European Scientific Journal, *ESJ*

October 2021

European Scientific Institute, ESI

The content is peer reviewed

ESJ Social Sciences

October 2021 edition vol. 17, No. 35

About the Journal

The "European Scientific Journal", ESJ is a peer-reviewed and open access journal, which publishes research articles and literature reviews in English, French or Spanish. This monthly issued publication of the European Scientific Institute, ESI embraces a wide range of academic disciplines. Submissions in the area of social sciences, humanities, life sciences, medical and natural sciences are welcome.

Founded in 2010, on European soil, ESJ strives to become a venue for academic attainments from all around the globe. On its way to scientifically sound publications, it connects reviewers and authors from different countries and academic titles, providing knowledge transfer and sharing of best practices. In the past 10 years over 28.000 researchers have published their papers with ESJ.

ESJ supports the researchers in overcoming contemporary barriers. Our effort is to provide decency through a realistic amount of publication charges; Fairness by cutting the timeframe for reviewer selection and first decision; Agility through permanent communication with the authors and reviewers; professionalism through a constant promotion of academic ethics and international impact through support of open science and interdisciplinary research.

Sincerely,

Jovan Shopovski, PhD

European Scientific Journal (ESJ)

Managing Editor

International Editorial Board

Jowati binti Juhary,
National Defense University of Malaysia, Kuala Lumpur, Malaysia

Faranak Seyyedi,
Azad University of Arak, Iran

Abe N'Doumy Noel,
International University of Social Sciences Hampate-Ba (IUSS-HB) Abidjan RCI, Ivory Coast

Majid Said Al Busafi,
Sultan Qaboos University- Sultanate of Oman

Nguyen Thi Hoai Phuong,
Ho Chi Minh City University of Law, Vietnam

Chaudhry Zahid Javid,
Taif University, Saudi Arabia

Dejan Marolov,
European Scientific Institute, ESI

Gloria Esteban de la Rosa,
University of Jaen, Spain

Noor Alam,
Universiti Sains Malaysia, Malaysia

Rashad A. Al-Jawfi,
Ibb University, Yemen

Muntean Edward Ioan,
University of Agricultural Sciences and Veterinary Medicine (USAMV) Cluj-Napoca, Romania

Hans W. Giessen,
Saarland University, Saarbrucken, Germany

Naheed Vaida,
University of Kashmir, India

Frank Bezzina,
University of Malta, Malta

Monika Bolek,
University of Lodz, Poland

Michele Minor-Corriveau,
Laurantian University, Canada

Robert N. Diotalevi,
Florida Gulf Coast University, USA

Daiva Jureviciene,
Vilnius Gediminas Technical University, Lithuania

Mariangela Giusti,
University of Milan - Bicocca, Italy

Anita Lidaka,
Liepaja University, Latvia

Rania Zayed,
Cairo University, Egypt

Louis Valentin Mballa,
Autonomous University of San Luis Potosi, Mexico

Ziad Said,
College of the North Atlantic, Qatar

Lydia Ferrara,
University of Naples, Italy

Byron A Brown,
Botswana Accountancy College, Botswana

Grazia Angeloni,
University "G. d'Annunzio" in Chieti, Italy

Chandrasekhar Putcha,
California State University, Fullerton, CA, USA

Mona Kassem,
National Research Centre, Egypt

Cinaria Tarik Albadri,
Trinity College Dublin University, Ireland

Mahammad A. Nurmamedov,
State Pedagogical University, Azerbaijan

Thomas Fenzl,
Alps-Adria University of Klagenfurt, Austria

Franko Milost,
Faculty of Management, Koper, Slovenia

Giuseppe Cataldi,
University of Naples "L'Orientale", Italy

Daniel Velasco,
Chicago School of Professional Psychology, USA

N. K. Rathee,
Delaware State University, USA

Michael Ba Banutu-Gomez,
Rowan University, USA

Adil Jamil,
Amman University, Jordan

Habib Kazzi,
Lebanese University, Lebanon

Valentina Manoiu,
University of Bucharest, Romania

Henry J. Grubb,
University of Dubuque, USA

Daniela Brevenikova,
University of Economics, Slovakia

Genute Gedviliene,
Vytautas Magnus University, Lithuania

Vasilika Kume,
University of Tirana, Albania

Mohammed Kerbouche,
University of Mascara, Algeria

Adriana Gherbon,
University of Medicine and Pharmacy Timisoara, Romania

Pablo Alejandro Olavegogeascoechea,
National University of Comahue, Argentina

Raul Rocha Romero,
Autonomous National University of Mexico, Mexico

Oihab Allal-Cherif,
KEDGE Business School, France

Izabela Dembinska,
University of Szczecin, Poland

Driss Bouyahya,
University Moulay Ismail, Morocco

William P. Fox,
Naval Postgraduate School, USA

Rania Mohamed Hassan,
University of Montreal, Canada

Tirso Javier Hernandez Gracia,
Autonomous University of Hidalgo State, Mexico

Alicia Marchant Rivera,
University of Malaga, Spain

Lucia D'Ambrosi,
University of Macerata, Italy

Tilahun Achaw Messaria,
Addis Ababa University, Ethiopia

George Chiladze,
University of Georgia, Georgia

Elisa Rancati,
University of Milano-Bicocca, Italy

Alessandro Merendino,
University of Ferrara, Italy

David L. la Red Martinez,
Northeastern National University, Argentina

Anastassios Gentzoglanis,
University of Sherbrooke, Canada

Awoniyi Samuel Adebayo,
Solusi University, Zimbabwe

Milan Radosevic,
Faculty Of Technical Sciences, Novi Sad, Serbia

Berenyi Laszlo,
University of Miskolc, Hungary

Hisham S Ibrahim Al-Shaikhli,
Auckland University of Technology, New Zeland

Omar Arturo Dominguez Ramirez,
Hidalgo State University, Mexico

Francesco Lenci,
Institute of Biophysics, Italy

Hafiz Muhammad Iqbal,
University of the Punjab, Pakistan

Bupinder Zutshi,
Jawaharlal Nehru University, India

Pavel Krpalek,
University of Economics in Prague, Czech Republic

Mondira Dutta,
Jawaharlal Nehru University, India

Evelio Velis,
Barry University, USA

Asma Zaidi,
Kansas City University of Medicine and Biosciences, USA

Mahbubul Haque,
Daffodil International University, Bangladesh

Diego Enrique Baez Zarabanda,
Autonomous University of Bucaramanga, Colombia

Juan Antonio Lopez Nunez,
University of Granada, Spain

Nouh Ibrahim Saleh Alguzo,
Imam Muhammad Ibn Saud Islamic University, Saudi Arabia

Ashgar Ali Ali Mohamed,
International Islamic University, Malaysia

A. Zahoor Khan,
International Islamic University Islamabad, Pakistan

Valentina Manoiu,
University of Bucharest, Romania

Fabio Pizzutilo,
University of Bari "Aldo Moro", Italy

Andrzej Palinski,
AGH University of Science and Technology, Poland

Jose Carlos Teixeira,
University of British Columbia Okanagan, Canada

Horst Hanke,
Technical University Darmstadt, Germany

Elpiniki I. Papageorgiou,
Technological Educational Institute of Central Greece, Greece

Enkeleint - Aggelos Mechili,
National and Kapodistrian University of Athens, Greece

Irina Matijosaitiene,
Kaunas University of Technology, Lithuania

Anita Auzina,
Latvia University of Agriculture, Latvia

Martin Gomez-Ullate,
University of Extremadura, Spain

Nicholas Samaras,
Technological Educational Institute of Larissa, Greece

Emrah Cengiz,
Istanbul University, Turkey

Andre Ozer,
University of Liege, Belgium

Francisco Raso Sanchez,
University of Granada, Spain

Simone T. Hashiguti,
Federal University of Uberlandia, Brazil

Tayeb Boutbouqalt,
University, Abdelmalek Essaadi, Morocco

Maurizio Di Paolo Emilio,
University of L'Aquila, Italy

Ismail Ipek,
Istanbul Aydin University, Turkey

Olena Kovalchuk,
National Technical University of Ukraine, Ukraine

Oscar Garcia Gaitero,
University of La Rioha, Spain

Alfonso Conde,
University of Granada, Spain

Mohsen Hanif,
Kharazmi University, Iran

Jose Antonio Pineda-Alfonso,
University of Sevilla, Spain

Jingshun Zhang,
Florida Gulf Coast University, USA

Rodrigue V. Cao Diogo,
University of Parakou, Benin

Salem Marzougui,
ElKef, Tunisia

Tunjica Petrasevic,
Josip Juraj Strossmayer University of Osijek, Croatia

Olena Ivanova,
Kharkiv National University, Ukraine

Marco Mele,
Unint University, Italy

Okyay Ucan,
Omer Halisdemir University, Turkey

Arun N. Ghosh,
West Texas A&M University, USA

Matti Raudjarv,
University of Tartu, Estonia

Cosimo Magazzino,
Roma Tre University, Italy

Susana Sousa Machado,
Polytechnic Institute of Porto, Portugal

Jelena Zascerinska,
University of Latvia, Latvia

Umman Tugba Simsek Gursoy,
Istanbul University, Turkey

Zoltan Veres,
University of Pannonia, Hungary

Vera Komarova,
Daugavpils University, Latvia

Cosmin Stefan Dogaru,
University of Bucharest, Romania

Tiffany T. Boury,
Franciscan University of Steubenville, USA

Salloom A. Al-Juboori,
Muta'h University, Jordan

Stephane Zingue,
University of Maroua, Cameroon

Jawed Iqbal,
National University of Sciences & Technology, Pakistan

Tanzer Celikturk,
Pamukkale University, Turkey

Ruth Erika Lerchster,
Alpen-Adria University Klagenfurt, Austria

Pierluigi Passaro,
University of Bari Aldo Moro, Italy

Georges Kpazai,
Laurentian University, Canada

Claus W. Turtur,
University of Applied Sciences Ostfalia, Germany

Natalia Sizochenko,
Dartmouth College, USA

Michele Russo,
G. D'Annunzio" University of Pescara, Italy

Nikolett Deutsch,
Corvinus University of Budapest, Hungary

Andrea Baranovska,
University of st. Cyrill and Methodius Trnava, Slovakia

Brian Sloboda,
University of Maryland, USA

Murtaz Kvirkvaia,
Grigol Robakidze University, Georgia

Enrique Jerez Abajo,
University of Zaragoza, Spain

Yassen Al Foteih,
Canadian University Dubai, UAE

Marisa Cecilia Tumino,
Adventista del Plata University, Argentina

Luca Scaini,
Al Akhawayn University, Morocco

Aelita Skarbaliene,
Klaipeda University, Lithuania

Efthymios Papatzikis,
Canadian University, Dubai, UAE

Oxana Bayer,
Dnipropetrovsk Oles Honchar University, Ukraine

Onyeka Uche Ofili,
International School of Management, France

Aurela Saliaj,
University of Vlora, Albania

Maria Garbelli,
Milano Bicocca University, Italy

Josephus van der Maesen,
Wageningen University, Netherlands

Claudia M. Dellafiore,
National University of Rio Cuarto, Argentina

Francisco Gonzalez Garcia,
University of Granada, Spain

Mahgoub El-Tigani Mahmoud,
Tennessee State University, USA

Hilal YIildirir Keser,
Bursa Technical University, Turkey

Miriam Agreda Montoro,
University of La Rioja, Spain

Daniel Federico Morla,
National University of Rio Cuarto, Argentina

Valeria Autran,
National University of Rio Cuarto, Argentina

Muhammad Hasmi Abu Hassan Asaari,
Universiti Sains, Malaysia

Angelo Viglianisi Ferraro,
Mediterranean University of Reggio Calabria, Italy

Roberto Di Maria,
University of Palermo, Italy

Delia Magherescu,
State University of Moldova, Moldova

Sayeeduzzafar Qazi,
University of Scientice and Technology, Saudi Arabia

Paul Waithaka Mahinge,
Kenyatta University, Kenya

Aicha El Alaoui,
Sultan My Slimane University, Morocco

Marija Brajcic,
University of Split, Croatia

Monica Monea,
University of Medicine and Pharmacy of Tirgu Mures, Romania

Belen Martinez-Ferrer,
Univeristy Pablo Olavide, Spain

Rachid Zammar,
University Mohammed 5, Morocco

Manuel Ramon Gonzalez Herrera,
The Autonomous University of Ciudad Juarez, Mexico

Fatma Koc,
Gazi University, Turkey

Calina Nicoleta,
University of Craiova, Romania

Shadaan Abid,
UT Southwestern Medical Center, USA

Sadik Madani Alaoui,
Sidi Mohamed Ben Abdellah University, Morocco

Patrizia Gazzola,
University of Insubria, Italy

Krisztina Szegedi,
University of Miskolc, Hungary

Liliana Esther Mayoral,
National University of Cuyo, Argentina

Amarjit Singh,
Kurukshetra University, India

Armando Carteni,
University of Naples Federico II, Italy

Oscar Casanova Lopez,
University of Zaragoza, Spain

Emina Jerkovic,
University of Josip Juraj Strossmayer, Croatia

Carlos M. Azcoitia,
National Louis University, USA

Rokia Sanogo,
University USTTB, Mali

Bertrand Lemennicier,
University of Paris Sorbonne, France

Lahcen Benaabidate,
University Sidi Mohamed Ben Abdellah, Morocco

Janaka Jayawickrama,
University of York, United Kingdom

Kiluba L. Nkulu,
University of Kentucky, USA

Oscar Armando Esparza Del Villar,
University of Juarez City, Mexico

Noralv Veggeland,
Inland Norway Univ. of Applied Sciences, Norway

Leila Ghudushauri,
Tbilisi State University, Georgia

George C. Katsadoros,
University of the Aegean, Greece

Elena Gavrilova,
Plekhanov University of Economics, Russia

Kira Trostina,
Plekhanov University of Economics, Russia

Eyal Lewin,
Ariel University, Israel

Szczepan Figiel,
University of Warmia, Poland

Don Martin,
Youngstown State University, USA

John B. Strait,
Sam Houston State University, USA

Nirmal Kumar Betchoo,
University of Mascareignes, Mauritius

Iveta Reinholde,
University of Latvia, Latvia

Patrick Chanda,
The University of Zambia, Zambia

Meryem Ait Ouali,
University IBN Tofail, Morocco

Laid Benderradji,
Mohamed Boudiaf University of Msila, Algeria

Amine Daoudi,
University Moulay Ismail, Morocco

Claudio Fabian Guevara,
University of Guadalajara, Mexico

Oruam Cadex Marichal Guevara,
University Maximo Gomes Baez, Cuba

Vanya Katarska,
National Military University, Bulgaria

Carmen Maria Zavala Arnal,
University of Zaragoza, Spain

Francisco Gavi Reyes,
Postgraduate College, Mexico

Aysegul Ozbebek Tunc,
Istanbul University, Turkey

Iane Franceschet de Sousa,
Federal University S. Catarina, Brazil

Mary Kathryn Mc Vey,
Franciscan University of Steubenville, USA

Patricia Randrianavony,
University of Antananarivo, Madagascar

Roque V. Mendez,
Texas State University, USA

Kesbi Abdelaziz,
University Hassan II Mohammedia, Morocco

Eugenio D'Angelo,
Pegaso Telematic University, Italy

Whei-Mei Jean Shih,
Chang Gung University of Science and Technology, Taiwan

Ilknur Bayram,
Ankara University, Turkey

Elenica Pjero,
University Ismail Qemali, Albania

Gokhan Ozer,
Fatih Sultan Mehmet Vakif University, Turkey

Komina Amevoin,
University of Lome, Togo

Veronica Flores Sanchez,
Technological University of Veracruz, Mexico

Camille Habib,
Lebanese University, Lebanon

Larisa Topka,
Irkutsk State University, Russia

Paul M. Lipowski,
Creighton University, USA

Marie Line Karam,
Lebanese University, Lebanon

Jorge Wozniak,
National University of Tres de Febrero, Argentina

Sergio Scicchitano,
Research Center on Labour Economics (INAPP), Italy

Mohamed Berradi,
Ibn Tofail University, Morocco

Visnja Lachner,
Josip J. Strossmayer University, Croatia

Sangne Yao Charles,
University Jean Lorougnon Guede, Ivory Coast

Omar Boubker,
University Ibn Zohr, Morocco

Judit Sole Resina,
Autonomous University of Barcelona, Spain

Kouame Atta,
University Felix Houphouet Boigny, Ivory Coast

Patience Mpanzu,
University of Kinshasa, Congo

Angeles Aguilera Velasco,
University of Guadalajara, Mexico

Rachid Hsissou,
Ibn Tofail University, Morocco

Svetlana Melentijevic,
Complutense University of Madrid, Spain

Devang Upadhyay,
University of North Carolina at Pembroke, USA

Nyamador Wolali Seth,
University of Lome, Togo

Akmel Meless Simeon,
Ouattara University, Ivory Coast

Mohamed Sadiki,
IBN Tofail University, Morocco

Paula E. Faulkner,
North Carolina Agricultural and Technical State University, USA

Gamal Elgezeery,
Suez University, Egypt

Manuel Gonzalez Perez,
Universidad Popular Autonoma del Estado de Puebla, Mexico

Denis Pompidou Folefack,
Centre Africain de Recherche sur Bananiers et Plantains (CARBAP), Cameroon

Seka Yapi Arsene Thierry,
Ecole Normale Superieure Abidjan (ENS Ivory Coast)

Dastagiri MB,
ICAR-National Academy of Agricultural Research Management, India

Alla Manga,
Universitey Cheikh Anta Diop, Senegal

Lalla Aicha Lrhorfi,
University Ibn Tofail, Morocco

Ruth Adunola Aderanti,
Babcock University, Nigeria

Katica Kulavkova,
University of "Ss. Cyril and Methodius", Republic of Macedonia

Aka Koffi Sosthene,
Research Center for Oceanology, Ivory Coast

Forchap Ngang Justine,
University Institute of Science and Technology of Central Africa, Cameroon

Toure Krouele,
Ecole Normale Superieure d'Abidjan, Ivory Coast

Sophia Barinova,
University of Haifa, Israel

Leonidas Antonio Cerda Romero,
Escuela Superior Politecnica de Chimborazo, Ecuador

T.M.S.P.K. Thennakoon,
University of Sri Jayewrdenepura, Sri Lanka

Aderewa Amontcha,
Universite d'Abomey-Calavi, Benin

Khadija Kaid Rassou,
Centre Regional des Metiers de l'Education et de la Formation, Morocco

Rene Mesias Villacres Borja,
Universidad Estatal De Bolivar, Ecuador

Aaron Victor Reyes Rodriguez,
Autonomous University of Hidalgo State, Mexico

Qamil Dika,
Tirana Medical University, Albania

Kouame Konan,
Peleforo Gon Coulibaly University of Korhogo, Ivory Coast

Hariti Hakim,
University Alger 3, Algeria

Emel Ceyhun Sabir,
University of Cukurova, Turkey

Salomon Barrezueta Unda,
Universidad Tecnica de Machala, Ecuador

Belkis Zervent Unal,
Cukurova University, Turkey

Elena Krupa,
Kazakh Agency of Applied Ecology, Kazakhstan

Carlos Angel Mendez Peon,
Universidad de Sonora, Mexico

Antonio Solis Lima,
Apizaco Institute Technological, Mexico

Roxana Matefi,
Transilvania University of Brasov, Romania

Bouharati Saddek,
UFAS Setif1 University, Algeria

Toleba Seidou Mamam,
Universite d'Abomey-Calavi (UAC), Benin

Serigne Modou Sarr,
Universite Alioune DIOP de Bambey, Senegal

Nina Stankous,
National University, USA

Lovergine Saverio,
Tor Vergata University of Rome, Italy

Fekadu Yehuwalashet Maru,
Jigjiga University, Ethiopia

Karima Laamiri,
University of Moulay Ismail, Morocco

Elena Hunt,
Laurentian University, Canada

Sharad K. Soni,
Jawaharlal Nehru University, India

Lucrezia Maria de Cosmo,
University of Bari "Aldo Moro", Italy

Florence Kagendo Muindi,
University of Nairobi, Kenya

Maximo Rossi Malan,
Universidad de la Republica, Uruguay

Haggag Mohamed Haggag,
South Valley University, Egypt

Olugbamila Omotayo Ben,
Obafemi Awolowo University, Ile-Ife, Nigeria

Eveligh Cecilania Prado-Carpio,
Technical University of Machala, Ecuador

Maria Clideana Cabral Maia,
Brazilian Company of Agricultural Research - EMBRAPA, Brazil

Fernando Paulo Oliveira Magalhaes,
Polytechnic Institute of Leiria, Portugal

Valeria Alejandra Santa,
Universidad Nacional de Río Cuarto, Córdoba, Argentina

Stefan Cristian Gherghina,
Bucharest University of Economic Studies, Romania

Goran Ilik,
"St. Kliment Ohridski" University, Republic of Macedonia

Amir Mohammad Sohrabian,
International Information Technology University (IITU), Kazakhstan

Aristide Yemmafouo,
University of Dschang, Cameroon

Gabriel Anibal Monzón,
University of Moron, Argentina

Robert Cobb Jr,
North Carolina Agricultural and Technical State University, USA

Arburim Iseni,
State University of Tetovo, Republic of Macedonia

Milad Reda Qelliny,
Minia University, Egypt

Raoufou Pierre Radji,
University of Lome, Togo

Juan Carlos Rodriguez Rodriguez,
Universidad de Almeria, Spain

Mohammadreza Hadizadeh,
Central State University, USAa

Mushtaq Ismael Hasan,
Thi-Qar University, Iraq

Satoru Suzuki,
Panasonic Corporation, Japan

Iulia-Cristina Muresan,
University of Agricultural Sciences and Veterinary Medicine, Romania

Russell Kabir,
Anglia Ruskin University, UK

Nasreen Khan,
SZABIST, Dubai

Luisa Morales Maure,
University of Panama, Panama

Abdelaaziz El Bakkali,
Sidi Mohamed Ben Abdelah University, Morocco

Lipeng Xin,
Xi'an Jiaotong University, China

Harja Maria,
Gheorghe Asachi Technical University of Iasi, Romania

Adou Paul Venance,
University Alassane Ouattara, Cote d'Ivoire

Nkwenka Geoffroy,
Ecole Superieure des Sciences et Techniques (ESSET), Cameroon

Benie Aloh J. M. H.,
Felix Houphouet-Boigny University of Abidjan, Cote d´Ivoire

Bertin Desire Soh Fotsing,
University of Dschang, Cameroon

N'guessan Tenguel Sosthene,
Nangui Abrogoua University, Cote d'Ivoire

Ackoundoun-Nguessan Kouame Sharll,
Ecole Normale Superieure (ENS), Cote d'Ivoire

Ouedraogo Francois de Charles,
Josepk Ki-Zerbo University, Burkina Faso

Abdelfettah Maouni,
Abdelmalek Essaadi University, Morocco

Alina Stela Resceanu,
University of Craiova, Romania

Alilouch Redouan,
University Abdelmalek Saadi, Morocco

Gnamien Konan Bah Modeste,
Jean Lorougnon Guede University, Cote d'Ivoire

Sufi Amin,
International Islamic University, Islambad Pakistan

Sanja Milosevic Govedarovic,
University of Belgrade, Serbia

Elham Mohammadi,
Curtin University, Australia

Andrianarizaka Marc Tiana,
University of Antananarivo, Madagascar

Ngakan Ketut Acwin Dwijendra,
Udayana University, Indonesia

Yue Cao,
Southeast University, China

Nishant Agrawal,
Nirma University, India

Audrey Tolouian,
University of Texas, USA

Alaa Abdulhady Jaber,
University of Technology, Iraq

Asli Cazorla Milla,
Federal University of Rio de Janerio, Brazil

Valentin Marian Antohi,
University Dunarea de Jos of Galati, Romania

Tabou Talahatou,
University of Abomey-Calavi, Benin

N. K. B. Raju,
Sri Venkateswara Veterinary University, India

Hamidreza Izadi,
Chabahar Maritime University, Iran

Idriss M'bouka Milandou Auguste Williams,
Marien Ngouabi University, Congo

Elsa Kristo,
University of Tirana, Albania

Hanaa Ouda Khadri Ahmed Ouda,
Ain Shams University, Egypt

Rachid Ismaili,
Hassan 1 University, Morocco

Bashar H. Malkawi,
University of Sharjah, UAE

Tamar Ghutidze,
Ivane Javakhishvili Tbilisi State University, Georgia

Emine Koca,
Ankara Haci Bayram Veli University, Turkey

David Perez Jorge,
University of La Laguna, Spain

Ousmane Tanor Dieng,
Cheikh Anta Diop University, Senegal

Irma Guga,
European University of Tirana, Albania

Ozgur Muhittin Esen,
Istanbul University, Turkey

Saif Ur Rehman,
PMAS-Arid Agriculture University, Pakistan

Jesus Gerardo Martínez del Castillo,
University of Almeria, Spain

Mohammed Mouradi,
Sultan Moulay Slimane University, Morocco

Marco Tulio Ceron Lopez,
Institute of University Studies, Mexico

Mangambu Mokoso Jean De Dieu,
University of Bukavu, Congo

Hadi Sutopo,
Kalbis Institute, Indonesia

Priyantha W. Mudalige,
University of Kelaniya, Sri Lanka

Emmanouil N. Choustoulakis,
University of Peloponnese, Greece

Yasangi Anuradha Iddagoda,
Charted Institute of Personal Management, Sri Lanka

Pinnawala Sangasumana,
University of Sri Jayewardenepura, Sri Lanka

Abdelali Kaaouachi,
Mohammed I University, Morocco

Dimitrios Belias,
University of Thessaly, Greece

Kahi Oulai Honore,
University of Bouake, Cote d'Ivoire

Ma'moun Ahmad Habiballah,
Al Hussein Bin Talal University, Jordan

Amaya Epelde Larranaga,
University of Granada, Spain

Franca Daniele,
"G. d'Annunzio" University, Chieti-Pescara, Italy

Youssef Babakhouya,
Inje University, South Korea

Saly Sambou,
Cheikh Anta Diop University, Senegal

Daniela Di Berardino,
University of Chieti-Pescara, Italy

Dorjana Klosi,
University of Vlore "Ismail Qemali, Albania

Abu Hamja,
Aalborg University, Denmark

Stankovska Gordana,
University of Tetova, Republic of Macedonia

Kazimierz Albin Klosinski,
John Paul II Catholic University of Lublin, Poland

Maria Leticia Bautista Diaz,
National Autonomous University, Mexico

Bruno Augusto Sampaio Fuga,
North Parana University, Brazil

Anouar Alami,
Sidi Mohammed Ben Abdellah University, Morocco

Vincenzo Riso,
University of Ferrara, Italy

Janhavi Nagwekar,
St. Michael's Hospital, Canada

Jose Grillo Evangelista,
Egas Moniz Higher Institute of Health Science, Portugal

Xi Chen,
University of Kentucky, USA

Nawaz Ahmad,
Institute of Business Management, Pakistan

Varij Nayan,
Central Institute for Research on Buffaloes, India

Fateh Mebarek-Oudina,
Skikda University, Algeria

Nadia Mansour,
University of Sousse, Tunisia

Jestoni Dulva Maniago,
Majmaah University, Saudi Arabia

Daniel B. Hier,
Missouri University of Science and Technology, USA

S. Sendil Velan,
Dr. M.G.R. Educational and Research Institute, India

Enriko Ceko,
Wisdom University, Albania

Laura Fischer,
National Autonomous University of Mexico, Mexico

Mauro Berumen,
Caribbean University, Mexico

Jonida Lesha,
University of Tirana, Albania

Sara I. Abdelsalam,
The British University in Egypt, Egypt

Hanif Qureshi,
University of Cincinnati, USA

Maria Carlota,
Autonomous University of Queretaro, Mexico

H.A. Nishantha Hettiarachchi,
University of Sri Jayewardenepura, Sri Lanka

Bhupendra Karki,
University of Louisville, Louisville, USA

Evens Emmanuel,
University of Quisqueya, Haiti

Iresha Madhavi Lakshman,
University of Colombo, Sri Lanka

Francesco Scotognella,
Polytechnic University of Milan, Italy

Zayde Ayvaz,
Canakkale Onsekiz Mart University, Turkey

Kamal Niaz,
Cholistan University of Veterinary & Animal Sciences, Pakistan

Rawaa Qasha,
University of Mosul, Iraq

Amal Talib Al-Sa'ady,
Babylon University, Iraq

Hani Nasser Abdelhamid,
Assiut University, Egypt

Mihnea-Alexandru Gaman,
University of Medicine and Pharmacy, Romania

Daniela-Maria Cretu,
Lucian Blaga University of Sibiu, Romania

Ilenia Farina,
University of Naples "Parthenope, Italy

Luisa Zanolla,
Azienda Ospedaliera Universitaria Verona, Italy

Jonas Kwabla Fiadzawoo,
University for Development Studies (UDS), Ghana

Adriana Burlea-Schiopoiu,
University of Craiova, Romania

Alejandro Palafox-Munoz,
University of Quintana Roo, Mexico

Fernando Espinoza Lopez,
Hofstra University, USA

Ammar B. Altemimi,
University of Basrah, Iraq

Monica Butnariu,
University of Agricultural Sciences and Veterinary Medicine "King Michael I, Romania

Davide Calandra,
University of Turin, Italy

Nicola Varrone,
University of Campania Luigi Vanvitelli, Italy

Luis Angel Medina Juarez,
University of Sonora, Mexico

Francesco D. d'Ovidio,
University of Bari "Aldo Moro", Italy

Sameer Algburi,
Al-Kitab University, Iraq

Braione Pietro,
University of Milano-Bicocca, Italy

Mounia Bendari,
Mohammed VI University, Morocco

Stamatios Papadakis,
University of Crete, Greece

Aleksey Khlopytskyi,
Ukrainian State University of Chemical Technology, Ukraine

Sung-Kun Kim,
Northeastern State University, USA

Nemanja Berber,
University of Novi Sad, Serbia

Krejsa Martin,
Tecnical University of Ostrava, Czech Republic

Magdalena Vaverkova,
Mendel University in Brno, Czech Republic

Jeewaka Kumara,
University of Peradeniya, Sri Lanka

Antonella Giacosa,
University of Torino, Italy

Paola Clara Leotta,
University of Catania, Italy

Francesco G. Patania,
University of Catania, Italy

Rajko Odobasa,
University of Osijek, Faculty of Law, Croatia

Jesusa Villanueva-Gutierrez,
University of Tabuk, Tabuk, KSA

Leonardo Jose Mataruna-Dos-Santos,
Canadian University of Dubai, UAE

Usama Konbr,
Tanta University, Egypt

Leonid Nakov,
"Ss. Cyril and Methodius University", Republic of Macedonia

Branislav Radeljic,
Necmettin Erbakan University, Turkey

Anita Mandaric Vukusic,
University of Split, Croatia

Barbara Cappuzzo,
University of Palermo, Italy

Roman Jimenez Vera,
Juarez Autonomous University of Tabasco, Mexico

Lucia P. Romero Mariscal,
University of Almeria, Spain

Pedro Antonio Martin-Cervantes,
University of Almeria, Spain

Hasan Abd Ali Khudhair,
Southern Technical University, Iraq

Table of Contents:

Improving Learning Experience of People with Cognitive Disabilities Using Serious Games: A Review

Anirban Chakraborty, Student Member IEEE
Eseohen Ojo
Bryce Quonoey
Gayatri Mehta, Senior Member IEEE
University of North Texas, USA

Abstract
 Serious games have grown as one of the alternative means to assist people with cognitive and learning disabilities. They have been found to have a positive influence on these people and to help them improve their social skills. They offer them a stress-free environment that assists them in working on their skills at their own pace. Studies have shown that no one game is fit for all kinds of disabilities. Instead, these games must be tailored according to the specific needs of the disability. This paper discusses some of the prevalent serious games and the frameworks that can be used while designing them. Serious games need to be made broadly accessible for people in developing countries to increase their efficacy. Using serious games has helped the disabled to overcome their anxiety, as well as help them in coping with their disability, and its effectiveness to do so is also proven in some studies.

Keywords: Serious Games, Cognitive Disabilities, Intellectual Disabilities

Introduction
 The use of computing machinery like personal computers, smartphones, and video game consoles has become ubiquitous these days. According to a study published by Entertainment Software Association (Pierre-Louis, 2020), 75% of Americans have at least one video game player

in their household. While traditional video games were primarily developed for entertainment, the domain of serious games, which are a class of video games or computer games, serves a more specific purpose: imparting an additional goal, such as improving learning. These additional aims are called characterizing goals (Dörner, Göbel, Effelsberg, & Wiemeyer, 2016). The term Serious Games was first coined by Clark C. Abt in his book "Serious Games" (Abt, 1970). He is also known for providing the very first definition of the phrase: "reduced to its formal essence, a game is an activity among two or more independent decision-makers seeking to achieve their objectives in some limiting context. A more conventional definition would say that a game is a context with rules among adversaries trying to win objectives. We are concerned with serious games in the sense that these games have an explicit and carefully thought-out educational purpose and are not intended to be played primarily for amusement." Serious Games are also defined as games that entertain players as they educate, train, or change their behavior (Stokes, 2005). More recently the definition has been fused in parlance with computer technology: interactive computer application, with or without significant hardware component, that has a challenging goal, is fun to play and engaging, incorporates some scoring mechanism, and supplies the user with skills, knowledge, or attitudes useful in reality (Bergeron, 2006). Serious games provide a learner-centered approach to education wherein the trainee takes full control over the learning process in an interactive framework (Ricciardi & Paolis, 2014). The game spectrum classification described in (Qin, Chui, Pang, Choi, & Heng, 2010) describes that computer games are classified into two main spectrums—skills training and fun-based. Serious games lie in the middle of the spectrum and represent games that are developed for non-entertainment purposes and designed for skills development. These games are a blend of realism together with the entertainment factor of a traditional game. Serious games differ from the traditional simulators in four different aspects (Ricciardi & Paolis, 2014): (1) Entertainment factor, (2) Development costs, (3) Development time, and (4) Deployment cost. Besides serious games, several other techniques as documented in (Akiki, 2014; Amar & David, 2017; Cacciattolo, 2015; Jacob & Olisaemeka, 2016) are also prevalent to improve the learning experiences.

Serious games focus primarily on imparting skills and knowledge (Dörner et al., 2016). The development costs are reduced when compared to traditional gaming simulators because they are developed over the existing entertainment gaming platform. The technologies needed to run serious games are widely available among common people, making it easier to deploy the games for all age groups and skill development purposes.

The development of serious games is a relatively newer spectrum in the domain of games with a purpose (GWAP). Various teams come up with

their own game flow for the serious games that aim towards achieving a goal. However, all these games lack a unifying framework that brings all the diversified perspectives together. The concept of learning through play is quite known (Dewey, 1916; Jean, 1999; Malone, 1981; Papert, 1988). The growth of computer games has consequently aroused interest among researchers to use the platform to impart some knowledge or skill to the players.

This paper presents a comprehensive survey of serious games for various intellectual and cognitive disabilities, including Autism, ADHD, Down's syndrome, and Dyslexia. We also describe how serious games can be used effectively to provide a great learning experience to people with such disabilities. A key element that was observed while studying literature is the adaptation of the serious game for a particular disability. The existing research suggests that serious games be designed with special characteristics keeping in mind the needs of people with a specific disability. For example, what a person with ASD needs the most help with may not be the same thing as what a person with ADHD needs, so a game designed to help people with ASD might not be as beneficial to a person with ADHD. In short, there is not one serious game for all. This paper also stresses the need-based system for serious games development to improve its efficacy. The games need to be specific and tailored towards what each disability group needs.

In addition, the unavailability of serious games in middle to low-income countries has also been highlighted. This paper also raises the point of spreading serious games to people all over the world. According to (Sharifzadeh et al., 2020) most of the research on serious games has been done on the American and European continents. We must extend these studies and our findings to other parts of the world, especially in developing countries. Aiding the game developers has also been an aim and, to that cause, some simplified models and frameworks have also been cited to assist in future game developments.

Serious Games for Cognitive Development

People suffering from some cognitive disabilities face difficulties in proper knowledge gaining and all-around competence development. They suffer from disabilities in different ways like proper attention, memory, inadequate problem-solving skills, etc. (Tomé, Pereira, & Oliveira, 2014). Some of the most common cognitive disabilities are Attention-Deficit/Hyperactivity Disorder (ADHD), Autism Spectrum Disorder (ASD), Down syndrome, and Fragile X syndrome. Other kinds of disabilities are reported in (Komolafe, 2018; Svestkova & Sladkova, 2015). While some examples of learning disabilities include dyslexia, speech impairment, and visual impairment. Although they are all categorized as disabilities, they do not entail the same symptoms. People suffering from these disabilities require

dedicated attention, as traditional approaches to learning fall short in the purpose of learning. They tend to lose interest quickly and hence perform well if the environment is stress-free. Serious games have proven to be one means to address the problems faced by these people (Tomé et al., 2014; Zhonggen, 2019). The instant feedback that these games provide can be highly motivational and beneficial for their learning. There are some pitfalls, however. Some serious games prove to be challenging because they require certain techniques and capabilities that these people cannot deliver. However, they do not feel the pressure of the real world while spending time on a serious game. Since the environment is completely virtual, they feel safe exploring all their decisions and testing their behaviors in a virtual space. Serious games have also proven to be beneficial for people suffering from attention deficit disorder, as these games can capture their interest (Griffiths, 2002) to improve motor coordination and spatial orientation (González, Cabrera, & Gutiérrez, 2007; Griffiths, 2002). Some studies also suggest that the ability to use computers for impaired people also boosts their self-confidence and pride (Robertson & Hix, 2002). Besides all these benefits, these games can be tailored to the individual needs of the players, the multiple meanings associated with the games can be more effective in awakening the creativity of the players (Lanyi & Brown, 2010). (Lanyi & Brown, 2010) also describes the game on extra time (GOET) project that shows that serious games are used to educate students with cognitive disabilities to increase their chance of employment. To that effect (Lanyi, Brown, Standen, Lewis, & Butkute, 2010) describes the ten games that were designed and evaluated under the GOET project that can be helpful for other developers looking to venture into the domain of serious games development. A review of the effect of serious games on the intellectually disabled (Hersh & Leporini, 2018) and people with autism also revealed that serious games have the potential to improve practical, conceptual, cognitive, and social skills (Tsikinas & Xinogalos, 2019). In a study conducted on children, particularly within students with learning disabilities (Flogie, Aberšek, Aberšek, Lanyi, & Pesek, 2020), it was also found that serious games could provide a personalized learning environment and hence modification of the game on a one-to-one basis is very much important to increase its efficacy. In addition, the study described in (García-Redondo, García, Areces, Núñez, & Rodríguez, 2019) has reported a significant improvement in attention performance measures (visual attention). As a result, the research group proposes the deliberate use of serious games to boost the different bits of intelligence, talents, or unique abilities of students with learning disabilities.

In a study mentioned in (Erhel & Jamet, 2013; Koh, 2020) it is found that intrinsic motivation is increased when players experience the challenges offered by the serious games and that leads to better learning scores in the

game. Research has also suggested that using serious games rather than traditional methods to educate people is less expensive (Ricciardi & Paolis, 2014). So, it seems like there is nothing to lose with serious games when they are created with the right elements and used appropriately by educators. Therefore, a lot of focus has now been put on trying to improve and expand the range of serious games available to us.

Essential Elements of Serious Games

For serious games to appeal to people with learning and cognitive disabilities, they must have some basic elements incorporated in them. They must be able to engage learners while targeting cognitive and social, related skills to improve outcomes of learners. Research has shown that some specific things increase motivation to learn in serious games, as described below:

Creation of a storyline or narrative: Storylines allow learners to feel as though they are experiencing the contents of the game. It also encourages them to look forward to what is next. This allows them to feel attached to the game and increases motivation to learn. Therefore, storylines are an essential element of serious games because it motivates learners.

Goals Direct learning: When medium - and long-term goals are set for the learners, it encourages them to keep playing the game (and essentially keep learning) just so they can achieve these goals. Setting goals for learners in the games also encourage learners to exercise patience. Now, when goals directed learning is combined with storylines, it is highly likely that learners would be very interested and motivated to learn.

Feedback and Rewards: This is very important in serious games because it motivates learners to do better and makes them open to constructive feedback and criticism. Serious games are interactive, and a necessary part of this interaction is constant feedback (whether it be positive or negative) and rewards for good things. Not only do they motivate learners, but they also help build learners' character.

Increasing Levels of Difficulty: While not being too difficult and frustrating for learners to handle, serious games need to be challenging for learners to learn and improve their skills. The sole purpose of this element is to ensure that learners are learning and reaching their best capability while not feeling demotivated.

Provision of Choice: As an interactive game, serious games need to allow their learners to make their own choices in the game. This boosts self-confidence and encourages the learners to express themselves.

Multiplayer option: Having a multiplayer option in serious games also helps the players learn as they can share their experiences with their peers. This encourages teamwork and ensures that learners do not feel lonely. The

multiplayer option allows for character development and motivation of learners, so it is essential.

Conceptual Model of Serious Games

According to (Avila-Pesantez, Delgadillo, & Rivera, 2019), serious games are based on different theories of learning, which are organized by a set of principles. Constructivism, which is based on problem-solving and making discoveries, social development, humanism, to train experimental knowledge, cognitivism, based on cognitive development and improving learning skills, and behaviorism, based on teaching social skills and programmed instruction. With these principles in mind, (Avila-Pesantez et al., 2019) proposed a conceptual model for serious games. This model comprises four phases: analysis, pre-production, production, and post-production. The first phase comprises coming up with objectives and a target audience, as well as a central concept for the game to revolve around. In the second phase, elements such as a story to complete the objectives, and content such as script and setting, are created. In the production phase, programming will begin with developing game scenarios and user interfaces. Finally, the post-production phase contains the publication and distribution of the game, as well as maintenance, so that the game can be updated as deemed necessary.

Another framework considers the learning and pedagogy theory along with the gaming requirements (Yusoff, Crowder, Gilbert, & Wills, 2009). The aim is to make the games effective for learning. The conceptual model has the following features: capability includes the cognitive, psychomotor, and possibly effective skills that the players gain while playing the games, while the instructional content is the theme or the concept that the players should learn. Game attributes encompass the factors that make the game engaging and help in the learning process. The goals that are presumed to be achieved during the gameplay session are included in the intended learning outcomes. The measures that must be adopted by the developer of the game to keep the player engaged to make up the learning activity. Based on the gameplay, the player thinks about the next step to be taken in the game and that is found in the reflection stage. The game genre represents the type of game, while game mechanics represent the rules that the players must follow in the game. The amount of learning that the player had while playing the game is represented in the game achievement.

Apart from the above frameworks, (Tsikinas & Xinogalos, 2018) aim to study the existing serious games frameworks and extract the design guidelines from there and propose a more effective framework to design serious games meant for people with intellectual disabilities.

Methodologies for Designing Serious Games

Marne et al. did an excellent job of proposing some methods that need to be implemented when designing a serious game (Marne, Wisdom, Huynh-Kim-Bang, & Labat, 2012). The six facets they proposed were: Pedagogical Objectives, Domain Simulation, Interactions with the Simulation, Problems and Progression, Decorum, and Condition of Use. They described **Pedagogical Objectives** as important in designing a serious game because it involves understanding the way and methods in which an educator educates; the models and methods they use. It is important to understand the educator's methods and get feedback, as an educator is the one who is going to use the game to educate learners. And so, if the methods of the educator are not understood, then the game may not fulfill its purpose in the learners. **Domain Simulation** involves responding to the learners effectively. When a serious game is being designed, it is important that the game can respond quickly and effectively to learners. Making serious games interactive can benefit learners significantly. **Interactions with the Simulation** involve considering how learners can conveniently interact with the game when designing the game. This is important because, as mentioned earlier, serious games are interactive games. Without this feature, the game might not be very helpful for people with cognitive disabilities. **Problems and progression** mean that the game needs to be designed in such a way that it can decide which problems to give to the learners by measuring their progression. This way, the learning will be effective. **Decorum** involves considering aesthetics and adding fun elements in the game to keep learners engaged. In designing serious games, things like the colors of the characters, the shapes, etc., need to be considered. Finally, the **Condition of Use** needs to be considered. Designers of serious games need to understand the demographics of the target audience (e.g., age group) i.e., who will play the games. If they do not aim the design of serious games at specific target audiences, then the serious games might not be that effective.

In the same vein (Jaramillo-Alcázar, Venegas, Criollo-C, & Luján-Mora, 2021) proposed a list of accessibility guidelines for designing video games for people with disabilities, especially dyslexia. They are listed below:
1. Use simple language.
2. Include subtitles or captions.
3. Use a reasonable font size and style for the words.
4. Use a simple writing style.
5. Ensure a smooth, simple to difficult progression in the game.
6. Remind players of the aim of the game frequently during the game.
7. Provide the players with explicit visual rewards.
8. Put the grayscale in the foreground and the background into consideration.
9. Allow the players to pause when reading instructions and objectives.

All the above is necessary to establish an effective Game-Based Learning (GBL) environment (Marfisi-Schottman, George, & Tarpin-Bernard, 2010).

There are also different methods used by researchers to understand individuals' learning abilities and to understand things that serious games offer to people with learning and cognitive disabilities. First, (Marenus, 2020) the Tree of Intelligence (ToI) based on Gardener's Theory of Multiple Intelligences (MIT) explored the multiple possibilities that both serious games and the multiple intelligence approach may offer for improving cognitive components. The Wechsler Intelligence Scale for Children-IV (WISC-IV) was used to determine the participants' intellectual abilities; it provides detailed information on participants' cognitive profiles. The D2 Attention Test (Bates & Lemay, 2004) was used to assess the attentional variables based on participants' performance; it is a screening test of selective attention and concentration. The EDAH Scale (Zulueta, Díaz-Orueta, Crespo-Eguilaz, & Torrano, 2018) evaluates attentional symptomatology through the administration of a 20-item observational skill.

Also, to explain social difficulties in people with cognitive disorders like autism, many people investigate the theory of mind (ToM) approach (Korkmaz, 2011; Premack & Woodruff, 1978). This approach based on (Premack & Woodruff, 1978) states that social difficulties in people with cognitive disabilities, especially ASD, come from an inability to recognize the mental state of oneself and other people. This theory serves as a basis for many designs of serious games, like the interactive therapy system (ITS) and much more. (Starks, 2014) also describes in exhaustive detail the unified model for the development of serious games aimed at cognitive development.

Examples of Serious Games for Cognitive Development

"My First Day at Work" and "The Big Party," described in (Torrente, Blanco, Moreno-Ger, & Fernández-Manjón, 2012) are two of the popular serious games that are used to treat individuals with cognitive disabilities. When the former is focused on facilitating the incorporation of a new person with a cognitive disability to a new company, the latter is developed to train a specific set of social and self-autonomy skills and concepts in adults with a cognitive disability. Both games allowed players to play at their own pace and comfort, offered a personalized gameplay environment as well. To increase realism during gameplay, both games have also incorporated real-life photos and videos with cartoon-like designs. A key observation in these games was the inability of the players having Down's syndrome to tackle and remember the primary and secondary goals in the game. Observations and findings like these are immensely helpful in developing a serious game that is suited for a particular disability.

Computer-based games are effectively used to improve the emotional and social skills of people having autism, like improving the emotion and face identity recognition abilities (Tanaka et al., 2010; Wainer & Ingersoll, 2011) to improving the language and social skills (Grynszpan, Weiss, Perez-Diaz, & Gal, 2014), etc. Serious games can also help children with autism to learn vocabulary (Khowaja, Salim, & Al-Thani, 2018). This is possible because individuals having autism embark on activities that can be performed in a safe environment, like computer games (Rice, 2012). The authors (Whyte, Smyth, & Scherf, 2015) claim that if the principles of serious games can be used in the computer games targeted towards treating autism, then it can lead to an improved outcome. To bolster their claim, the authors have incorporated the findings from other studies (Beaumont & Sofronoff, 2008; Hopkins et al., 2011) all of which evidenced the incorporation of serious games elements. Computer games for autism treatment should focus on three key aspects (Whyte et al., 2015): (1) use of storyline and goal-directed behaviors, (2) use of cooperative multi-player games that build upon the efficacy of interpersonal interactions in previous virtual reality interventions, and (3) increased use of gaming elements that facilitate the transfer of knowledge and skills from the intervention to more ecologically valid in-person social situations. In 2019 a study was published (García-Redondo et al., 2019) that analyzed the effects in attention on a sample of 44 students having attention deficit hyperactivity disorder (ADHD) and specific learning disorder (SLD), age ranging from six to sixteen years after they were introduced to an educational video game. It was found that there is a significant improvement in attention performance measures (visual attention) after the test. Methodologies to enhance the social skills of children having autism have also been investigated in a game called Social Craft that takes inspiration from a very popular game called Minecraft (Cadieux & Keenan, 2020). The researchers have updated Minecraft with Social Craft modifications. The primary goal was to enhance the capabilities of the game to strengthen and inculcate social communication skills. Some of the popular games that are available for addressing the issues associated with autism are described below:

1. KickAs—Autism Game ("Game Makes Teenagers with Autism More Independent," n.d.): Adolescents having autism spectrum disorder (ASD) can take part in this game that will allow them to improve their social skills during difficult social scenarios. The gameplay aids them to build a proper insight into social situations and how to cope up with them. This game is being linked to the E-Mental Platform used by therapists.

2. Zirkus Empathica—Autism Game for children ("Effectively Promote Feelings and Empathy in Autism," n.d.): Zirkus Empathica is primarily targeted for the training of socio-emotional competencies within the

pre and elementary school children with autism. The game is based on a mobile platform, making it easier for the children to get going with the game from the comfort of their homes. The game uplifts the emotional and empathetic competencies of children with autism. In October 2015—October 2016, the app was used by seventy children with autism and the data received from the gameplay validated the app as a therapeutically applicable tool for autism-specific therapy (Dörner et al., 2016).

3. Improving sensitivity to eye gaze cues in autism using serious game technology (Scherf et al., 2018): The developers of the game designed an intervention game that uses the principles of serious games to train people with autism spectrum disorder (ASD) to realize that the eyes, and shifts in gaze specifically, provide information about the external world. The developers believe that this will increase understanding of gaze cues and attention to faces. In the phase I randomized control trial performed, it was found that the game can motivate and increase the skills of people with autism. Interactive Therapy System (ITS) and Sensory Integration Therapy (SIT) have been used in trying to figure out the designs of serious games. ITS is used to assist arm and hand function in children with motor impairment. This is beneficial to children who are diagnosed with autism, as many children with autism also show some degree of motor impairment. (Wille et al., 2009) looked at the use of virtual reality as pediatric ITS. SIT is another form of therapy that can be beneficial for those with ASD by training the processing of neurological information. (Iwanaga et al., 2014) investigated how effective SIT can be for children with high functioning ASD. In a study involving students diagnosed with ASD and Asperger's disorder, the children underwent either SIT or common group therapy (GT) to compare the two. Studies have shown that serious games are very promising in improving the learning experiences of people with ASD.

4. New Horizon game and the SpaceControl application (Carlier, Paelt, Ongenae, Backere, & Turck, 2020): This application aims at improving the lives of children having ASD and their parents by reducing stress and anxiety using the serious game New Horizon and a supporting parent application, SpaceControl. This application was developed considering the suggestions of therapists and according to the guidelines for e-health patient empowerment. It was observed that the game had some potential to reduce stress and anxiety among children having ASD. This game can also be used as a tool to develop more e-health applications that are geared toward treating children having ASD.

An example of a serious game that has been used to help people with Down's syndrome is Galaxy Shop (Salah, Abdennadher, & Atef, 2017). Galaxy Shop focuses on teaching people with Down's Syndrome the advanced numeracy skills needed for their daily life. It has proven to enhance independence in the different aspects concerning numeracy.

Serious games, as a virtual reality game called EnCity (Bourazeri, Bellamy-Wood, & Arnab, 2017) is also used to engage and encourage young people with Down's Syndrome to have more involvement in the community. By allowing players to complete mini-games that are related to everyday tasks, players gain the required training and encouragement to take part and lead a life without requiring help and support from families and friends.

The use of serious games to analyze Strengths, Weaknesses, Opportunities, and Threats (SWOT) while employing serious games among people with Alzheimer's disease and other related disorders (ADRD) has been systematically assessed (Robert et al., 2014). The aim was to identify practical means to develop serious games that are purposefully geared towards people suffering from this disease. It was found that, if properly developed, then serious games show great potential for people with ADRD. MinWii (Benveniste, Jouvelot, Pin, & Péquignot, 2012) is a serious video game for people having Alzheimer's and dementia. It is a music therapy-based game that aims to improve the self-image of the patient and reduce behavioral symptoms. In addition, (Shamsuddin, Lesk, & Ugail, 2011) also provides all the guidelines that the serious games targeted towards people having dementia must possess to provide an effective approach for early detection. The use of artificial intelligence in designing a serious game for people having Alzheimer's has been proposed (Imbeault, Bouchard, & Bouzouane, 2011). The game can provide an accessible tool for cognitive training and allow the player to estimate the in-game cognitive performance.

(Jaramillo-Alcázar et al., 2021) describes dyslexia as a cognitive disorder that affects the evolutionary ability of people to read, write, and speak. In designing serious games for people with dyslexia, three typical subcomponents of phonological deficits need to be considered: short-term and working phonological memory, Phonological Awareness, and Lexical Access. For children with dyslexia, it is especially important that when designing serious games, things like the font size/design, color patterns, word spacing, and writing style should always be put into consideration.

Serious games can assess the potential risk of Developmental Dyslexia (DD) in children and treat preschoolers who are at risk (Gaggi et al., 2017). This paper describes several games which train unique abilities in children which could benefit those with dyslexia. These games include "Paths", which train both central and peripheral vision by requiring the player to connect a green circle to a yellow circle by following other open circles, thus requiring

them to distinguish between different images quickly. Another similar game discussed in the paper is called "Local Visual Search," in which the player is shown an image at the start of the game session, which they must recognize and identify among other images. This game helps to train attention, as well as associate different images, which are effective in both visual and auditory settings.

Serious games that would tailor specifically to the needs of children with ADHD would have to include things that are most likely to draw their attention. So, the games could be designed in bright and beautiful colors and objects just to attract the children to it. The games could also be designed in a way where the players could move around while playing them, so they do not lose focus while playing them.

One research paper (Crepaldi et al., 2020) goes over a serious game called Antonyms, which is a computer game for children with ADHD. The game allows the children to interact with environments in various scenarios and requires them to complete different activities based on their selected scenario. The game, therefore, benefited the children with ADHD by allowing them to stay more focused and engaged in the game to achieve fewer errors.

Discussion

Intellectual disability, as described in (Disabilities, n.d.), is "a disability characterized by significant limitations in both intellectual functioning and in adaptive behavior, which covers many everyday social and practical skills. This disability originates before the age of 22." Therefore, people with intellectual disabilities are found to have a lack of communication skills, self-care capabilities, social skills, academic skills, etc. (Katz & Lazcano-Ponce, 2008). Impulsive behavior, deficiency in discernment, and short attention span associated with slow learning are also characteristic features of people suffering from intellectual disabilities. Associated with all these are some comorbidities, such as mood and anxiety disorders and stress (Cooper et al., 2015). It is necessary to address these issues and pave some means and infrastructures that will help people suffering from intellectual disabilities to cope with the prevalent norms and standards of society. This will enable them to take care of their daily activities and promote independence.

The research works done on serious games about people with disabilities are few, but many of them yield similar results: that serious games have a positive future in the education sector and that more research needs to be done to ensure that the appropriate serious games are given to target audiences.

Serious games have been found to have some positive influences on people suffering from these kinds of disabilities. It has been found that serious

games help in acquiring basic skills of daily life (Lopez-Basterretxea, Mendez-Zorrilla, & Garcia-Zapirain, 2014). These kinds of games have been helpful, because of the stress-free environment it provides these people to undertake challenging activities at their own leisure and more often. This will, eventually, make the rehabilitation more intensive and successful (Sochocka, Mirocha, & Starypan, 2020). In the presence of a relatively stress-free environment, the learning process becomes more effective.

However, a lack of proper knowledge of the disabilities and their associated problems while designing the serious game can render an inefficient outcome of the game. The effectiveness of the serious games can be vastly improved when the caregivers and the educators employ a balanced approach when applying the game for serious health concerns (Graafland et al., 2014). It has been found that in elders, serious games are as effective as the conventional tests in improving the cognitive abilities (Kueider, Parisi, Gross, & Rebok, 2012) and much more effective in improving the neuropsychological abilities of patients with alcoholism over the conventional neuropsychological interventions (Gamito et al., 2014). As mentioned before, the application of serious games sounds promising, the Journal of Medical Internet Research ("Journal of Medical Internet Research," n.d.), and the Dutch Society for Simulation in Healthcare ("Dutch Society for Simulation in Healthcare - DSSH," n.d.) have already launched an international peer-reviewing initiative to assess the effectiveness of the serious games that are used in healthcare. The healthcare provider must ensure that the serious game suits the need of the user, and this can be done from the following five key areas (Graafland et al., 2014):

1. **Game description:** The developer must provide an adequate description of the target people for which the serious game applies. This will help the healthcare provider to make a sound assessment of the applicability of the game.
2. **Rationale:** This will provide information about how the game is going to address the problem which is developed within the people.
3. **Functionality:** This provides information about how the game can be played and how the instructions in the game are delivered to the user.
4. **Validity:** From this area, the degree to which the game claims to be successful for the problem must be discerned.
5. **Data protection:** It must be ensured that the gaming framework is adherent to the prevalent privacy standards for the user. This includes an assessment of how secure the server is that hosts the game and how securely the data is transmitted to and from the server and the medium used by the server, which is usually an electronic device.

An element of serious concern is, however, the limited accessibility of serious games. (Gentry et al., 2019) describes that research on the effectiveness of serious games has been primarily performed in high-income countries. Therefore, sufficient data on its effectiveness has not been gathered from the low-or middle-income countries. Educators, researchers, and other related professionals can think of new ways to make these games broadly accessible, especially in developing countries.

Conclusion

The domain of serious games is relatively new. The scientific community has identified the potential benefits of serious games in imparting knowledge and skills to the players. To that effect, several research groups have also conducted their in-house study to test the feasibility of serious games on people with cognitive and learning disabilities. Some results, as discussed before, strongly suggest that serious games can help in the daily activities of disabled people. Overall, it is becoming more obvious that more research needs to be done concerning serious games. There are not enough serious games that meet the specific requirements of each disability. While designing serious games, the learning requirements of people with disabilities need to be met. The increasing shift from traditional learning to more technological learning has also forced professionals to investigate serious games and their advantages. Using an electronic medium sometimes may pose certain difficulties in the study of the effectiveness of serious games in low-income countries. Once the research is extended into these countries, the collected data will provide a further clear and strengthened interpretation of the benefits of serious games for intellectually disabled individuals.

Acknowledgment

References:
1. Abt, Clark. C. (1970). *Serious Games*. doi: 10.1177/000276427001400113
2. Akiki, T. K. (2014). A review on effective teaching and learning in higher education. *European Scientific Journal, 10(*10).
3. Amar, S., & David, N. B. (2017). Future learning environments for tomorrow's schools. *European Scientific Journal, 13*(12). doi: 10.19044/esj.2017.v13n12p%p

4. Avila-Pesantez, D., Delgadillo, R., & Rivera, L. A. (2019). Proposal of a conceptual model for serious games design: A case study in children with learning disabilities. *IEEE Access*, *7*, 161017–161033. doi: 10.1109/access.2019.2951380

5. Bates, M. E., & Lemay, E. P. (2004). The d2 Test of attention: Construct validity and extensions in scoring techniques. *Journal of the International Neuropsychological Society*, *10*(3), 392–400. doi: 10.1017/s135561770410307x

6. Beaumont, R., & Sofronoff, K. (2008). A multi-component social skills intervention for children with Asperger syndrome: The junior detective training program. *Journal of Child Psychology and Psychiatry*, *49*(7), 743–753. doi: 10.1111/j.1469-7610.2008.01920.x

7. Benveniste, S., Jouvelot, P., Pin, B., & Péquignot, R. (2012). The MINWii project: Renarcissization of patients suffering from Alzheimer's disease through video game-based music therapy. *Entertainment Computing*, *3*(4), 111–120. doi: 10.1016/j.entcom.2011.12.004

8. Bergeron, B. (2006). *Developing Serious Games (Game Development Series)*. USA: Charles River Media, Inc.

9. Bourazeri, A., Bellamy-Wood, T., & Arnab, S. (2017). *EnCity: A Serious Game for Empowering Young People with Down's Syndrome*. 1–6. doi: 10.1109/segah.2017.7939267

10. Cacciattolo, K. (2015). An analysis of how people learn at the place of work .. *European Scientific Journal,* 11*(22).*

11. Cadieux, L., & Keenan, M. (2020). Can social communication skills for children diagnosed with autism spectrum disorder rehearsed inside the video game environment of minecraft generalize to the real world? *JMIR Serious Games*, *8*(2), e14369. doi: 10.2196/14369

12. Carlier, S., Paelt, S. V. der, Ongenae, F., Backere, F. D., & Turck, F. D. (2020). Empowering children with ASD and their parents: Design of a serious game for anxiety and stress reduction †. *Sensors*, *20*(4), 966. doi: 10.3390/s20040966

13. Cooper, S.-A., McLean, G., Guthrie, B., McConnachie, A., Mercer, S., Sullivan, F., & Morrison, J. (2015). Multiple physical and mental health comorbidity in adults with intellectual disabilities: population-based cross-sectional analysis. *BMC Family Practice*, *16*(1), 110. doi: 10.1186/s12875-015-0329-3

14. Crepaldi, M., Colombo, V., Mottura, S., Baldassini, D., Sacco, M., Cancer, A., & Antonietti, A. (2020). Antonyms: A computer game to improve inhibitory control of impulsivity in children with attention deficit/hyperactivity disorder (ADHD). *Information*, *11*(4), 230. doi: 10.3390/info11040230

15. Dewey, J. (1916). Democracy and education by John Dewey. *Project Gutenberg*. Retrieved from https://www.fulltextarchive.com/pdfs/Democracy-and-Education.pdf.

16. Dörner, R., Göbel, S., Effelsberg, W., & Wiemeyer, J. (Eds.). (2016). *Serious Games: Foundations, Concepts and Practice* (1st ed.). Cham: Springer. doi: 10.1007/978-3-319-40612-1

17. Effectively promote feelings and empathy in autism. (n.d.). Retrieved July 25, 2021, from https://www.zirkus-empathico.de/.

18. Erhel, S., & Jamet, E. (2013). Digital game-based learning: Impact of instructions and feedback on motivation and learning effectiveness. *Computers & Education*, *67*, 156–167. doi: 10.1016/j.compedu.2013.02.019

19. Flogie, A., Aberšek, B., Aberšek, M. K., Lanyi, C. S., & Pesek, I. (2020). Development and Evaluation of Intelligent Serious Games for Children With Learning Difficulties: Observational Study. *JMIR Serious Games*, *8*(2), e13190. doi: 10.2196/13190

20. Gaggi, O., Palazzi, C. E., Ciman, M., Galiazzo, G., Franceschini, S., Ruffino, M., … Facoetti, A. (2017). Serious games for early identification of developmental dyslexia. *Computers in Entertainment (CIE)*, *15*(2), 1–24. doi: 10.1145/2629558

21. Game makes teenagers with autism more independent. (n.d.). Retrieved July 20, 2021, from https://www.ranj.com/en/cases/game-makes-teenagers-with-autism-more-independent/.

22. Gamito, P., Oliveira, J., Lopes, P., Brito, R., Morais, D., Silva, D., … Deus, A. (2014). Executive functioning in alcoholics following an mHealth cognitive stimulation program: Randomized controlled trial. *Journal of Medical Internet Research*, *16*(4), e102. doi: 10.2196/jmir.2923

23. García-Redondo, P., García, T., Areces, D., Núñez, J. C., & Rodríguez, C. (2019). Serious games and their effect improving attention in students with learning disabilities. *International Journal of Environmental Research and Public Health*, *16*(14), 2480. doi: 10.3390/ijerph16142480

24. Gentry, S. V., Gauthier, A., Ehrstrom, B. L., Wortley, D., Lilienthal, A., Car, L. T., … Car, J. (2019). Serious gaming and gamification education in health professions: Systematic review. *Journal of Medical Internet Research*, *21*(3), e12994. doi: 10.2196/12994

25. González, J. L., Cabrera, M. J., & Gutiérrez, F. L. (2007). Using Videogames in Special Education. In M. D. R, P. F, & Q. A. A (Eds.), *Computer Aided Systems Theory -- EUROCAST 2007* (pp. 360–367). Berlin, Heidelberg: Springer Berlin Heidelberg. doi: 10.1007/978-3-540-75867-9_46

26. Graafland, M., Dankbaar, M., Mert, A., Lagro, J., Wit-Zuurendonk, L. D., Schuit, S., … Schijven, M. (2014). How to systematically assess serious games applied to health care. *JMIR Serious Games*, *2*(2), e11. doi: 10.2196/games.3825

27. Griffiths, M. D. (2002). The educational benefits of video games. *Education and Health*, *20*(3), 47–51.

28. Grynszpan, O., Weiss, P. L. (Tamar), Perez-Diaz, F., & Gal, E. (2014). Innovative technology-based interventions for autism spectrum disorders: A meta-analysis. *Autism*, *18*(4), 346–361. doi: 10.1177/1362361313476767

29. Hersh, M., & Leporini, B. (2018). Editorial: Serious games, education and inclusion for disabled people. *British Journal of Educational Technology*, *49*(4), 587–595. doi: 10.1111/bjet.12650

30. Hopkins, I. M., Gower, M. W., Perez, T. A., Smith, D. S., Amthor, F. R., Wimsatt, F. C., & Biasini, F. J. (2011). Avatar assistant: Improving social skills in students with an ASD through a computer-based intervention. *Journal of Autism and Developmental Disorders*, *41*(11), 1543–1555. doi: 10.1007/s10803-011-1179-z

31. Imbeault, F., Bouchard, B., & Bouzouane, A. (2011). Serious games in cognitive training for Alzheimer's patients. *2011 IEEE 1st International Conference on Serious Games and Applications for Health (SeGAH)*, 1–8. doi: 10.1109/segah.2011.6165447

32. Iwanaga, R., Honda, S., Nakane, H., Tanaka, K., Toeda, H., & Tanaka, G. (2014). Pilot study: Efficacy of sensory integration therapy for Japanese children with high-functioning autism spectrum Disorder. *Occupational Therapy International*, *21*(1), 4–11. doi: 10.1002/oti.1357

33. Jacob, U. S., & Olisaemeka, A. N. (2016). Inclusive education in the 21st century: Parameters and opportunities for learners with special needs. *European Scientific Journal, 12*(10), 188. doi: 10.19044/esj.2016.v12n10p188

34. Jaramillo-Alcázar, A., Venegas, E., Criollo-C, S., & Luján-Mora, S. (2021). An approach to accessible serious games for people with dyslexia. *Sustainability*, *13*(5), 2507. doi: 10.3390/su13052507

35. Jean, P. (1999). *Play, Dreams And Imitation In Childhood*. Routledge. doi: 10.4324/9781315009698

36. Katz, G., & Lazcano-Ponce, E. (2008). Intellectual disability: definition, etiological factors, classification, diagnosis, treatment and prognosis. *Salud Pública de México*, *50*, s132-41. doi: 10.1590/s0036-36342008000800005

37. Khowaja, K., Salim, S. S., & Al-Thani, D. (2018). Components to design serious games for children with autism spectrum disorder

(ASD) to learn vocabulary. *2018 IEEE 5th International Conference on Engineering Technologies and Applied Sciences (ICETAS)*, 1–7. doi: 10.1109/icetas.2018.8629208

38. Koh, C. (2020). A qualitative meta-analysis on the use of serious games to support learners with intellectual and developmental disabilities: What we know, what we need to know and what we can do. *International Journal of Disability, Development and Education*, 1–32. doi: 10.1080/1034912x.2020.1746245

39. Komolafe, A. F. (2018). The nexus between fatigue indices and coping strategies in sports among oyo state special athletes. *European Scientific Journal, 14*(1), 151. doi: 10.19044/esj.2018.v14n1p151

40. Korkmaz, B. (2011). Theory of mind and neurodevelopmental disorders of childhood. *Pediatric Research*, *69*(8), 101–108. doi: 10.1203/pdr.0b013e318212c177

41. Kueider, A. M., Parisi, J. M., Gross, A. L., & Rebok, G. W. (2012). Computerized cognitive training with older adults: A systematic review. *PLoS ONE*, *7*(7), e40588. doi: 10.1371/journal.pone.0040588

42. Lanyi, C. S., & Brown, D. J. (2010). Design of serious games for students with intellectual disability. *Proceedings of the 2010 International Conference on Interaction Design & International Development*, 44–54. Swindon, GBR: BCS Learning & Development Ltd. doi: 10.14236/ewic/ihci2010.6

43. Lanyi, C. S., Brown, D. J., Standen, P., Lewis, J., & Butkute, V. (2010). User interface evaluation of serious games for students with intellectual disability. *Computers Helping People with Special Needs*, 227–234. Berlin, Heidelberg: Springer Berlin Heidelberg. doi: 10.1007/978-3-642-14097-6_37

44. Lopez-Basterretxea, A., Mendez-Zorrilla, A., & Garcia-Zapirain, B. (2014). A telemonitoring tool based on serious games addressing money management skills for people with intellectual disability. *International Journal of Environmental Research and Public Health*, *11*(3), 2361–2380. doi: 10.3390/ijerph110302361

45. Malone, T. W. (1981). Toward a theory of intrinsically motivating instruction. *Cognitive Science*, *5*(4), 333–369. doi: 10.1016/s0364-0213(81)80017-1

46. Marenus, M. (2020). Gardner's Theory of Multiple Intelligences | Simply Psychology. Retrieved August 14, 2021, from Gardner's Theory of Multiple Intelligences website: https://www.simplypsychology.org/multiple-intelligences.html.

47. Marfisi-Schottman, I., George, S., & Tarpin-Bernard, F. (2010). *Tools and methods for efficiently designing serious games*. 226–234. Retrieved from https://www.scopus.com/inward/record.uri?eid=2-

s2.0-79960317843&partnerID=40&md5=3bd83224ba27f1896837654d0425c5b1.

48. Marne, B., Wisdom, J., Huynh-Kim-Bang, B., & Labat, J.-M. (2012). The Six Facets of Serious Game Design: A Methodology Enhanced by Our Design Pattern Library. *21st Century Learning for 21st Century Skills*, 208–221. Berlin, Heidelberg: Springer. doi: 10.1007/978-3-642-33263-0_17

49. Papert, S. (1988). Does Easy Do It? Children, Games, and Learning. *Game Developer Magazine*. Retrieved from http://papert.org/articles/Doeseasydoit.html.

50. Pierre-Louis, S. (2020). *Essential facts about the computer and video game industry* (p. 24). Entertainment Software Association. Retrieved from Entertainment Software Association website: https://www.theesa.com/wp-content/uploads/2020/07/2020-ESA_Essential_facts_070820_Final_lowres.pdf.

51. Premack, D., & Woodruff, G. (1978). Does the chimpanzee have a theory of mind? *Behavioral and Brain Sciences*, *1*(4), 515–526. doi: 10.1017/s0140525x00076512

52. Qin, J., Chui, Y.-P., Pang, W.-M., Choi, K.-S., & Heng, P.-A. (2010). Learning blood management in orthopedic surgery through gameplay. *IEEE Computer Graphics and Applications*, *30*(2), 45–57. doi: 10.1109/mcg.2009.83

53. Ricciardi, F., & Paolis, L. T. D. (2014). A comprehensive review of serious games in health professions. *International Journal of Computer Games Technology*, *2014*, 1–11. doi: 10.1155/2014/787968

54. Rice, J. W. (2012). The gamification of learning and instruction: Game-based methods and strategies for training and education. *International Journal of Gaming and Computer-Mediated Simulations (IJGCMS)*, *4*(4), 81–83. doi: 10.4018/jgcms.2012100106

55. Robert, P. H., König, A., Amieva, H., Andrieu, S., Bremond, F., Bullock, R., … Manera, V. (2014). Recommendations for the use of Serious Games in people with Alzheimer's Disease, related disorders and frailty. *Frontiers in Aging Neuroscience*, *6*, 54. doi: 10.3389/fnagi.2014.00054

56. Robertson, G. L., & Hix, D. (2002). Making the computer accessible to mentally retarded adults. *Communications of the ACM*, *45*(4), 171–183. doi: 10.1145/505248.506006

57. Salah, J., Abdennadher, S., & Atef, S. (2017). Galaxy shop: Projection-based numeracy game for teenagers with Downs Syndrome. *Serious Games*, 109–120. Cham: Springer International Publishing. doi: 10.1007/978-3-319-70111-0_10

58. Scherf, K. S., Griffin, J. W., Judy, B., Whyte, E. M., Geier, C. F., Elbich, D., & Smyth, J. M. (2018). Improving sensitivity to eye gaze cues in autism using serious game technology: study protocol for a phase I randomised controlled trial. *BMJ Open*, *8*(9), e023682. doi: 10.1136/bmjopen-2018-023682

59. Shamsuddin, S. W., Lesk, V., & Ugail, H. (2011). Virtual environment design guidelines for elderly people in early detection of dementia. *Zenodo*, *5*, 603–607. doi: 10.5281/zenodo.1054980

60. Sharifzadeh, N., Kharrazi, H., Nazari, E., Tabesh, H., Khodabandeh, M. E., Heidari, S., & Tara, M. (2020). Health education serious games targeting health care providers, patients, and public health users: Scoping review. *JMIR Serious Games*, *8*(1), e13459. doi: 10.2196/13459

61. Sochocka, A., Mirocha, J., & Starypan, R. (2020). Serious games as an aid in the development of people with intellectual disabilities. *Bio-Algorithms and Med-Systems*, *16*(1), 20190055. doi: 10.1515/bams-2019-0055

62. Starks, K. (2014). Cognitive behavioral game design: a unified model for designing serious games. *Frontiers in Psychology*, *5*, 28. doi: 10.3389/fpsyg.2014.00028

63. Stokes, B. (2005). Videogames have changed: time to consider 'Serious Games'? *The Development Education Journal*. Retrieved from http://hdl.handle.net/1961/auislandora:63571

64. Svestkova, O., & Sladkova, P. (2015). System of prevocational rehabilitation in the Czech Republic. *European Scientific Journal, 11*(10).

65. Tanaka, J. W., Wolf, J. M., Klaiman, C., Koenig, K., Cockburn, J., Herlihy, L., … Schultz, R. T. (2010). Using computerized games to teach face recognition skills to children with autism spectrum disorder: the Let's Face It! program. *Journal of Child Psychology and Psychiatry*, *51*(8), 944–952. doi: 10.1111/j.1469-7610.2010.02258.x

66. Tomé, R. M., Pereira, J. M., & Oliveira, M. (2014). Using serious games for cognitive disabilities. *Serious Games Development and Applications*, 34–47. Cham: Springer. doi: 10.1007/978-3-319-11623-5_4

67. Torrente, J., Blanco, Á. del, Moreno-Ger, P., & Fernández-Manjón, B. (2012). Designing serious games for adult students with cognitive disabilities. In T. Huang, Zhigang Zeng, Chuandong Li, & Chi Sing Leung (Eds.), *Neural Information Processing* (pp. 603–610). Berlin, Heidelberg: Springer. doi: 10.1007/978-3-642-34478-7_73

68. Tsikinas, S., & Xinogalos, S. (2018). Designing effective serious games for people with intellectual disabilities. *2018 IEEE Global*

Engineering Education Conference (EDUCON), 1896–1903. doi: 10.1109/educon.2018.8363467

69. Tsikinas, S., & Xinogalos, S. (2019). Studying the effects of computer serious games on people with intellectual disabilities or autism spectrum disorder: A systematic literature review. *Journal of Computer Assisted Learning*, *35*(1), 61–73. doi: 10.1111/jcal.12311

70. Wainer, A. L., & Ingersoll, B. R. (2011). The use of innovative computer technology for teaching social communication to individuals with autism spectrum disorders. *Research in Autism Spectrum Disorders*, *5*(1), 96–107. doi: 10.1016/j.rasd.2010.08.002

71. Whyte, E. M., Smyth, J. M., & Scherf, K. S. (2015). Designing serious game interventions for individuals with autism. *Journal of Autism and Developmental Disorders*, *45*(12), 3820–3831. doi: 10.1007/s10803-014-2333-1

72. Wille, D., Eng, K., Holper, L., Chevrier, E., Hauser, Y., Kiper, D., … Meyer-Heim, A. (2009). Virtual reality-based pediatric interactive therapy system (PITS) for improvement of arm and hand function in children with motor impairment—a pilot study. *Developmental Neurorehabilitation*, *12*(1), 44–52. doi: 10.1080/17518420902773117

73. Yusoff, A., Crowder, R., Gilbert, L., & Wills, G. (2009). *A Conceptual Framework for Serious Games*. 1–4. doi: 10.1109/icalt.2009.19

74. Zhonggen, Y. (2019). A meta-analysis of use of serious games in education over a decade. *International Journal of Computer Games Technology*, *2019*, 1–8. doi: 10.1155/2019/4797032

75. Zulueta, A., Díaz-Orueta, U., Crespo-Eguilaz, N., & Torrano, F. (2018). Virtual reality-based assessment and rating scales in ADHD diagnosis. *Psicología Educativa*, *25*(1), 13–22. doi: 10.5093/psed2018a18

Challenges Caused by the COVID-19 Quarantine for Families Raising Children with Disabilities: Compatibility Between Working from Home and Childcare

Laura Gardziuleviciene, MA
Association "Help the Children", Lithuania
Agota Giedre Raisiene, Prof. Dr.
Klaipėda University, Lithuania

Abstract
Parents with children having special needs go through extremely difficult emotional, psychological experiences and physical fatigue due to unavailability of help and lack of access to social services. The COVID-19 pandemic has worsened the situation since the need for cohesion and the importance of social responsibility were not addressed well by the public authorities. The unavailability of help is believed to have plunged parents even further into exclusion. If before the pandemic, parents felt stigmatized, the situation after the COVID-19 pandemic became significantly worse. Thus, with the help of the phenomenological research, we aimed to reveal the challenges faced by families raising children with disabilities in combining aspects of work and childcare, by analyzing the attitudes and experiences of the respondents. The study is relevant for both public authorities and parents raising children with special needs in the context of developing social inclusion and family support network respectively.

Keywords: Working from home; childcare; parents of disabled children; COVID-19 challenges

Introduction

The COVID-19 quarantine and its impact on humanity is a unique phenomenon (Durosini, Triberti, Savioni, & Pravettoni, 2020). The government representatives kept people informed on the COVID-19 pandemic, rigorous restrictions were put into place, where people were encouraged to keep physical distance, wear masks, avoid communicating with more than several households (Nwachukwu, 2021). Due to limitations in physical contact, child daycare centers, child busyness centers, and other institutions providing services to children and their families were forced to close (Gadermann, Thomson, Richardson, Gagné, McAuliffe, Hirani & Jenkins, 2021). Having closed elementary schools, children required care at home, and this inevitably increased the burden for their parents (Yamamura & Tsustsui, 2021). A very difficult challenge proved to be the remote learning for children when parents needed to become more involved in the child's educational environment and at the same time combine their job and childcare commitments.

There is evidence that the COVID-19 pandemic caused social isolation (e.g., Dukes & Berlingo, 2020; Cheng, Mendolia, Paloyo, Savage, & Tani, 2021; Berard, Rattaz, Peries, Loubersac, Munir, & Baghdadli, 2021). The pandemic especially sharpened the situation for people with disabilities, including challenges with availability of help and assistance, and lack of social inclusion. Families raising children with disabilities experienced a lot of negative impacts due to the unavailability of help (Yates & Dickinson, 2021). Mothers, in particular, were involved more in family support processes by organizing remote learning, carrying out childcare, household chores all the while having commitments in their jobs, which caused an emergence of stress, fatigue, and disappointment (Neece, McIntyre & Fenning, 2020; Hjálmsdóttir & Bjarnadóttir, 2021). During quarantine, only a minority of parents were able to get involved in new activities, change jobs, solve existential crises, and experience emotional well-being, e.g., taking part in altruistic activities (Durosini et al., 2020).

As research shows, long-term isolation at home may have a long-term negative impact on families' emotional wellbeing, especially in families raising children with special needs (Shorey, Lau, Tan, Debby & Ramkumar, 2021). The availability of social integration for families with members having special needs was obvious even before the pandemic. However, COVID-19 has shown just how big the exclusion of disabled people is during times of cataclysm (Blanck, 2020). Normally, politicians declare an effort to provide institutional help for the most socially vulnerable groups. Nevertheless, during the pandemic, people with disabilities remained outside of the government's focus. The disabled and their family members were left isolated two-fold: on the one hand, naturally isolated due to their disability, on the other hand, due

to the government's instructions to close all social service institutions and the requirement for all citizens to remain home, limiting their social circle to a minimum. COVID-19 has revealed that governmental institutions are not prepared to apply means of social assistance in critical circumstances. Nevertheless, only assumptions can be made about the real work and life experience of parents with disabled children during the pandemic due to a lack of research on the problem. In this regard, our study aims to disclose the challenges of combining remote work and caring for a child with disabilities. A semi-structured interview method was used to find out the experiences of the informants without limiting their expression of opinion and not directing the respondents to answer with closed-type questions.

The article consists of four parts: a review of research on the challenges of families raising children with disabilities during the COVID-19 quarantine; aspects of compatibility between childcare and remote work in the context of COVID-19 pandemic; the methodology of empirical study, and the analysis of the interview results. At the end of the article, findings are set out.

Social exclusion during the COVID-19 quarantine

COVID-19 pandemic has made an already difficult situation and lack of availability of help for people with disabilities even more acute. Earlier pandemics have shown that public health problems and social exclusion are especially exposed during huge epidemics and influence the evolution of humanity (Yates & Dickinson, 2021). The COVID-19 pandemic has strengthened social inequality and exposed the lack of effectiveness of the assistance system. Research shows that political measures dedicated to fighting COVID-19, i.e., closed institutions, remote work, etc. conform to social isolation (Cheng et al., 2021). Government representatives who influence social policy and make responsible decisions did not contribute to creating an inclusive society in their countries (Blanck, 2020). What is more, though social issues require more financial and human resources in crisis time, additional funding from the budget and other financial support was redirected to support businesses.

Scientists have determined that people who are left excluded from society due to their special needs are more affected by stress, which negatively influences also the health and behavior of their family members(Rigles, 2019). A margin between active society and vulnerable social groups is ever increased in the time of the pandemic (Dukes & Berlingo, 2020). Long-term isolation at home causes long-term effects that have a significant impact on the emotional well-being of families, especially those raising children with disabilities (Shorey et al., 2021). Parents' social isolation directly affects the disabled child's development regardless of the type of disability Nevertheless, inadequate behavior is mostly observed in children with psychosocial

disabilities. Educating parents on the aspects of their child's disability and collaboration with children's health and education professionals is no less important than diagnosing the child and appointing appropriate treatment (McConnell & Savage, 2015; McConkey, Ohagan, & Corcoran, 2021). To ensure the successful functioning of the family, a balance in all areas of life is key. Here, the way to improve the well-being of parents with disabled children as well as to reduce their stress and fatigue is psychosocial support.

In 2010, Lithuania ratified a United Nations Convention on the Rights of Persons with Disabilities, committing to create conditions and ensure availability for people with disabilities and their families to actively participate in education, culture, healthcare, labor market, and other societal processes. Nevertheless, social exclusion remains one of the fundamental issues for families raising children with disabilities, caused by a negative attitude towards them, condemnation, pity, and similar reactions from society. Such attitude influences the manifestation of the feeling of guilt in parents, which is caused by unpredictable child behavior and negative reactions from bystanders. As a result, parents usually choose exclusion and less participate in public life (McGarty, 2020). Limited accessibility of help and untimely psychosocial help to parents with disabled children negatively influence their life quality and reduce their participation in public life. During the COVID-19 pandemic, all families survived difficult moments, but the situation was more extreme in families raising children with more severe disabilities.

Challenges of families raising children with special needs during COVID-19 quarantine

The pandemic unbalanced the everyday life of families, which was evident by worsened mental health and stress due to social isolation (Cost, Crosbie, Anagnostou, Birken, Charach, Monga, Kelley, Nicolson, Maguire, Burton, Schachar, Arnold & Korczak, 2021). The entire world needed to adapt to the new situation because of the widespread virus. Research has shown that in the United Kingdom, 28 percent of parents who were quarantined were diagnosed with mental disorders, compared to 6 percent of those who did not experience hard quarantine restrictions (Nwachukwu, 2021). Families raising children with disabilities often benefit from various services which were disrupted during the pandemic, resulting in these families experiencing an extremely negative impact due to the lack of help availability.

The COVID-19 pandemic caused psychosocial consequences which outside of the quarantine period were addressed to and resolved by mental health specialists or social service institutions (Nwachukwu, 2021). Because of quarantine, a necessity of remote services was evident as parents raising children with disabilities were only ensured with partial service availability and continuity (Shorey et al., 2021). During the pandemic, children spent a

significant amount of time using digital technologies. Meanwhile, parents aimed to ensure the family's emotional stability and children's mental health, thus they needed to discover ways to control negative emotions, maintain adequate levels of physical activity and keep up the family members' motivation (Shuai, He, Zheng, Wang, Qiu, Xia, Cao, Lu, & Zhang, 2021). During the COVID-19 outbreak, changes in families were observed. Parents, especially mothers, dedicated more time for childcare and less to their personal needs (Ribeiro, Janzen, Passarini & Vanzella, 2021; Papadopoulos, 2021). During the COVID-19 pandemic, more than 300 million people needed to participate in remote learning (Alsadoon & Turkestani, 2020). Parents had to assist children with their education processes, requiring combining this assistance with their own job commitments and housework. Quarantine disrupted systems that allowed to maintain the mental health and emotional wellbeing of families (Gadermann et al., 2021). The quarantine restrictions were only softened in some countries (Wilson, 2020). However, even in these countries, e.g., in France, people with disabilities could not receive governmental institution services on their full scale: around a third of these people remained at home and kept compliant with safety requirements and recommendations (Berard et al., 2021).

According to research, public politics and education representatives had to foresee the measures and decisions which would balance out the risk of infection and allow children to learn at school, as remote learning caused deterioration of children's mental health (Cost et al., 2021; Sieberer, Kaman, Erhart, Devine, Schlack & Otto, 2021; Shorey et al., 2021). The pandemic has clearly shown that even economically developed countries, such as the United States of America are not fully prepared for extreme situations, especially handling the difficulties experienced by citizen groups with partial possibilities (Baweja et al., 2021).

Researchers determined five aspects that had the biggest impact on people's mental health during quarantine. These are the following: i) length of quarantine; ii) fear of infection; iii) frustration and boredom; iv) insufficient resources; v) lack of information (Durosini et al., 2020; Brooks, Webster, Smith, Woodland, Wessely & Greenberg, 2020). Some of these aspects depend on every individual while others are closely related to opportunities provided by the individual's environment. In Lithuania, for example, people with disabilities were unable to participate in some busyness activities, while children with special needs could not attend educational institutions for almost the whole pandemic (Resolution of the Government of the Republic of Lithuania No. 1226, 4th of November 2020 "On the announcement of quarantine in the territory of the Republic of Lithuania"). A period like this lasted more than six months. Parents who decided against letting their children with disabilities attend education institutions could apply for a certificate of

incapacity or received unemployment checks. Families raising children with disabilities were provided with medical, social, and education services. Assistance was oriented to particular segments which better respond to a child's needs. However, to take care of the child, complex help is required for parents as well. Even before the pandemic, families raising children with disabilities faced a lack of availability and accessibility of individual help, and lack of information in Lithuania though families have the right to address governmental institutions for assistance and necessity of one or another service according to legal documents. Therefore, the COVID-19 pandemic has highlighted the severity of problems of social exclusion for families raising children with disabilities.

Working from home and childcare in the context of the COVID-19 pandemic

Parents' participation in the labor market directly affects the family's emotional wellbeing (Stefanidis & Strogilos 2020). During the pandemic, remote work has become a challenge due to altered work conditions (Zamarro & Prados, 2021). Working from home changed people's daily routine, home environment, and busyness.

During the COVID-19 pandemic, education, health management, hobbies, and sports, leisure activities became very limited or completely unavailable (Durosini et al., 2020). Families experienced anxiety about possible financial instability as not all employers could offer the possibility to work remotely. Moreover, some of the employers relieved laid off their employees when the company's activities stopped (Baweja et al., 2021). It was natural that working people who have children experienced more financial challenges compared to childless people. Nevertheless, the most difficult situation fell upon people with children who lost their jobs.

A huge challenge for parents proved to be remote learning (Baweja et al., 2021). Parents had to learn to manage their time and energy resources more effectively. Although in most of the countries, children with disabilities were allowed to learn in the contact method, families whose children had additional diseases, or a compromised immune system avoided using services that required physical contact to prevent being infected with the virus. Therefore, family members were the ones responsible for educating, caring for the child with a disability, and meeting the child's other needs.

It is significant to highlight that grandparents have a high impact on households and contribute to the economic, social, and emotional life of the family by participating in childcare (Cantillon, Moore & Teasdale, 2021). Before the pandemic, grandparents helped with caring for children with disabilities. However, during the pandemic, family members that were not a part of the same household could not participate in childcare anymore. The

pandemic increased differences between genders regarding childcare and even more burdened people that not only worked remotely but also carried the responsibility for the household (Yamamura & Tsustsui, 2021). Mothers take upon the burden of working from home and caring for children while fathers are keener on working at the office and contribute less to childcare (Cheng et al., 2021). Mothers organize the daily routine, which included combining their children's remote learning, childcare, and household chores, which resulted in the emergence of stress, fatigue, and frustration (Neece et al., 2020; Hjálmsdóttir & Bjarnadóttir, 2021). Increased burned caused stress not only for the woman but for her whole family (Yamamura & Tsustsui, 2021; Fodor, Gregor, Fodor, et al., 2021). During quarantine, only a small portion of parents was able to participate in new activities, switch jobs, spend more time with their families, see deeper into children's needs, and survive existential crises (Durosini et al., 2020).

Compatibility of work and childcare during quarantine has become a complicated process for families with children that develop regularly. However, it has become extremely hard for families raising children with disabilities.

Research methodology

The research data was gathered using a semi-structured interview. The phenomenological approach was chosen because the struggles of families where one or more members have disabilities are poorly researched in the context of the pandemic.

In the research, parents with disabled children were interviewed. A mandatory condition to participate in the research was that at minimum one of the parents have a part-day or full-day job. Respondents were invited to participate in the research via special groups in social media using the snowball method. This method was chosen to ensure that any parent who has disabled children in Lithuania could have an opportunity to be selected into the sample of the research. The limitations of the research sample were only caused by the willingness of the potential respondents – people were asked to participate in the research voluntarily.

Thus, the selection of research participants was based on three criteria: 1) one or more children with disabilities in the family; 2) at least one of the parents being employed; 3) children in the family are of school age and were learning from home during quarantine. All these criteria were met by fifteen families that agreed to share their experiences.

The age of the informants was from 26 to 47 years. Eight of the questioned families raise two children, three families raise three or more children, and four families raise one child with special needs who requires special care.

The interview data was gathered via direct and remote meetings and phone calls. The average length of an interview was 40 minutes. To ensure confidentiality, the informants' names were replaced with codes. The informants' characteristics are presented in Table 1.

Table 1. Sociodemographic characteristics of the informants.

Code	Gender	Age	Both parents working	Working parent	Work nature
S1	Female	40		father	mental
S2	female	26	+		physical
S3	Female	40	+		mental
S4	Female	39	+		mental
S5	Female	37	+		mental
S6	Male	42	+		physical - mental
S7	Female	38	+		mental
S8	Female	30	+		physical - mental
S9	Female	27		father	physical
S10	Male	45	+		mental
S11	Male	46	+		mental
S12	Female	46		father	physical - mental
S13	Female	26		mother	mental
S14	Female	32	+		physical
S15	Female	47		mother	mental

Source: the authors' research.

All research participants were informed about the goal of the research, use of their data, and assurance of confidentiality. During the research, the anonymity of data was ensured, and principles of voluntary participation, privacy, confidentiality, and personal respect were followed.

After the interview, the gathered data was transcribed, analysed, and formed into semantic units, then, grouped into categories and subcategories. The conclusions were formed using the inductive method.

Analysis

The interview results have shown that during quarantine, role conflict has become more severe. Families were affected by both external pressure and internal contradictions. Due to pressure from employers and children's educational institutions, as well as because of lost access to the majority of social help services which before the pandemic were provided by special institutions, parents experienced internal tensions when deciding which of the two most important roles to take on – employee or parent. In cases of more complex children's disabilities, remote work and childcare were completely incompatible, according to the interviewed. Therefore, one of the parents usually had to sacrifice the job to take care of their child.

Table 2. Compatibility of work and childcare during the COVID-19 pandemic.

Category	Subcategories	Supporting statements
Compatibility of remote work and childcare	Role conflict: parents or employees?	*"<...> I missed the understanding that there was a disabled child at home and both parents are working. In general, no one took working parents into consideration, only insisted on parents to teach their children while only giving instructions remotely" (S8)*
		"<...> it is difficult to combine remote education, child's development, exercise, work and on top of that, find time to rest" (S14)
		"<...> the most difficult part was that the workday did not have clear working hours, most important and difficult tasks were postponed to the night, when it is possible to focus, work in silence. During the day, as a mother I felt stressed out because everyone's needs had to be met, daily routine kept (returning from work, cooking etc.)" (S14)
		"<...> me and my husband shared childcare half a day each. In the morning, I was at work and after lunch, my husband was at work" (S2)
		"<...> the lack of childcare services was very evident, as one cannot take care of the child with quality while working, you are only meeting his physical needs as you don't have any time to even think about his education and development" (S5)
		"<...> it was extremely difficult to combine work and childcare" (S6)
		"<...> one of the parents has to make a sacrifice, as work and caring for a child with a disability are completely incompatible. I applied for incapacity for work and we obviously felt it financially" (S12)
		"<...> I stayed at home with the children to allow my husband to work full-time" (S2)
	Increased burden of personal responsibilities due to the closure of education and social care institutions	*"<...> continuous sitting at home with children where you not only have to be a mother, but also a teacher and have to take care of everything... And also, a little daughter who requires full assistance, drains you both physically and emotionally"(S9)*
		"<...> no one took working parents into consideration, only insisted on parents teaching the child while only giving instructions remotely" (S10)

Source: the authors' research.

The interview has shown that in families where only one parent is working and the other is taking care of the child, parents experience psycho-emotional separation. The especially complicated situation was faced by

parents raising children with psychosocial disabilities. These children require constant care and special attention. The tension, stress, fatigue, and <u>guilt</u> felt by the parents raised significant challenges for the emotional stability of the whole family. Meanwhile, families, where both parents were working during quarantine, did not feel a destructive effect on their relationships but only mentioned increased social isolation. Therefore, having a job bears not only financial security for parents raising children with disabilities. Unfortunately, during the COVID-19 pandemic, families with disabled children experienced increased social exclusion, psycho-emotional and physical fatigue, relationship issues due to the unavailability of social help.

Table 3. The impact of quarantine on the psycho-emotional wellbeing of parents raising children with disabilities.

Category	Subcategories	Supporting statements
The lack of social help	Social exclusion	*"<...> during quarantine, I understood that work for me is an opportunity to get out of home, change environment and run away from daily routine " (S3)*
		"<...> I miss colleagues, morning coffee gatherings. Work is a great opportunity to get out of home routing and change environment. I could not work remotely all the time; it is exhausting and separates me from people"(S1)
		"<...> during quarantine, we received no help from the municipality or school. Even while we were sick with coronavirus"(S5)
	Psycho-emotional fatigue	*"<...> I was always afraid my daughter would not survive being infected. Her immune system is very weak" (S15)*
		"<...> I lacked quality rest and sleep, change of environment, and some time only for myself. I would have also been very grateful for help with tidying up the home. " (S2)
		"<...> I had to take sedatives as psychological tension was unbearable, I sought specialists' help " (S7)

Source: the authors' research.

During quarantine, unusual challenges were caused by remote learning. Education of normal development children was transferred to remote learning on a somewhat full scale. However, the education of children with disabilities was transferred to their parents. Some parents were infected with coronavirus or had to self-isolate but did not receive any help from the pedagogues even in that case.

Children with disabilities also lacked healthcare and special help during quarantine, which is especially important to the child's development.

Table 4. Lack of education and healthcare services for children with disabilities.

Category	Subcategories	Supporting statements
Necessity of services for the child	Education	*"<...> education was not carried out, maybe due to our fault as we did not educate our child on our own "* (S10)
		"<...> it was very difficult, especially for my daughter with special needs. I applied for incapacity for work in order to assist with education processes"(S4)
		"<...> I felt guilty that due to the amount of work I could not provide my child with enough attention and his education did not take place" (S7)
	Special help	*"<...> we really lacked procedures and occupations for the child which were discontinued due to COVID-19 both at school and town's education center " (S12)*
		"<...> we require constant services from a physiotherapist, occupational therapist, music therapist, psychologist and speech therapist. We only had one meeting a year and they are mandatory for the child's development" (S7)

Source: the authors' research.

However, in some cases, the pandemic brought positive consequences. The changes happening in the world forced people to slow down the pace of life and spend more time with their families: "*<...> it seems that I can fit a lot in my day. Simple things started to make me happy – a short walk, driving somewhere, coffee in the car. I think that there were not a lot of education in my time with children, but we spent our time together nicely…*" (S5). People going through difficult experiences often experience existential changes and internal transformations. The informants in our research state that "*<...> in spring, when full quarantine was announced and we had to educate our child at home, I found that there is more time for the child's needs, I better knew my child…*" (S13); "*<...> we spent more time with the family…*" (S10).

In conclusion, both negative and positive aspects influenced the informants' compatibility between work and childcare during COVID-19.
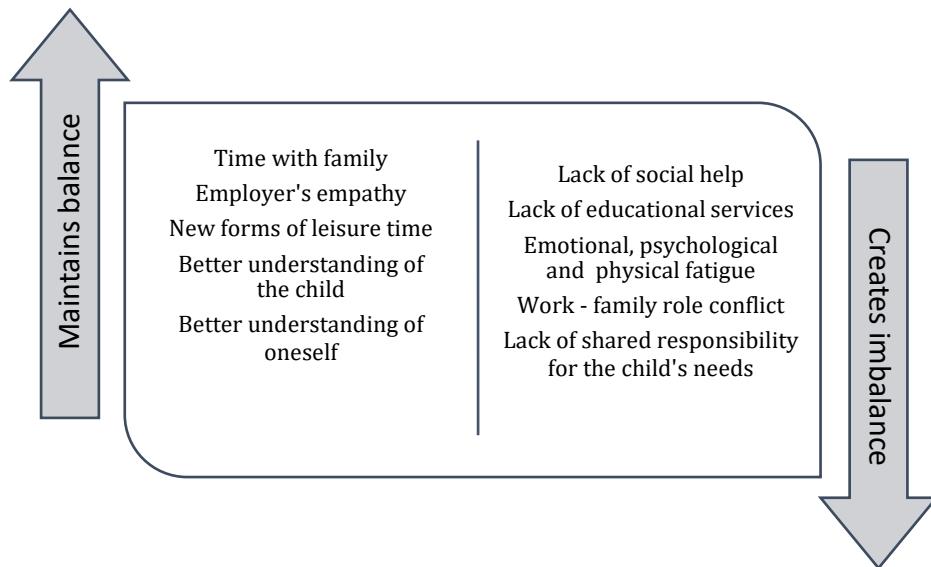
Picture 1. Aspects influencing the compatibility between work from home and caring for children with disabilities.
Source: the authors.

COVID-19 has highlighted the complex situation of families raising children with disabilities and the unpreparedness of governmental institutions to help parents in an extreme situation.

Conclusion

COVID-19 pandemic is an extremely difficult period for families with disabled children. Families where one or more children have special needs experience bigger physical, emotional, and psychological fatigue than typical development children having families. Our research revealed that in the time of quarantine, parents' responsibilities and duties dramatically increased whereas families' daily routines became significantly unbalanced. The research shows that childcare duties and working from home are almost incompatible as a child with disabilities requires special attention and care.

The research has determined that parents' participation in the labor market reduces the risk of social exclusion: having a job is not only required to ensure financial stability but also increases the family's wellbeing.

The situation when social services were unavailable during quarantine most negatively impacted families raising children with psycho-social disabilities. The informants' experiences have revealed that the education of children with severe disabilities or very high special needs was left completely for the parents to carry out.

According to our research, parents found positivity in the changed situation at the start of the COVID-19 pandemic. At the beginning of the quarantine, some families were happy with the opportunity to spend more time with their children and better understand their children's needs. However, with time these families began to feel the negative consequences of social isolation as well especially the consequences of the unavailability of social services.

Our study does not claim to draw broad conclusions; however, the insights of the research can be seen as a step towards a better understanding of how families with disabled children live in the time of the current cataclysm. The key message of our study is that if social policymakers do not take into account the situation of families with disabled children, with the continuation of the pandemic and the lack of necessary social assistance, this social group may experience a complete collapse as economically viable members of society.

References:

1. Alsadoon, E., Turkestani, M. (2020). Virtual Classrooms for Hearingimpaired Students during the COVID19 Pandemic. *Romanian Journal for Multidimensional Education*, 12(1), 1-8. DOI:10.18662/rrem/12.1sup2/240.
2. Baweja, R., Brown, S.L., Edwards, E.M., & Murray, M.J. (2021). COVID-19 Pandemic and Impact on Patients with Autism Spectrum Disorder. *Journal of Autism and Developmental Disorders.* DOI: https://doi.org/10.1007/s10803-021-04950-9.
3. Berard, M., Rattaz, C., Peries, M., Loubersac, J., Munir, K., & Baghdadli, A. (2021). Impact of containment and mitigation measures on children and youth with ASD during the COVID-19 pandemic: Report from the ELENA cohort. *Journal of Psychiatric Research*, 137, 73–80. DOI: https://doi.org/10.1016/j.jpsychires.2021.02.041.
4. Blanck, P. (2020). Disability Inclusive Employment and the Accommodation Principle: Emerging Issues in Research, Policy, and Law. *Journal of Occupational Rehabilitation*, 7(30), 505–510. https://doi.org/10.1007/s10926-020-09940-9.
5. Brooks, S. K., Webster, R. K., Smith, L. E., Woodland, L., Wessely, S., & Greenberg, N. (2020). The psychological impact of quarantine and how to reduce it: rapid review of the evidence. *The Lancet*, 395, 912 – 920. DOI: https://doi.org/10.1016/S0140-6736(20)30460-8 PMID: 32112714.
6. Cantillon, S., Moore, E., & Teasdale, N. (2021). COVID-19 and the Pivotal role of Grandparents: Childcare and income Support in the UK and South Africa. *Feminist Economics*, 27(1-2), 188-202. DOI: 10.1080/13545701.2020.1860246.

7. Cheng, Z., Mendolia, S., Paloyo, A.R., Savage, D.A., & Tani, M. (2021). Working parents, financial insecurity, and childcare: mental health in the time of COVID-19 in the UK. 13. *Review of Economics of the Household*, 19, 123–144. DOI: https://doi.org/10.1007/s11150-020-09538-3.

8. Cost, K.T., Crosbie, J., Anagnostou, E., Birken, C.S., Charach, A., Monga, S., Kelley, E., Nicolson, R., Maguire, J.L., Burton, Ch. L., Schachar, R. J., Arnold, P.J., & Korczak, D.J. (2021). Mostly worse, occasionally better: impact of COVID-19 pandemic on the mental health of Canadian children and adolescents. *European Child & Adolescent Psychiatry*. DOI: https://doi.org/10.1007/s00787-021-01744-3.

9. Durosini, I., Triberti, S., Savioni, L., & Pravettoni, G. (2020). In the eye of a quiet storm: A critical incident study on the quarantine experience during the coronavirus pandemic. *PLoS ONE*, 16(2), e0247121. DOI: https://doi.org/10.1371/journal.pone.0247121.

10. Fodor, E., Gregor, A., Koltai, J., Kováts, E. (2021). The impact of COVID-19 on the gender division of childcare work in Hungary. *European Societies*, 23, 1. DOI: https://doi.org/10.1080/14616696.2020.1817522.

11. Gadermann, A. C., Thomson, K.C., Richardson, Ch. G., Gagné, M., McAuliffe, Hirani, S., & Jenkins, E. (2021). Examining the impacts of the COVID-19 pandemic on family mental health in Canada: findings from a national cross-sectional study. *BMJ Open*, 11:e042871. DOI:10.1136/bmjopen-2020-042871 1.

12. Hjálmsdóttir, A., Bjarnadóttir, V. S. (2021). "I have turned into a foreman here at home": Families and work–life balance in times of COVID-19 in a gender equality paradise. *Gender Work and Organization*, 28, (1), 68–283. DOI: 10.1111/gwao.12552.

13. *Lietuvos Respublikos Socialinių paslaugų įstatymas*. 2006 m. sausio 19 d. Nr. X-493. Available at: https://e-seimas.lrs.lt/portal/legalAct/lt/TAD/TAIS.270342

14. McConkey, R., Ohagan, P. & Corcoran, J. (2021). The need for and the impact of a family-centred intervention for parents of children with developmental disabilities: A model project in rural Ireland, in *Proceedings of the 3rd International Electronic Conference on Environmental Research and Public Health —Public Health Issues in the Context of the COVID-19 Pandemic*, MDPI: Basel, Switzerland, doi:10.3390/ECERPH-3-09023

15. McConnell, D. & Savage, A. (2015). Stress and Resilience Among Families Caring for Children with Intellectual Disability: Expanding

the Research Agenda. *Current Developmental Disorders Reports*, 2, 100–109 https://doi.org/10.1007/s40474-015-0040-z

16. Moloney, K., Moloney, S. (2020). Australian Quarantine Policy: From Centralization to Coordination with Mid-Pandemic COVID-19 Shifts. *The American Society for Public Administration*, 80(4), 671–682. DOI: 10.1111/puar.13224.

17. Neece, C., McIntyre, L. L., & Fenning, R. (2020). Examining the impact of COVID-19 in ethnically diverse families with young children with intellectual and developmental disabilities. *Journal of Intellectual Disability Research*, 64(10). DOI: https://doi.org/10.1111/jir.12769.

18. Nwachukwu, P.T.T (2021). COVID-19 Lockdown and its Impact on Social–Ethics and Psycho- Social Support for Disability Care. *Journal of Intellectual Disability - Diagnosis and Treatment*, 9(1), 45-55. DOI: https://doi.org/10.6000/2292-2598.2021.09.01.6.

19. Papadopoulos, D. (2021). Mothers' Experiences and Challenges Raising a Child with Autism Spectrum Disorder: A Qualitative Study. *Brain Sciences*, 11, 309. DOI:https://doi.org/10.3390/brainsci11030309.

20. Ribeiro, F.S., Janzen, T.B., Passarini, L., & Vanzella, P. (2021). Exploring Changes in Musical Behaviors of Caregivers and Children in Social Distancing During the COVID-19 Outbreak. *Frontiers in Psychology*, 12. DOI: 10.3389/fpsyg.2021.629768.

21. Shorey, S., Lau, L.S.T., Tan, J.X., Debby, E., & Ramkumar, A. (2021). Families With Children with Neurodevelopmental Disorders During COVID-19: A Scoping Review. *Journal of Pediatric Psychology*, 2021, 1–12. DOI: 10.1093/jpepsy/jsab029.

22. Shuai, L., He, Sh., Zheng, H., Wang, Z., Qiu, M., Xia, W., Cao, X., Lu, L., & Zhang, J. (2021). Influences of digital media use on children and adolescents with ADHD during COVID-19 pandemic. *Globalization and Health*, 17(48), DOI: https://doi.org/10.1186/s12992-021-00699-z.

23. Sieberer, U.R., Kaman, A., Erhart, M., Devine, J., Schlack, R. , & Otto, Ch. (2021). Impact of the COVID-19 pandemic on quality of life and mental health in children and adolescents in Germany. *European Child & Adolescent Psychiatry*. DOI: https://doi.org/10.1007/s00787-021-01726-5.

24. Williams, K., Jacoby, P., Whitehouse, A., Kim, R., Epstein, A., Murphy, N.,

25. Wilson, K. (2020). The COVID-19 pandemic and the human rights of persons with mental and cognitive impairments subject to coercive

powers in Australia. *International Journal of Law and Psychiatry*, 73. DOI: https://doi.org/10.1016/j.ijlp.2020.101605.

26. Yamamura, E., Tsustsui, Y. (2021). The impact of closing schools on working from home during the COVID-19 pandemic: evidence using panel data from Japan. *Review of Economics of the Household*, 19, 41–60. DOI: https://doi.org/10.1007/s11150-020-09536-5.

27. Yates, S., Dickinson, H. (2021). Navigating Complexity in a Global Pandemic: The Effects of COVID-19 on Children and Young People with Disability and Their Families in Australia. *Public Administration Review*, DOI:10.1111/puar.13352.

28. Zamarro, G., Prados, M. J. (2021). Gender differences in couples' division of childcare, work and mental health during COVID-19. *Review of Economics of the Household*, 19, 11–40. DOI: https://doi.org/10.1007/s11150-020-09534-7.

29. Rigles, B. (2019). The Development of Health Lifestyles in Families Experiencing Disability. *Journal of Family Issues,* 40(7), 929–953. DOI: 10.1177/0192513X19831410

30. Dukes, Ch. & Berlingo, L. (2020). Fissuring Barriers to Inclusive Education for Students with Severe Disabilities, *Research and Practice for Persons with Severe Disabilities*, 45(1),14-17.

The Impact of Foreign Direct Investment on the Economic Growth of South Caucasus Countries

Lela Scholer-Iordanashvili, PhD Student
Business Administration, Grigol Robakidze University, Georgia

Abstract

This paper focuses on the effects of foreign direct investment inflows on the economic growth in a panel of three South Caucasus countries using data from 1996-2019 periods. In this study, we applied the following control variables; trade openness, investment, real exchange rate, and population growth. Classical linear regression model was employed in this paper. Ordinary least squares methods are used for estimation. Empirical results revealed that there is no significant effect of FDI inflows on economic growth. The results show that inward FDI stock-to-GDP ratio and real GDP growth rate are positively correlated.

Keywords: Foreign direct investment, reforms, technologies, economic growth, GDP growth

Introduction

The growth and development of a country's economy depend on many factors, and one of these important growth factors is investment. Today, many countries compete for attraction of foreign investments. Competition is expressed in offering of business environment suitable for investments.

In Georgia, inflow of foreign direct investments (FDI) began from 1996. During the last 24 years (1996-2020), Georgia attracted investments in total amount of 16.5 billion USD. This makes up an average of 823 million USD annually. According to the data of the last 24 years, the largest investor country in Georgia is Azerbaijan with a total of 2.2 billion USD invested.

Second on the list is the United Kingdom (Great Britain) with a total of 2 billion USD. On the third place are Netherlands with a total of 1.6 billion USD investments. Azerbaijan and British investments (mainly British Petroleum) are basically connected to oil and gas pipelines lied through Georgia, which connect Azerbaijan oil and gas to Turkey[1].

According to the last data of 2020, the largest FDI in Georgia came from United Kingdom with 307 million USD. On the second place is Netherland with 172 million USD, and on the third place is Turkey with 108 million USD. FDI in Georgia amounted to 616.9 million USD in 2020 (preliminary data), and down to 52.9 percent from the same period of the previous year[2].

Which sectors of Georgian economy attract FDI most of all? If we look at the statistics of the last 20 years (schedule 5), we observed that most investments were made in the transport and communication sector amounting to 3.2 billion USD. This sector occupies first place because of investments made in pipelines transport. On the second place is power energy with 1.8 billion USD. Investments made in the power energy sector are basically connected to construction of hydro power stations. From 1997-2019, lowest FDI were made in agricultural sector as only 134 million USD was realized (averagely 6.7 USD annually).

During the last decade, foreign direct investments have played certain role in the development of Georgian economy and assisted to move to the new stage of development. Nonetheless, investments flows in Georgia are less stable from the stand point of fragment, production, and export support. Based on Investment Development Path, research shows that Georgia is on the second level of its development. This means that inflow investments are prevailing on outflow investments, and the country is still progressing based on non modern technology-based economy (Sikharulidze, 2018).

Azerbaijan is one of the Caucasus countries rich in oil reserves, which also attract FDI. According to the data of State Statistical Committee of the Republic of Azerbaijan, after gaining of independence, Azerbaijan faced inflow of large volumes of FDI. If 2001 volume of FDI made up 1.092 million USD according to the data of 2020, this volume exceeded 12 000 million USD. If we examine distribution of FDI by sector, we will see that the FDI is basically focused on oil sector. However, the oil sector is not the only motivating factor for inward FDI. The country has also developed attractive business environment provided by government programs (Frayne, 2012).

---

[1]National Statistics of Georgia https://www.geostat.ge/en/modules/categories/191/foreign-direct-investments

[22]National Statistics of Georgia https://www.geostat.ge/en/modules/categories/191/foreign-direct-investments

Figure 1below shows the volume of FDI inflow in Azerbaijan for the last decades.
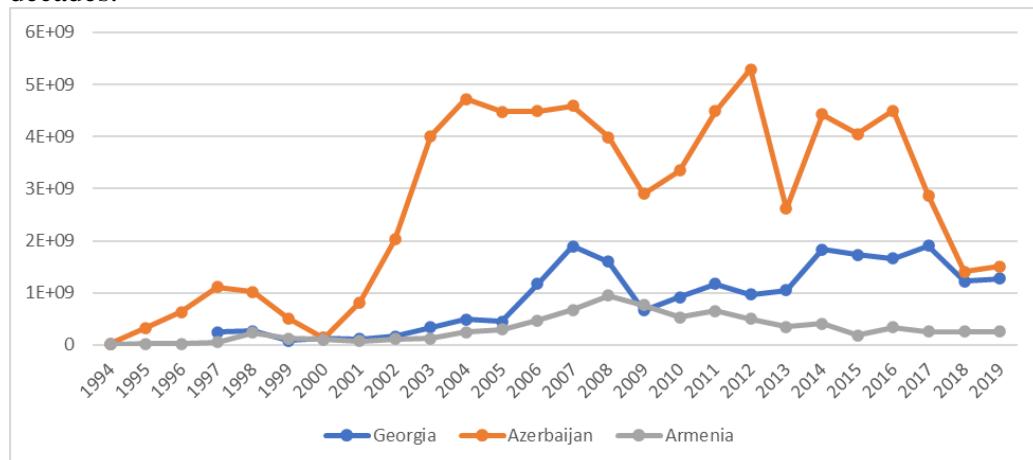
Figure 1. Foreign Direct Investment in South Caucasus Countries[3]

As in Georgia and Azerbaijan, FDI has been inflowing in Armenia since the 1990s. A year after the restoration of Armenia's independence, the stock of funds invested in the Armenian economy by foreign partners amounted to 2 million USD. This situation can be connected to the high instability of the market in the first half of 1990th (among them high investment risk), caused by systemic transformation, economic crisis, and armed conflict in Nagorno-Karabakh (from 1988). From 1994, the Government implemented many important reforms which are connected to the inflow of direct foreign investments. This resulted in the growth of the economy, and then membership in the World Trade Organization (January 2003). First significant declining of FDI was observed in 1998 (Kaczmarek-Khubnaia, 2017). Important inward stock of FDI in Armenia is connected to the operations of the following companies: Greek company (GTE) has invested in telecommunication sector, Pernod Ricard has bought Yerevan Cognac Company (YBC), and Furtono acquired Armenian Diamond Company (Bartlett, 2000). In 2014, the FDI net inward was made up of 182.3 million USD, which makes up 4.4 percent of GDP. Moreover, the largest part of investments comes from Russian investors who made these investments in energetic sector. This fact made up almost the half of foreign direct investments inward, and it significantly exceeds the volume of investments realized in the mining and telecommunication sectors. Inward FDI stock in Armenia is also connected to the policy implemented by the Government, which was aimed at improving the investment environment. Armenian Government has made significant changes in order to improve business

___

[3] The World Bank Data: https://data.worldbank.org/country

environment by amending the FDI law to improve investor protection. According to the UNCTAD's World Investment Report (2020), in 2018, inward foreign investments in Armenia made up to 254 million USD which is unchanged from the previous year. In 2019, stock of foreign direct investments was evaluated at 5.7 billion USD. Russia, Greece, Cyprus, and Germany are four main investors. Furthermore, significant investments are also implemented by members of Armenian diaspora (almost 6 million people). Sectorial distribution of foreign direct investments in Armenian economy is as follows: energy, telecommunications, metallurgy, hotel services, and air transportation[4].

From this standpoint, it would be very interesting to analyze influence of direct foreign investments on the economy of South Caucasus.

Literature Review

Policy makers and scientists argue that FDI can have an important positive effect on development of host country. FDI can be the source of technologies and know-how when integrated with local economy. FDI plays an important role in support of economic growth, improvement of technological level of the country, creation of new possibilities for employment, and availability of capital for developing countries (Loungani, 2001). Besides, there is learning advantage which foreign direct investments offer to local governments, local businesses and citizens to study new business practice, management techniques, and conceptions. Thus, this helps them in the development of local business and industries (Kumar, 2014). Furthermore, foreign direct investments help developing countries to integrate in global markets, and also make available global capital for growth of investments which causes growth of economy needed for reduction of poverty and improve standards of living (Dollar, 2002; Rutihinda, 2007).

Hanson (2001) argues that evidence of the fact that FDI have positive spillovers for the host country is somehow weak. On the basis of the analysis of micro data, Gorg (2002) concluded that spillovers from firms based on foreign capital to the local firms in most cases is negative. Lipsey (2002) has a different opinion which, after analysis of literature at the micro level, proves that there are positive effects. In addition to the result of the empirical study conducted at macro level, he concluded that there is no consistent connection between inward FDI stock and GDP growth. Besides, he argues that analysis of spillovers requires consideration of the country and industry specificity. The relationship between FDI and domestic investment in Georgia was studied by Sikharulidze (2015) for the post 1990 period. In his work, Sikharulidze

---

[4]Foreign Direct Investment (FDI) in Armenia
https://www.lloydsbanktrade.com/en/market-potential/armenia/investment

shows crowding out of local investments in Georgia. The results of econometric analysis of the total investment model presented in this paper show the evidence of crowding out long-term effect of FDI on investment in Georgia. Dzegvelishvili (2018) conducted an empirical analysis during 1997-2017 for Georgia, which shows that FDI inflows into the agricultural and manufacturing sector tend to have a negative effect on growth. On the contrary, the FDI inflows in service sector have positive effect.

According to Blomstrom (2003) and Borensztein (1998), the contributions of FDI to the development are extensively recognized as filling the gap between desired investments and domestically mobilized increasing tax revenues, saving and improving managerial know-how and technology, as well as managerial skills in host countries. However, the impact of foreign direct investments on the economic growth has no immediate effect. Borenzstein (1998) argues that in order for FDI to have a positive effect over economy growth, the country shall necessarily achieve minimum threshold level of development in education, technologies, infrastructure, financial markets, and healthcare industry (Borensztein, 1998).

Indeed, FDI contributes to economic growth only when the host country has reached a developmental level capable of absorbing the advanced technology that it brings (Elboiashi, 2011). According to Klein (2001), business environment in which foreign investors are operating shall be improved for successful implementation of FDI, which will be followed by economic growth and reduction of poverty.

Empirical studies show that FDI are very crucial for economic development, and this is because they are source of capital attraction and complements domestic private investments. According to Blomström (2003) and Chen (2002), foreign direct investments provide to the growth of total factor productivity and growth of incomes in the host economy more than domestic investments can do.

Xiaoying Li (2004) have revealed direct connection between FDI and economic growth. During analysis of this connection, the level of local human capital development and technological achievements was also taken into account. Positive direct effect is confirmed for developed and developing countries. Nair-Reichert (2001) has studied causal connection between foreign investments and economic growth in dynamic panel, which covers 24 developing countries. Thus, the work controlling variables include investments, inflation, openness quality, and human capital. On average, foreign direct investments have a positive impact on growth, and higher quality of openness strengthens positive aspects of FDI (Adhikary, 2011).

Therefore, it shall be noted that empirical literature does not give consensus on connection between foreign direct investments and the whole economy. Some researches reveal positive effect of foreign direct

investments on productivity and growth of the GDP, and the others reveal negative connection or weak interaction. Besides, during empirical studies, it is important to consider such country specificity as the level of economic, technological, infrastructural, and institutional development (Adhikary, 2011). Therefore, starting from this point of view, this leads us to our hypothesis. FDI has a statistically significant impact on the economies of the South Caucasus countries.

Methodology: Model Specification

For testing the hypothesis in the model applied in research, there is an explained interaction between FDI and economic growth using cross-section regressions with 3 countries for the time period (1996-2019). The model also provides all those factors which can potentially and significantly affect growth rate of GDP. According to the theories and empirical studies, FDI-to-GDP ratio apart, economic growth is determined by factors such as gross fixed capital formation, trade liberalization or degree of openness, exchange rate, and labor force (see Table 1). The analysis was implemented using EViews 10 Software.

Table 1.

Growth	F	FDI	GFCF	Trade	Infl	Rer	Labour
		+	+	+	-	+ or -	+

In the theoretical analysis, as already mentioned, the FDI inflow increases GDP growth through modern technologies and improvements of managerial skills. Feldstein (2000) argues that FDI allows for technology transfers that cannot be achieved through financial investment and trade in goods and services. It is also important to consider the impact of control variables on economic growth. Among the driving factors of the long-term growth, the openness of the economy is widely recognized. Trade plays an important role in ensuring economic growth. Trade liberalization allows local firms to access the best technologies and management skills (Baily, 1995; Miller, 2000). When analyzing the openness of the economy, it is important to consider the impact of the real exchange rate on economic growth. Chiefly, the exchange rate of a country plays a key role in international economic transactions. For example, an increase in exchange rate may increase the demand of domestic products and the cost of imported capital and other imported inputs. Theories and empirical studies show that population growth, labor force, and gross fixed capital formation can affect both individual sectors as well as the economy as a whole. Proponents of labor suggest that population growth allows the rural sector to play a role in fostering economic growth (Pemberton, 2002). A large number of the population provides a large

domestic market. In addition, population growth encourages competition that includes technological advances and innovations (Tsen, 2005) (see Table 1).

Thus, the variables appearing in the equations are defined as follows (Manamba Epaphra, 2017):

Table 2. Variables Description

Symbols	Description	Sources
LnGrowth	Real GDP growth, annual percent.	World Bank data
FDI-to-GDP	Inward FDI to GDP .	World Bank data
GFCF	Gross fixed capital formation, percent of GDP. GFCF is made up of machinery, plant, purchases of equipment, industrial buildings, construction of railways, and roads.	World Bank data
Trade	Trade openness, measured as export and import, percent of GDP.	World Bank data
RER	Real exchange rate.	World Bank data
Infl	Inflation rate, measured as the growth rate of consumer price index as a proxy of macroeconomic stability.	World Bank data
Labour	Population growth, annual percent.	World Bank data
GDPin	Initial GDP.	World Bank data
GE	General government final consumption expenditure (% of GDP).	World Bank data

The ordinary least squares method (OLS) is used for estimation. OLS is simple and widely used in empirical work. We calculated the impact of overall FDI inflows on economic growth based on the following equation (Borensztein, 1998; Carkovic, 2005; Alfaro, 2003):

$$lnGrowth = \beta_0 + \beta_1 lnFDI_t + \beta_2 lnGFCF_t + \beta_3 trade_t + \beta_4 RER_t + \beta_5 Lnlabour_t + \beta_6 GDPin_t + \beta_7 GE_7 + \varepsilon_t \quad (1)$$

Where,

$$\beta_0, \beta_1 \ldots \beta_n \text{ - parameters to be estimated,}$$
$$t-1, \ldots, T \text{ - the period of time, years,}$$
$$\varepsilon_t \text{ - white noise error term.}$$

The data for the variables which are included in the estimation models (Real GDP growth, real exchange rate, trade as a percent of GDP, labour) are obtained from World Bank and World Development Indicators[5]. Growth is the dependent variable and is defined as the annual growth rate of real GDP per capital. FDI-to-GDP represents the annual inward FDI inflows as a share of

---

[5] The world bank indicators: https://data.worldbank.org/country

GDP, and it is the primary variable of interest through which we test the contribution of FDI for the host countries in our sample. According to the theory, we consider the variable gross capital formation which is implied to capture the impact of domestic investment on economic growth. Gross capital formation as a share of GDP is used as a proxy. The model also considers a measure of trade openness calculated as a ratio of exports and imports to GDP (Trade). We also control the effect of foreign exchange, population growth, and annual percent. Furthermore, we are interested in β_1 coefficient for testing the hypothesis formulated in the study.

Estimation Techniques

The ordinary least squares method is applied for estimation. The ordinary least squares method is widely used in empirical work. The co-integration methodology is employed to determine the long run relationships among the variables.

Table 3 provides correlation between the ratio of GDP and real exchange rate. Additionally, the degree of liberalization and gross fixed capital formation is positive. GDP growth negatively correlates with population growth rate.

Table 3. Estimates of Correlation Coefficient[6]

	Growth	FDI-to-GDP	GFCF	Trade	Exchange rate	Labour
Growth	1,00					
FDI-to-GDP	0,25	1,00				
GFCF	0,23	0,68	1,00			
Trade	0,10	0,39	0,17	1,00		
Exchange rate	0,08	-0,49	-0,37	-0,31	1,00	
Labour	-0,16	0,18	0,09	0,21	-0,22	1,00

Empirical Results

The goal of the empirical analysis is to analyze whether FDI have effects on a country's economic growth. Following Borensztein (1998), Carkovic (2005) and Alfaro (2003), we look at the direct effect of the FDI on economic growth using cross-section regressions with 3 countries for the time period (1996-2019). We calculated the impact of overall FDI inflows on economic growth based on equation (1) using Stata 14 software.

---

[6]Source: Authors' Calculations.

Table 4. Growth and Total FDI[7] Dependent Variable - Real GDP Growth Rate

Independent variables	1	2	3	4	5	6
lnFDI-to-GDP	0.343192	0.240433	0.231459	0.274173	0.408986	0.418962
	(0.161337)	(0.221907)	(0.242043)	(0.239067)	(0.251905)	(0.256624)
lnGFCF		0.435151	0.444208	0.411121	0.345857	0.2028
		(0.642200)	(0.653868)	(0.642913)	(0.641536)	(0.634227)
lnTrade			0.073965	0.279859	0.45911	1.092235
			(0.763400)	(0.758938)	(0.761891)	(0.807668)
lnLabour				-0.237651	-0.200232	-0.396528
				(0.131755)	(0.134279)	(0.269834)
lnExchange rate					0.079442	0.119808
					(0.054914)	(0.132106)
Inflation					-0.016429	-0.03076
					(0.023123)	(0.023648)
GE						-0.134604
						(0.06668)
GDPin						4.7884
						(9.4334)
C	0.941159	-0.251202	-0.587691	-1.480832	-2.413697	-3.764071
	(0.339085)	(1.792338)	(3.914515)	(3.879101)	(3.925235)	(4.376452)
Observations	68	68	68	68	68	68
F-statistic	4.58	2.47	1.62	2.07	2.87	2.82
R^2	0.06	0.07	0.07	0.11	0.16	0.545

Consequently, the main purpose of this analysis is to examine the impact of FDI on a host country's growth. Table 4 summarizes the results of fixed effects panel estimation. The regressions shows FDI have a positive and insignificant effect on growth (Column 1). As it can be seen from the table, FDI does not maintain their significant positive effect after controlling for gross fixed capital formation (Column 2), trade openness (Column 3), and exchange rate and population growth variables (Columns 4-5). Moreover, the coefficient on FDI is rather stable and ranges from 0.34 in the case when there are no control variables to 0.4 in the cases when we control all variables. In fact, GDP real growth did not respond to an increase in FDI inflow-to-GDP ratio over the 1996-2019 periods. This is the case when the impact of FDI is neutral, which is consistent with the opinion of scholars who have revealed a weak or negative interaction between FDI and GDP growth. F-statistic is significant at 1 percent, rejecting the null hypothesis that all the regressors have coefficients not different from zero. This suggests that the model estimated has good overall explanatory power. R-squared, which measures the goodness of fit of the variables, is not sufficiently large. This suggests that about 16 percent of the variations in GDP is jointly explained by the regressors during the 1996-2019 period (Column 5).

---

[7]Source: Authors' Calculations.

The fifth column of the table shows that FDI have a positive but not significant impact on economic growth. In addition, investments and trade openness have a positive impact on economic growth. Nonetheless, their impact is not statistically significant. The coefficient for the labor force is significantly different from zero at the 1 percent level, suggesting that a 1 percent increase in labor force may reduce real GDP growth by 0.2 percent ceteris paribus.

Table 4 shows that inflation has a negative impact on economic growth. This result is not surprising since the uncertainty about price change affects growth through distortions in the allocation of resources, and through discouraging the overall accumulation of physical capital. The impact of inflation may hinder the formation of savings and investment, and this will ultimately leads to low GDP growth rates. The real exchange rate has a negligible and non-significant effect on the real GDP growth during the sample period.

In the sixth column, two more variables are added: initial GDP and government expenditure. With addition of these variables, R-squared became 0.54 which is not small, and about 54 percent of the variations in GDP is jointly explained by the regressors.In addition to these variables, FDI still has a positive impact on economic growth.

Conclusion

Since the collapse of the Soviet Union, most post-Soviet countries, including the Caucasus countries, have faced severe economic challenges, both in terms of the depth and duration of the economic crisis. Economic recovery in all three countries has been under way since 1996. It was during this period that the inflow of FDI began, and this has made some contribution to overcoming the economic crisis of these countries. Hence, the interest of our research is the impact of FDI on the economic growth of these countries. This paper is confined to FDI inflows and economic growth in South Caucasus countries during the 1996-2019 periods. During this period, the government of these countries attracted a substantial amount of FDI through various incentives policy. The goal of this study is to investigate the impact of FDI inflows on real GDP growth, FDI-to-GDP ratio, and real GDP growth apart. The control variables included in the models are gross fixed capita formation, population growth rate (labour), real exchange rate, and the ratio of imports plus export-to-GDP (degree of trade liberalization or openness). Time series data spanning from 1996 to 2019 are used for estimation and analysis. Data are obtained from World Bank, World Development Indicators, UNCTAD, and National Statistics Office of Georgia.

The empirical findings suggest that there is no significant effect between FDI and real GDP growth. However, the relationship between FDI

and real GDP growth is positive. It is also revealed that the correlation between FDI and real economic growth is positive but not strong. The positive effect of FDI on overall economic growth implies that a recent improvement in the economy of South Caucasus countries is due to improvement in the growth of non-agricultural sectors. The results of the study are consistent with the opinion of scholars that the impact of FDI on economic growth is not unambiguous.

Thus, productivity is vital to sustaining high economic growth. Long-term economic growth models point to the main challenges for the growth of the economy, given the limited opportunities for population growth and a sharp increase in domestic savings. One of the main factors for increasing productivity is the attraction of efficiency-seeking FDI, which in turn boost integration into global markets due to expert-oriented activities.

According to our research, although FDI have a positive impact on economic growth, there are still unanswered questions. In this regard, the research will take into account the sectors of the economy such as industry, services and agriculture, as well as the characteristics of the country.

References:
1. Adhikary, B. (2011). FDI, Trade Openness, Capital Formation, and Economic Growth in Bangladesh: A Linkage Analysis. . *International Journal of Business and Management,*, pp. 16-28.
2. Alfaro, L. A. C. O. (2003). FDI and Economic Growth: The Role of Local Financial Markets. *Journal of International Economics*.
3. Baily, M. A. (1995). Efficiency in Manufacturing and the Need fo Global Competition. *Brookings Papers on Economic Activity: Microeconomics,*, pp. 307-358.
4. Bartlett, D. L. (2000). Stabilization Policy in Post-Soviet Armenia. *Post-Soviet Geography and Economics,*, 41(1), 30–47.
5. Blomström, M. A. (2003). The Economics of Foreign Direct Investmen Incentives. *NBER Working Papers 9489, National Bureau of Economic Research,*. Cambridge. Retrieved from econpapers.repec.org/RePEc:hhs:eijswp:0168
6. Blomstrom, M. A. (2003). *The Economics of Foreign Direct Investment Incentives.* Cambridge.: NBER Working Papers 9489, National Bureau of Economic Research. Retrieved from https://doi.org/10.3386/w9489
7. Borensztein, E. D. (1998). How Does Foreign Direct Investment Affect Economic Growth? *Journal of International Economics*, pp. 115-135. Retrieved from https://doi.org/10.1016/S0022-1996(97)00033-0

8. Carkovic, M. A. (2005). *Does Foreign Direct Investment Accelerate Economic Growth?* Washington, DC: Institute for International Economics and Center for Global Development.

9. Chen, Y. A. (2002). Foreign Direct Investment and Manufacturing Productivity in China. *CEPII Research Project on the Competitiveness of China's Economy.*

10. Dollar, D. A. (2002). Growth Is Good for the Poor. *Journal of Economic Growth,*, pp. 195-225. Retrieved from https://doi.org/10.1023/A:1020139631000

11. Dzegvelishvili, L. (2018). The impact of Foreign direct investment on the economy of Georgia. *Journal of Young Researchers.*

12. Elboiashi, H. A. (2011). *The Effect of FDI and Other Foreign Capital Inflows on Growth and Investment in Developing Economies.* Glasgow.

13. Feldstein, M. (2000). Aspects of Global Economic Integration: Outlook for the Future. *NBER Working Paper No. 7899, National Bureau of Economic Research.*

14. Frayne, T. (2012). Energy Sector FDI in Azerbaijan: An Example of Good Governance? *E-International relations.* Retrieved from https://www.e-ir.info/2012/08/05/energy-sector-fdi-in-azerbaijan-an-example-of-good-governance/

15. Gorg, H. A. (2002). Much Ado About Nothing? Do Domestic Firms Really Benefit from Foreign Direct Investment?". *Research Paper 2001/37, Globalisation and Labour Markets Programme, at Leverhulme Centre for Research on Globalisation and Economic Policy.*

16. Hanson, G. H. (2001). Should Countries Promote Foreign Direct Investment?". *G-24 Discussion, New York: United Nations.* , Paper No. 9.

17. Kaczmarek-Khubnaia, J. (2017). Foreign direct investment in Armenia. *Journal of Geography, Politics and Society*, pp. 48-49.

18. Klein, M. A. (2001). Foreign Direct Investment and Poverty Reduction. *Policy Research Working Paper, World Bank eLibrary.* Retrieved from https://doi.org/10.1596/1813-9450-2613

19. Kumar, M. (2014). FDI and Indian Economic Growth Factors—An Empirical Analysis. *International Journal of Management and Commerce Innovations*, pp. 7-15.

20. Lipsey, R. E. (2002). Home and Host Country Effects of FDI. *NBER Working Paper 9293.*

21. Loungani, P. A. (2001). How Beneficial Is FDI for Developing Countries? *Finance & Development: A Quarterly Magazine of IMF.* Retrieved from

http://www.imf.org/external/pubs/ft/fandd/2001/06/loungani.htm

22. Manamba Epaphra, A. H. (2017). Analysis of Foreign Direct Investment, Agricultural Sector and Economic Growth in Tanzania. *Scientific Research Publishing*, pp. 111-140.

23. Miller, S. A. (2000). The Effects of Openness, Trade Orientation, and Human Capital on Total Factor Productivity. *Journal of Development Economics,*, pp. 399-423.

24. Nair-Reichert, U. A. (2001). Causality Tests for Cross-Country Panels: a New Look at FDI and Economic Growth in Developing Countries. *Oxford Bulletin of Economics and Statistics,*, pp. 153–171.

25. Pemberton, C. (2002). A Population Growth Theory of Rural Development. In Rural Development Challenges in the Next Century. *Proceedings of the International Conference of ALACEA-The Latin American and Caribbean Association of Agricultural Economists, edited by Carlisle A. Pemberton,* , (pp. pp. 214-227). Trinidad and Tobago.

26. Rutihinda, C. (2007). Impact of Globalization on Small and Medium Size Firms in Tanzania. *ABR & TLC Conference Proceedings, ,* . Hawaii, USA.

27. Sikharulidze, D. T. T. (2015). The impact of FDI on domestic investment (in case of Georgia). *Social and Economic Revue*, pp 35-40.

28. Sikharulidze, D. C. (2018). OLI paradigm and investment position of Georgia. *Globalization&Business*, pp. 71-78.

29. Tsen, W. A. (2005). The Relationship between Population and Economic Growth in Asian Economies. *ASEAN Economic Bulletin*, pp. 314-330.

30. Xiaoying Li, X. L. (2004). Foreign Direct Investment and Economic Growth: An Increasingly Endogenous Relationship. *World Development* , pp. Vol. 33, No. 3, pp. 393-407.

Confianza durante la pandemia por COVID-19 en Panamá

Ericka Matus
Facultad de Biociencias y Salud Pública, Universidad Especializada de las Américas, Corregimiento de Ancón, Albrook, Paseo de la Iguana, Panamá
Sistema Nacional de Investigación, SNI, SENACYT, Panamá
Lorena Matus
Department of Psychology, Universidad Iberoamericana,
Santa Fe, Ciudad de México City, México
Ana Toriz
Escuela de Contabilidad y Administración,
Universidad de Panamá, El Cangrejo, Simón Bolivar street
Jay Molino
Facultad de Biociencias y Salud Pública, Universidad Especializada de las Américas, Corregimiento de Ancón, Albrook, Paseo de la Iguana, Panamá
Sistema Nacional de Investigación, SNI, SENACYT, Panamá

Resumen
Esta investigación forma parte de una batería de pruebas para precisar las consecuencias psicológicas y conductuales por la crisis COVID-19, a partir de la iniciativa COVIDiSTRESS global survey (Lieberoth y colaboradores, 2020). El objetivo es establecer las propiedades psicométricas de la escala de confianza de la OCDE para explicar la confianza en las personas y en las instituciones en situación de COVID-19 en Panamá. Es un estudio transversal, prospectivo y comparativo. Se aplicó el instrumento de medición sobre confianza elaborado por la Organización para la Cooperación y el Desarrollo Económicos (OCDE), a una población de 765 panameños adultos, entre 18 y 82 años. La estructura psicométrica indica una validez de constructo que integra a dos factores que en conjunto tienen una varianza explicada de 69.69%. La confiabilidad Alpha de Cronbach, arroja un puntaje global de

0.882. Los resultados evidencian desconfianza en las personas, en las autoridades y en las instituciones nacionales e internacionales en situación de COVID-19 en Panamá. Se perciben diferencias significativas por escolaridad, situación marital y edad. La confianza es similarmente baja por género, a pesar de los esfuerzos gubernamentales por el manejo pertinente y eficiente durante el inicio de la pandemia. Es importante, resaltar que la situación de cuarentena por pandemia durante la aplicación del cuestionario es una variable externa, extraordinaria, por lo que se recomienda realizar estudios longitudinales para contrastar y medir el impacto que ésta tiene.

Palabras claves: Confianza, COVID-19, Panamá, pandemia, escala

Confidence during the COVID-19 pandemic in Panama

Ericka Matus
Facultad de Biociencias y Salud Pública, Universidad Especializada de las Américas, Corregimiento de Ancón, Albrook, Paseo de la Iguana, Panamá
Sistema Nacional de Investigación, SNI, SENACYT, Panamá
Lorena Matus
Department of Psychology, Universidad Iberoamericana,
Santa Fe, Ciudad de México City, México
Ana Toriz
Escuela de Contabilidad y Administración,
Universidad de Panamá, El Cangrejo, Simón Bolivar street
Jay Molino
Facultad de Biociencias y Salud Pública, Universidad Especializada de las Américas, Corregimiento de Ancón, Albrook, Paseo de la Iguana, Panamá
Sistema Nacional de Investigación, SNI, SENACYT, Panamá

Abstract
        This research is part of a battery of tests to determine the psychological and behavioral consequences of the COVID-19 crisis, based on the COVIDiSTRESS global survey initiative (Lieberoth et al., 2020). The objective is to establish the psychometric properties of the OECD trust scale to explain trust in people and institutions in situation of COVID-19 in Panama. It is a cross-sectional, prospective, and comparative study. The confidence measurement instrument developed by the Organization for Economic Cooperation and Development (OECD) was applied to a population of 765 Panamanian adults, between n 18 and 82 years old. The psychometric structure indicates a construct validity that integrates two factors that together have an explained variance of 69.69%. Cronbach's Alpha reliability yields an

overall score of 0.882. The results show mistrust in people, authorities, and national and international institutions in situation of COVID-19 in Panama. Significant differences are perceived by schooling, marital status, and age. Confidence is similarly low by gender, despite government efforts for relevant and efficient management during the onset of the pandemic. It is important to highlight that the quarantine situation due to pandemic during the application of the questionnaire is an external, extraordinary variable, so it is recommended to carry out longitudinal studies to contrast and measure the impact it has.

Keywords: Trust, COVID-19, Panama, pandemic, scale

Introduction

La Organización para la Cooperación y el Desarrollo Económicos (OCDE) propuso en 2009, complementar las medidas del bienestar humano, de modo que un conjunto de naciones dispuso de un grupo de asesores para elaborar un reporte que incluyera, entre otras cosas, la medición de la confianza dentro de la iniciativa denominada *Better Life*.

El objetivo principal fue recopilar información sobre las medidas de confianza en las instituciones y en las personas, para ayudar a comprender los diferentes enfoques de medición y sus implicaciones para el análisis de las oficinas nacionales de estadística y usuarios de datos. De este modo, a partir de 2011, se introdujo la escala de confianza por considerarse un concepto de fundamental importancia para el bienestar de las personas y para la sociedad en general (OCDE, 2017a).

Se trata de la credibilidad que otorga el individuo a las personas que lo rodean y a las instituciones. En tiempos relativamente estables, las personas pueden sentirse en confianza, sin embargo, en cualquier tipo de crisis, la desinformación cobra presencia y con ello la desazón, desesperanza, desasosiego e inquietud.

Para marzo de 2020, con una pandemia provocada por un virus. Las naciones manejaron la crisis de distintas formas, algunas en cuarentena absoluta, otras con medidas menos excesivas, los ciudadanos no dejaban de informarse por medios de comunicación masiva y contrastaban las medidas tomadas por su gobierno con otros de lejanos países. En ese momento, la Organización Mundial de la Salud (OMS), proporcionó algunas directrices que ya habían sido puestas en práctica por numerosos países (OMS, 2020).

Con el paso del tiempo, la cantidad de información que consumía cada persona terminó por convertirse en una fuente de estrés y varios sectores de la sociedad civil apelaron a sus derechos humanos de salir a la calle sin protección, particularmente por el contexto anterior a la pandemia como la discriminación, la pobreza, la desigualdad, la debilidad estructural de los

sistemas públicos de salud y, muchas veces, la falta de estabilidad política e institucional (OEA y CIDH, 2020).

Hay que hacer mención de que no es la primera vez que sucede, las crónicas de la peste negra en Europa dan cuenta fiel de la falta de información veraz, el terror de los que permanecían sanos, el prejuicio y estereotipo que se hizo patente y que llevó a la barbarie a poblaciones enteras, sacrificando brutalmente a hombres, mujeres y niños, víctimas de dicha desinformación (Hidalgo, 2011).

En medio de esta situación social, se aplica una batería de pruebas para conocer el impacto psicológico y conductual de los ciudadanos. Este estudio forma parte de una investigación internacional coordinada por Lieberoth, y colaboradores (2020), para determinar el impacto de la crisis COVID-19 alrededor del mundo. De esta iniciativa surge el COVIDiSTRESS global survey.

En Alemania se realizó un estudio sobre el nivel de confianza entre los grupos sociales. El objetivo era determinar si existe una relación inversa entre la diversidad étnica y la confianza, tal como había sido hallada en otras naciones como en los Estados Unidos. Sin embargo, no encontraron coincidencias. Lo que demostraron fue que existe una relación estadísticamente significativa y negativa entre la pobreza y la confianza social (Gereke, Schaub, y Baldassarri, 2018). Los hallazgos exponen que tanto los ciudadanos extranjeros y los alemanes tienen un alto nivel de confianza social. Otro resultado del mismo estudio indica que la pobreza de los hogares y estar rodeado de vecinos inmigrantes, redunda en niveles bajos de confianza social. Esto implica que en Alemania la cohesión social está asociada tanto con las características individuales, del hogar con el vecindario inmediato (Gereke, Schaub, y Baldassarri, 2018).

Para Holmberg y Rothstein (2017), el ideal normativo en una sociedad es tener altos niveles de confianza social y un mínimo de diferencias en la confianza entre la confianza social, económica y política. Los resultados de la encuesta de valor mundial en 80 países muestran que solamente en un muy limitado número de naciones existe un nivel razonable de confianza.

Todo parece indicar que los ciudadanos que cuentan con títulos universitarios tienen acceso a actividades laborales bien remuneradas, y que tienen buena salud, muestran un alto nivel de confianza hacia otras personas y hacia las instituciones, mientras que los ciudadanos con poca educación, con mala salud, y sin trabajo, es decir, las personas menos afortunadas y privilegiadas de todo el mundo tienden a tener menores niveles de confianza interpersonal. Esta condición afecta a la mayoría de las personas en la sociedad actual (Holmberg y Rothstein, 2017).

Yetano y Castillejos (2019) publicaron un artículo en donde insisten en la necesidad de efectuar auditorías de desempeño en las instituciones,

donde el nivel de corrupción es grande y la confianza de la gente es muy limitada. En el estudio demostraron que la ausencia de auditorías se debe a la falta de voluntad para establecer reformas y a la escasez de recursos humanos y financieros.

Otra dificultad aparece cuando las naciones, tratan de alcanzar los objetivos impuestos por los organismos internacionales sobre pobreza, educación y salud, cuando no existen condiciones de legitimidad.

Finalmente, la voluntad de los gobiernos para auditar a las instituciones es retórica, tanto en el sector público como en el privado, y se utiliza para justificarse ante otras naciones, de tal suerte que se impide la competitividad, el desarrollo y la innovación, restringiendo y limitando la capacidad de sus ciudadanos y promoviendo la desconfianza (Yetano y Castillejos, 2019).

En los Estados Unidos, Martin, Orr, Peyton y Faulkner (2020) realizaron una serie de experimentos para saber si la honestidad, integridad y rectitud política lograba aumentar la confianza en el gobierno. Los autores confirman que los bajos niveles de confianza en el gobierno tienen implicaciones sobre la estabilidad, la legitimidad y participación política. Mencionan además que existe numerosa literatura sobre la erosión de la confianza en las sociedades democráticas.

Los resultados son consistentes con estudios observacionales previos, donde se demuestra que la integridad política juega un papel causal importante en la formación de juicios sobre la confiabilidad de los gobiernos y sus políticos, sin embargo, la confianza del público en el gobierno puede ser más un reflejo de creencias actuales sobre la presencia o ausencia de corrupción, que las condiciones económicas o desacuerdos partidistas (Martin, Orr, Peyton, y Faulkner, 2020).

Todo parece indicar, que existe una relación inversa entre el aumento en las noticias de corrupción política y la disminución de la confianza, sin embargo, esta puede modificarse si la información que se presenta al público muestra la integridad y rectitud de los gobiernos; asimismo, los desacuerdos políticos manejados con cortesía pueden mantener el nivel de confianza (Martin, Orr, Peyton, y Faulkner, 2020).

Al parecer, la corrupción impide que se aprueben las reformas políticas en materia de rendición de cuentas y la transparencia en países de América Latina, lo que obstaculiza identificar fallas en el sector público y con ello la falta de confianza de los ciudadanos (Pastrana, 2019).

El documento sobre el panorama de la salud, latinoamericana y el caribe 2020, de la OCDE, propone evaluar tres puntos centrales para el desarrollo que son, el acceso a los servicios de salud, la calidad de estos y la protección financiera del país. En temas de salud, para el caso de Panamá, los

datos reportan que la esperanza de vida al nacer es la más alta en la región, siendo de 81.3 y 75.3 años para mujeres y hombres respectivamente.

Otro indicador internacional del estado de salud es la supervivencia hasta los 65 años, poniendo a la población panameña en el 87.3% en las mujeres y en el 78.6% en los hombres (OCDE, 2017b).

Con relación a la cobertura de recursos humanos y disponibilidad de infraestructura, se reportan 2.3 camas, 1.6 médicos, 3.1 enfermeros y 4 psiquiatras por cada 1000 habitantes (WHO y World Bank, 2017).

Cabe resaltar que la confianza en las instituciones y gobiernos está asociada al nivel de corrupción, en este sentido, Panamá ocupa el quinto lugar en América Latina con mayor percepción de corrupción y el segundo país con mayor percepción de incidencia en pago de sobornos en servicios públicos (TI, 2019).

Sobre el sector financiero, según la encuesta de opinión del grupo del Banco Mundial, ni el sector privado nacional, ni el internacional, confían en que Panamá pueda enfrentar sus problemas financieros (WBG, 2020).
En una muestra de 136 participantes de los cuales 42 eran colaboradores del Banco Mundial y 94 no, se preguntó, ¿hasta qué punto confía en que el gobierno panameño haga lo correcto?, en una escala de 1 a 10. El resultado fue un promedio de 5.5 lo que coincide con los datos del sector financiero (WBG, 2020).

Para fomentar la confianza en la transparencia de los procesos e instituciones gubernamentales, Panamá creó la Autoridad Nacional de Transparencia y Acceso a la Información (ANTAI) que junto con el Banco de Desarrollo de América Latina (CAF), están transformando las formas de funcionamiento anticorrupción, a través de portales digitales para la realización eficaz y transparente de los procesos, sin embargo, aún queda un largo camino por recorrer (ANTAI, 2019).

Con la inminente llegada de un brote de COVID-19 a Panamá, el gobierno de la República activa el Centro de Operaciones de Emergencias en Salud (CODES) a partir del 22 de enero de 2020, con el fin de identificar los recursos para atender la amenaza, coordinar con las entidades, técnicos y científicos la mejor manera de implementar y monitorear los planes operativos de respuesta, actualizar los inventarios de recursos disponibles y elaborar informes de situación para la toma de decisiones.

El 28 de enero se declara amenaza de alto riesgo de transmisión por COVID-19 en Panamá, y se adoptan las medidas que sean imprescindibles e impostergables para ajustar el Plan Nacional de gobierno. El 28 de febrero se aprueban los lineamientos y recomendaciones generales que promueven la prevención y control de la enfermedad producida por el coronavirus.

El 2 de marzo se crea la Comisión Multidisciplinaria para el asesoramiento de los procesos de prevención y control del Covid-2019 y el 3

de marzo se declara que la amenaza por un brote es muy alta, lo que precisa la creación del Centro de operaciones de emergencia (COE) que es la instancia para la coordinación intersectorial de las acciones dirigidas a contener la enfermedad; para el 10 de marzo se hacen ajustes a los lineamientos y recomendaciones generales para la prevención y control del COVID-19 en centros educativos, empresas públicas y privadas, además, se pone a disposición del público la línea telefónica automatizada (169) como medida sanitaria de prevención y control (MINSA, 2020).

Desde la confirmación del primer deceso por COVID-19, en Panamá, el 13 de marzo, se declara Estado de Emergencia Nacional mediante la Resolución de Gabinete número 11, intensificando las medidas ya establecidas previamente, como el distanciamiento físico, el uso de cubrebocas y sobre todo el constante lavado de manos y poniendo en práctica los protocolos de higiene en las instancias de salud, educación, trabajo y específicamente en los hogares. No obstante, ante la identificación de 86 casos positivos, el 17 de marzo se declara un toque de queda a nivel nacional para tratar de evitar la propagación, siendo las provincias de Panamá Oeste, Colón y Panamá, las más afectadas.

Otra de las medidas tomadas por las instituciones gubernamentales a partir del 19 de marzo, fue establecer una cuarentena al país por 30 días, solicitando el cierre temporal de las actividades educativas y comerciales, exceptuando, aquellos que dan servicios al personal de salud y los de venta de alimentos, que incluía la prohibición de distribución, venta y consumo de bebidas alcohólicas, en esa misma fecha, la Organización de Naciones Unidas, (ONU) felicita al país, considerando que "va un paso por delante" en las acciones para contener y mitigar la pandemia por COVID-19 (MINSA, 2020).

El 1 de abril, se propone que la movilidad ciudadana en las provincias de Panamá Oeste, Colón y Panamá sea por género y número de identificación personal, permitiendo salir de casa, solamente por dos horas máximo al día, tres días a la semana para el abastecimiento de alimentos y/o medicina, considerando una sola persona por familia, con revisión y cercos sanitarios en puntos estratégicos para impedir la movilización entre provincias (MINSA, 2020).

El 8 de mayo se flexibilizan algunas medidas comerciales y se reestablece la comercialización, distribución y consumo de bebidas alcohólicas, sin embargo, se mantiene la detección temprana y aislamiento domiciliario y/o en hoteles para los casos positivos con el fin de tratar de controlar la propagación del COVID-19 (MINSA, 2020).

El comportamiento de los casos positivos, con relación al número de muertes, dieron paso a la apertura por bloques económicos para la reactivación del país, el 1 de junio, sin embargo, el resto de los bloques económicos fueron

pospuestos con fechas tentativas en un periodo de 6 meses, que dependerían de los datos epidemiológicos.

Se difundió a través del Ministerio de Salud (MINSA), un conjunto de materiales viso-auditivos con la intención de llegar a todos los sectores panameños, entre ellos se encuentra el programa de Respuesta Operativa de Salud Automática (ROSA) y el Plan Protégete Panamá (MINSA, 2020).

El objetivo del pesente estudio es establecer las propiedades psicométricas de la escala de confianza de la OCDE para explicar el nivel de confianza que tienen en las personas y en las instituciones en situación de COVID-19 en Panamá.

Método

Es un estudio transversal, prospectivo y comparativo, que utilizó el cuestionario de confianza, diseñado en 2009 como parte de las medidas de bienestar humano para una vida mejor generada por la OCDE.

El cuestionario está integrado por ocho reactivos distribuidos en dos factores, el de la medición de la confianza entre las personas compuesto por dos reactivos, mientras que la medición de la confianza en las instituciones nacionales e internacionales integra seis ítems, que se miden en una escala de respuesta que va de 0 a 10, donde 0 indica nula confianza.

La encuesta COVIDiSTRESS global survey (Lieberoth, 2020) está integrada por nueve escalas. El instrumento sobre confianza de la OCDE es una de ellas.

En los artículos previos, publicados sobre la situación de pandemia por COVID-19 en Panamá por Matus y colaboradores (2020), se detallan las propiedades psicométricas de la escala PSS10-UCLA por COVID-19 en Panamá, así como el nivel de estrés percibido.

El tipo de selección de la muestra fue no probabilístico tipo bola de nieve, conformada por 765 participantes adultos panameños a nivel nacional. Se distribuyó en un periodo de marzo a mayo de 2020, de forma electrónica a través de redes sociales y direcciones de correo electrónico con el apoyo de un grupo de profesionales entusiastas como Ana María Florez, Melba Stanziola, Aelén López, Librada Guerra, Hilda Avilés, Ibeth Vergara, Ricardo Turner, Cristóbal Nieto, Virginia Castillero, Christian Tejeira, Jéssica Chung, Emelyn Sánchez y Nuria Araguás.

La información recuperada se analizó a través del programa estadístico para ciencias sociales SPSS 24©. Se realizaron análisis descriptivos e inferenciales paramétricos

Conflicto de Intereses

Los autores declaran que no tienen intereses en competencia en la realización y presentación de informes sobre este estudio. Esta investigación

se ha realizado de acuerdo con el código de conducta de la Asociación Estadounidense de Psicología y las directrices éticas nacionales de los autores. La participación fue voluntaria y se ha garantizado el anonimato. El trabajo enviado es un manuscrito original y no ha sido publicado total ni parcialmente en otras revistas o medios de comunicación.

Resultados

Los datos se sometieron a validez de constructo a través del análisis factorial. Se utilizó como método de extracción el de componentes principales y el método de rotación utilizado fue el de normalización Varimax con *Kariser*, el cual convergió en tres iteraciones.

Se obtuvieron dos factores que en conjunto explican el 69.69% de la varianza total.

Para obtener la confiabilidad del instrumento se utilizó el estadístico llamado *Alpha de Cronbach*, obteniéndose un puntaje α = 0.882. Así, la estructura psicométrica demuestra que el instrumento es válido y confiable para la población panameña.

Los reactivos que conforman los factores, los pesos de las cargas factoriales, la correlación ítem total corregida (r_{it}) y la confiabilidad de los factores se detallan en las tablas 1 y 2.

Tabla 1. Estructura Factorial de confianza durante la cuarentena por COVID-19, autoridades.

Factor 1. Confianza en las autoridades (Alfa = 0.896) Varianza Explicada = 48.35%		
Reactivo No.	r_{it}	Carga
3 ¿Cuánto confía en el gobierno de su país?	0.85	0.851
5 ¿Cuánto confía en la administración pública?	0.85	0.843
6 ¿Cuánto confía en el sistema de salud?	0.85	0.824
8 ¿Cuánto confía en los esfuerzos de su país para manejar COVID-19?	0.86	0.811
4 ¿Cuánto confía en la policía?	0.86	0.759
7 ¿Cuánto confía en la Organización Mundial de la Salud (OMS)?	0.87	0.661

Tabla 2. Estructura factorial de confianza durante la cuarentena por COVID-19, personas.

Factor 2. Confianza en las personas (Alfa = 0.724) Varianza Explicada = 21.34%		
No.	Reactivo	r_{it}	Carga
2	¿Cuánto confía en la mayoría de la gente que conoce personalmente?	0.88	0.87
1	¿Cuánto confía en la mayoría de la gente?	0.88	0.84

La muestra está compuesta por 765 personas, sin embargo, hay que aclarar que el número de respuestas válidas varía entre 658 y 669, por ello se ha incluido la *n* en cada una de las tablas y gráficas. Todos son panameños adultos, entre 18 y 82 años, siendo el 22.7% mujeres y 76.6% hombres; de los cuales el 99.2 % radica en la República de Panamá y el 0.8 % que contestó el instrumento, vive fuera del país. El 48% (323) tienen estudios universitarios y el 52% (347) no. Con relación a su situación marital, el 50.9% expresó ser soltero, divorciado o viudo y el 47.5 casado o en unión libre.

La medida más alta de confianza en promedio está "en la mayoría de la gente que conoce personalmente" ($\underline{x}$= 7.42, DE=1.90) y con la desviación estándar más pequeña, le sigue la confianza "en la mayoría de la gente" ($\underline{x}$= 6.21, DE=2.10) y en tercer lugar la confianza que tiene "en los esfuerzos de su país para manejar el COVID-19" ($\underline{x}$= 5.74, DE=2.64).

Se puede interpretar que a pesar de tener un promedio muy bajo de confianza "en los esfuerzos de su país para manejar el COVID-19" ($\underline{x}$= 5.74, DE=6.64), es en quién han depositado más confianza como autoridad.
Por otro lado, el grado más bajo de confianza, lo obtiene "la administración pública" ($\underline{x}$= 3.84, DE=2.37), seguido muy de cerca por la confianza que tiene "en el gobierno de su país" ($\underline{x}$= 4.08, DE=2.52).

Los valores obtenidos en cada una de las preguntas evidencian el nivel general de confianza como se muestra en la Figura 1. De igual manera los resultados sobre la escala de confianza OCDE, por factor se muestran en la tabla 3.

Figura 1. Nivel de confianza por ítem.

Tabla 3. Estadística descriptiva de confianza durante la cuarentena por COVID-19 en Panamá

	n	$\underline{x}$	DE
Confianza en general	658	5.39	1.79
Confianza en las Instituciones	660	4.91	2.07
Confianza en las personas	669	6.81	1.76

Debido a que las opciones de respuesta fueron establecidas en un rango de 0 a 10, donde cero significa nula confianza, en la tabla anterior, se percibe que la gente no confía, y menos aún en sus instituciones, dado que en promedio obtuvieron 4.91.

A través de la prueba de estadística inferencial *t de Student* para muestras independientes, se buscaron diferencias estadísticamente significativas por género. La Tabla 4 muestra los resultados.

Como se advierte en la tabla anterior, las respuestas de hombres y mujeres son homogéneas, de manera que no existen diferencias estadísticamente significativas por género respecto a la confianza durante el confinamiento por COVID-19, mostrando niveles bajos.

Con respecto a la escolaridad, se realizó agrupación entre universitarios y no universitarios (Ver tabla 5). Como se puede apreciar, existen algunas diferencias.

En la tabla 6 se aprecian las diferencias estadísticamente significativas. En el caso de la situación marital, también llamada estado civil, la tabla 7 resume los resultados.

Las diferencias estadísticamente significativas de acuerdo con su situación marital se exponen en la Tabla 8. Con respecto a la edad se construyeron tres grupos. El análisis se realizó a través de la prueba de estadística inferencial paramétrica llamada *one way ANOVA*. Los resultados se exhiben a continuación. De igual forma se analizó el nivel de confianza por grupo etáreo. Los resultados se reportan en la tabla 9. Las personas mayores tienen más confianza que los jóvenes, tal como se puede apreciar, con excepción de las preguntas 2 y 7.

La tabla 10 presenta las diferencias estadísticamente significativas entre los grupos etarios correspondientes a la confianza.

Considerando la importancia de establecer el nivel de confianza que tienen los participantes en los esfuerzos para el manejo de la pandemia, Panamá, obtuvo puntajes, muy bajos en general ($\underline{x}$= 5.39, DE=1.79) en todas las preguntas y específicamente, la valoración integrada en cada una de las variables sociodemográficas y el promedio de ellas no alcanza el valor de 6 en la escala que va de 0 a 10.

Tabla 4. Diferencias por sexo respecto a la confianza

	Sexo	n	$\underline{x}$	DE
1. ¿Cuánto confía en la mayoría de la gente?	Hombre	507	6.18	2.11
	Mujer	161	6.30	2.07
2. ¿Cuánto confía en la mayoría de la gente que conoce personalmente?	Hombre	506	7.41	1.86
	Mujer	161	7.44	2.00
3. ¿Cuánto confía en el gobierno de su país?	Hombre	504	4.07	2.50
	Mujer	160	4.07	2.56
4. ¿Cuánto confía en la policía?	Hombre	508	5.04	2.45
	Mujer	158	4.91	2.49
5. ¿Cuánto confía en la administración pública?	Hombre	504	3.86	2.38
	Mujer	160	3.77	2.33
6. ¿Cuánto confía en el sistema de salud?	Hombre	503	5.34	2.62
	Mujer	160	5.56	2.57
7. ¿Cuánto confía en la Organización Mundial de la Salud (OMS)?	Hombre	504	5.38	2.72
	Mujer	160	5.12	2.75
8. ¿Cuánto confía en los esfuerzos de su país para manejar COVID-19?	Hombre	508	5.72	2.67
	Mujer	159	5.77	2.54
Confianza en las Instituciones	Hombre	500	4.92	2.05
	Mujer	158	4.86	2.12
Confianza en las Personas	Hombre	506	6.80	1.77
	Mujer	161	6.87	1.77
Confianza en general	Hombre	498	5.40	1.79
	Mujer	158	5.37	1.81

Tabla 5. Diferencias por escolaridad respecto a la confianza

	Escolaridad	n	$\underline{x}$	DE
1. ¿Cuánto confía en la mayoría de la gente?	Universitarios	323	6.46	2.04
	No universitarios	347	5.97	2.12
2. ¿Cuánto confía en la mayoría de la gente que conoce personalmente?	Universitarios	323	7.50	1.83
	No universitarios	346	7.34	1.95
3. ¿Cuánto confía en el gobierno de su país?	Universitarios	321	4.30	2.58
	No universitarios	345	3.86	2.44
4. ¿Cuánto confía en la policía?	Universitarios	321	5.29	2.43
	No universitarios	347	4.75	2.45
5. ¿Cuánto confía en la administración pública?	Universitarios	320	4.07	2.42
	No universitarios	346	3.62	2.29
6. ¿Cuánto confía en el sistema de salud?	Universitarios	321	5.60	2.52
	No universitarios	344	5.19	2.67
7. ¿Cuánto confía en la Organización Mundial de la Salud (OMS)?	Universitarios	321	5.26	2.60
	No universitarios	345	5.37	2.84
8. ¿Cuánto confía en los esfuerzos de su país para manejar COVID-19?	Universitarios	322	5.91	2.64
	No universitarios	347	5.57	2.62
Confianza en las Instituciones	Universitarios	316	5.09	2.07
	No universitarios	344	4.74	2.05
Confianza en las Personas	Universitarios	323	6.98	1.72
	No universitarios	346	6.66	1.79
Confianza en general	Universitarios	315	5.57	1.78
	No universitarios	343	5.23	1.78

Tabla 6. Diferencias en escolaridad

	Universitarios n = 402		No universitarios n = 363				
	$\underline{x}$	DE	$\underline{x}$	DE	t	gl	p
1. ¿Cuánto confía en la mayoría de la gente?	6.46	2.04	5.97	2.12	3.015	668	0.003**
3. ¿Cuánto confía en el gobierno de su país?	4.30	2.58	3.86	2.44	2.232	664	0.026*
4. ¿Cuánto confía en la policía?	5.29	2.43	4.75	2.45	2.803	666	0.005**
5. ¿Cuánto confía en la administración pública?	4.07	2.42	3.62	2.29	2.458	664	0.014*
6. ¿Cuánto confía en el sistema de salud?	5.60	2.52	5.19	2.67	1.994	663	0.047*
Confianza en las Instituciones	5.09	2.07	4.74	2.05	2.139	658	0.033*
Confianza en las personas	6.98	1.72	6.66	1.79	2.356	667	0.019*
Confianza en general	5.57	1.78	5.23	1.78	2.445	656	0.015*

*p ≤.05. **p ≤.01

Tabla 7. Situación marital

		n	$\underline{x}$	DE
1. ¿Cuánto confía en la mayoría de la gente?	Soltero	344	5.90	2.07
	Casado	326	6.52	2.07
2. ¿Cuánto confía en la mayoría de la gente que conoce personalmente?	Soltero	344	7.34	1.86
	Casado	325	7.50	1.92
3. ¿Cuánto confía en el gobierno de su país?	Soltero	341	3.84	2.41
	Casado	325	4.31	2.60
4. ¿Cuánto confía en la policía?	Soltero	342	4.69	2.38
	Casado	326	5.35	2.49
5. ¿Cuánto confía en la administración pública?	Soltero	340	3.76	2.25
	Casado	326	3.92	2.48
6. ¿Cuánto confía en el sistema de salud?	Soltero	341	5.08	2.49
	Casado	324	5.71	2.68
7. ¿Cuánto confía en la Organización Mundial de la Salud (OMS)?	Soltero	341	5.34	2.75
	Casado	325	5.29	2.71
8. ¿Cuánto confía en los esfuerzos de su país para manejar COVID-19?	Soltero	343	5.50	2.49
	Casado	326	5.98	2.77
Confianza en las Instituciones	Soltero	338	4.71	1.95
	Casado	322	5.11	2.16
Confianza en las Personas	Soltero	344	6.62	1.74
	Casado	325	7.02	1.78
Confianza en general	Soltero	338	5.20	1.70
	Casado	320	5.60	1.86

Tabla 8. Situación Marital respecto a la confianza.

	Solteros n = 346		Casados n = 328				
	$\underline{x}$	DE	$\underline{x}$	DE	t	gl	p
1. ¿Cuánto confía en la mayoría de la gente?	6.46	2.04	5.97	2.12	-3.860	668	0.000***
3. ¿Cuánto confía en el gobierno de su país?	4.30	2.58	3.86	2.44	-2.413	654	0.016**
4. ¿Cuánto confía en la policía?	5.29	2.43	4.75	2.45	-3.512	666	0.000***
6. ¿Cuánto confía en el sistema de salud?	4.07	2.42	3.62	2.29	-3.139	652	0.002**
8. ¿Cuánto confía en los esfuerzos de su país para manejar COVID-19?	5.60	2.52	5.19	2.67	-2.330	650	0.020*
Confianza en las Instituciones	5.09	2.07	4.74	2.05	-2.436	643	0.015*
Confianza en las personas	6.98	1.72	6.66	1.79	-2.881	667	0.004**
Confianza en general	5.57	1.78	5.23	1.78	-2.894	642	0.004**

Tabla 9. Descriptivos por grupos de edad con respecto a la confianza.

	Edad	n	$\underline{x}$	DE
Confianza en las Instituciones	Hasta 30 años	307	4.63	1.93
	De 31 a 50 años	287	5.10	2.15
	51 o más	66	5.37	2.22
Confianza en las personas	Hasta 30 años	311	6.76	1.68
	De 31 a 50 años	291	6.85	1.80
	51 o más	67	6.97	2.07
Confianza en general	Hasta 30 años	305	5.18	1.67
	De 31 a 50 años	287	5.54	1.86
	51 o más	66	5.76	1.95
1. ¿Cuánto confía en la mayoría de la gente?	Hasta 30 años	312	5.99	2.08
	De 31 a 50 años	291	6.31	2.08
	51 o más	67	6.79	2.12
2. ¿Cuánto confía en la mayoría de la gente que conoce personalmente?	Hasta 30 años	311	7.52	1.78
	De 31 a 50 años	291	7.38	1.88
	51 o más	67	7.15	2.43
3. ¿Cuánto confía en el gobierno de su país?	Hasta 30 años	310	3.69	2.38
	De 31 a 50 años	290	4.41	2.55
	51 o más	66	4.44	2.77
4. ¿Cuánto confía en la policía?	Hasta 30 años	311	4.71	2.46
	De 31 a 50 años	291	5.24	2.39
	Desde 51 años	66	5.44	2.62
5. ¿Cuánto confía en la administración pública?	Hasta 30 años	311	3.55	2.21
	De 31 a 50 años	289	4.05	2.45
	51 o más	66	4.27	2.62
6. ¿Cuánto confía en el sistema de salud?	Hasta 30 años	310	5.02	2.49
	De 31 a 50 años	289	5.62	2.66
	51 o más	66	6.16	2.67
	Hasta 30 años	310	5.46	2.66

7. ¿Cuánto confía en la Organización Mundial de la Salud (OMS)?	De 31 a 50 años	290	5.16	2.78
	51 o más	66	5.40	2.84
8. ¿Cuánto confía en los esfuerzos de su país para manejar COVID-19?	Hasta 30 años	312	5.30	2.53
	De 31 a 50 años	291	6.04	2.67
	51 o más	66	6.48	2.74

Tabla 10. Diferencias por grupos de edad respecto a la confianza.

	18-30 n = 357		31-50 n = 329		51 o más n = 79		gl	p
	x	DE	x	DE	x	DE		
Confianza en las Instituciones	4.63	1.93	5.10	2.15	5.37	2.22	659	.004**
Confianza en general	5.18	1.67	5.54	1.86	5.76	1.95	657	.011*
1. ¿Cuánto confía en la mayoría de la gente?	5.99	2.08	6.31	2.08	6.79	2.12	669	.009**
3. ¿Cuánto confía en el gobierno de su país?	3.69	2.38	4.41	2.55	4.44	2.77	665	.001***
4. ¿Cuánto confía en la policía?	4.71	2.46	5.24	2.39	5.44	2.62	667	.009**
5. ¿Cuánto confía en la administración pública?	3.55	2.21	4.05	2.45	4.27	2.62	665	.011*
6. ¿Cuánto confía en el sistema de salud?	5.02	2.49	5.62	2.66	6.16	2.67	664	.001***
8. ¿Cuánto confía en los esfuerzos de su país para manejar COVID-19?	5.30	2.53	6.04	2.67	6.48	2.74	668	.000***

*p ≤.05. **p ≤.01. ***p ≤.001.

En la figura 2 se muestra el nivel de confianza promedio por sexo, escolaridad, estado marital y edad con respecto a los esfuerzos realizados por Panamá para manejar el COVID-19.

Figura 2. Confianza en el manejo gubernamental de manejar COVID-19
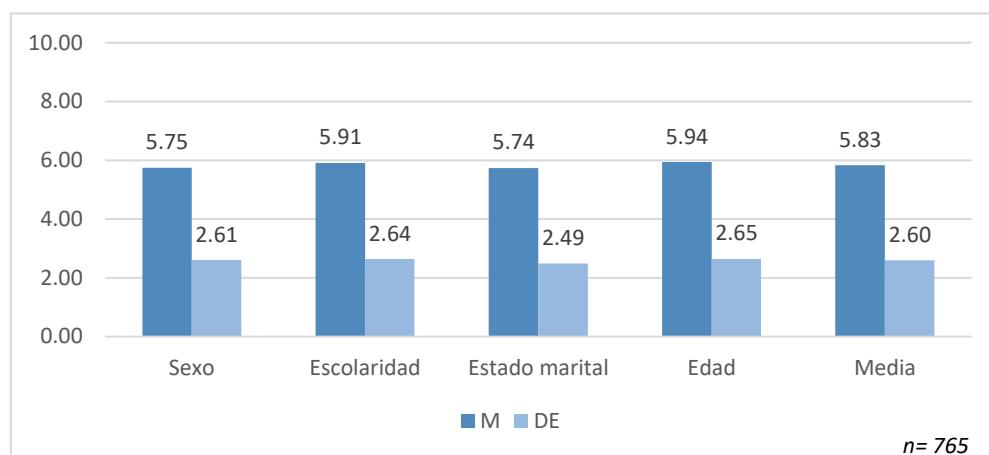
Financiamiento

Discusión y Conclusiones

No todas las personas están dispuestas a otorgar su confianza, porque han tenido experiencias de desencanto, traición, abuso, engaño o desilusión. Esto puede pasar tanto a nivel interpersonal como en las autoridades, las instituciones, las organizaciones y la sociedad en general.

Si la confianza es quebrantada, los adultos prefieren dudar como una forma de protección. Si la desconfianza está vinculada a un ente público por temas de corrupción, Pastrana (2019) señala que efectivamente la corrupción deteriora la legitimidad y quebranta la confianza.

La escala de confianza de la OCDE utilizada en esta investigación forma parte de la batería de nueve pruebas aplicada a nivel internacional por iniciativa COVIDiSTRESS global survey (Lieberoth y colaboradores, 2020). Para conocer las características psicométricas, se realizaron análisis de validez y confiabilidad, comprobando su valor para la población panameña.

Entre los principales resultados, destaca que el nivel de confianza es bajo, tomando en consideración que la evaluación promedio tuvo valores de 5 dentro de un rango de 0 a 10.

El 19 de marzo la Organización de las Naciones Unidas (ONU) reconoció de manera internacional a la República de Panamá por su pronta respuesta y acciones para contener al virus en tiempo y forma. Esta distinción

se difundió en todos los medios de comunicación nacional, sin embargo, se evidenció la falta de confianza también en los organismos internacionales.

Los hombres y las mujeres mostraron niveles semejantes de desconfianza, por lo que no hubo diferencias estadísticamente significativas, esto sugiere que la percepción en las personas y las instituciones en general, son similares en cuanto al género.

El análisis de los resultados, además, permite concluir que los universitarios tienen mayor confianza que los no universitarios, este resultado es consistente con lo que reportaron Holmberg y Rothstein (2017).

Con relación a la situación marital, los casados reflejan mayor grado de confianza que los solteros, tanto en las personas como en las instituciones, en el caso de la población de 51 años o más, tienen mayor confianza que los jóvenes, estos resultados, quizá están relacionados a que a mayor edad y en pareja, se tienen mayores compromisos económicos, institucionales y de pareja, por lo que requieren un cierto nivel de confianza como esperanza para ellos y sus familias.

Los hallazgos permiten establecer la falta de confianza al inicio de la emergencia por COVID-19 en Panamá, en las personas y en las instituciones, lo que se confirma con la literatura revisada (Holmberg y Rothstein, 2017; Yetano y Castillejos, 2019; Pastrana, 2019; Martin, Orr, Peyton, y Faulkner, 2020).

El concepto de confianza es subjetivo, por lo que su medición debe estar asociada al contexto, sin embargo, los autores nos hemos atrevido a tratar de entender el concepto en una situación extrema, por lo que no es claro si es una limitación o una ventaja.

Es importante, entonces, resaltar que la situación de cuarentena por pandemia durante la aplicación del cuestionario es una variable externa, extraordinaria, por lo que se recomienda realizar estudios longitudinales para contrastar y medir el impacto que ésta tiene.

References:

1. ANTAI (2019). *Reporte de resultados*. Autoridad Nacional de Transparencia y Acceso a la Información (ANTAI) y Banco de Desarrollo de América Latina (CAF). República de Panamá. Gobierno Nacional. www.antai.gob.pa/antai-y-caf-banco-de-desarrollo-de-america-latina-presentan-resultados-del-reporte-economia-y-desarrollo-2019/

2. Gereke, J., Schaub, M., y Baldassarri, D. (2018). Ethnic diversity, poverty, and social trust in Germany: Evidence from a behavioral measure of trust. *PLoS ONE*, 13(7), 1–15. https://doi.org/10.1371/journal.pone.0199834

3. Hidalgo, C. (2011). Etnografías de la Muerte. Rituales, desapariciones, VIH/SIDA y resignificación de la vida. Recuperado de http://www.sidastudi.org/resources/inmagic-img/DD17070.pdf#page=131

4. Holmberg, S., y Rothstein, B. (2017). Trusting other people. Journal of Public Affairs (14723891), 17(1/2), n/a-N.PAG. https://doi.org/10.1002/pa.1645

5. Levine, E. E., Bitterly, T. B., Cohen, T. R., y Schweitzer, M. E. (2018). Who is trustworthy? Predicting trustworthy intentions and behavior. *Journal of Personality and Social Psychology*, 115(3), 468–494. https://doi.org/10.1037/pspi0000136.supp (Supplemental)

6. Lieberoth, A., Cepulic, D., Rasmussen, J., Tran, T., Han, H., Lin, S., Tuominen, J. y Travaglino, G. (2020). COVIDiSTRESS global survey network (2020, March 30). COVIDiSTRESS global survey. DOI 10.17605/OSF.IO/Z39US. Recuperado de osf.io/z39us

7. Martin, A., Orr, R., Peyton, K., y Faulkner, N. (2020). Political probity increases trust in government: Evidence from randomized survey experiments. *PLoS ONE*, 15(2), 1–12. https://doi.org/10.1371/journal.pone.0225818

8. Matus, E., Matus, L., Florez, A., Tejeira, Ch., López, A., Araguas, N., y Stanziola, M. (julio 18 de 2020). Propiedades psicométricas de la escala PSS10-UCLA de estrés percibido en situación de COVID-19 en Panamá. DOI:10.5281/zenodo.3951184. Repositorio COVID-19. ZENODO.ORG. Recuperado de https://zenodo.org/record/3951184#.XxOUN3vitPZ

9. MINSA (19 de marzo de 2020). *Respuesta Operativa de Salud Automática*. Ministerio de Salud. República de Panamá. http://www.minsa.gob.pa/noticia/rosa-funciona-de-manera-exitosa

10. OEA y CIDH (2020). Derechos Humanos de las Personas con COVID-19. RESOLUCIÓN 4/202. Comisión Interamericana de derechos Humanos. Recuperado de https://www.oas.org/es/cidh/decisiones/pdf/Resolucion-4-20-es.pdf

11. OCDE (2017a). How's Life? 2017: Measuring Well-being, OECD Publishing, Paris.

12. OCDE (2017b). Guidelines on Measuring the Quality of the Working Environment, OECD Publishing, Paris

13. OMS (2020). La OMS publica directrices para ayudar a los países a mantener los servicios sanitarios esenciales durante la pandemia de COVID-19. Recuperado de https://www.who.int/es/news/item/30-03-2020-who-releases-guidelines-to-help-countries-maintain-essential-health-services-during-the-covid-19-pandemic

14. Pastrana, A. (2019). Estudio sobre la corrupción en América Latina. *Revista mexicana de opinión pública*, (27), 13-40. *Epub*.https://doi.org/10.22201/fcpys.24484911e.2019.27.68726

15. República de Panamá (20 de enero, 2020). Gobierno Nacional. Legislaciones. Resolución de gabinete por COVID-19 en el territorio nacional
https://panama.campusvirtualsp.org/sites/panama.campusvirtualsp.org/files/COVID-19/NuevaCarpeta/Resoluci%C3%B3n%20de%20Gabinete%20N%C2%B06%2028%20de%20enero%202020.pdf

16. República de Panamá (20 de marzo, 2020). *6 ANILLOS*. Plan Protégete Panamá. Gobierno Nacional.
https://panama.campusvirtualsp.org/sites/panama.campusvirtualsp.org/files/COVID-19/Seis%20Anillos%20del%20Plan%20Prote%CC%81gete%20Panama%CC%81.pdf

17. TI (2019). Transparency International. Global Corruption Barometer, Latin America & the Caribbean 2019. Citizens' views and experiences of corruption, Transparency International, https://www.transparency.org/files/content/pages/2019_GCB_LatinAmerica_Caribbean_Full_Report.pdf.

18. WHO and World Bank (2017), Tracking universal health coverage: 2017 global monitoring report: executive summary, World Health Organization and International Bank for Reconstruction and Development / The World Bank, https://apps.who.int/iris/bitstream/handle/10665/260522/WHO-HIS-HGF-17.2-eng.pdf?sequence=1 (accessed on 27 September 2019)

19. Yetano, A., & Castillejos, I. (2019). Auditorías de desempeño en América Latina: ¿Mejoran la confianza en los gobiernos? *Gestión y Política Pública*, 28(2), 407–440. https://doi.org/10.29265/gypp.v28i2.625

Evaluación de la Calidad Pedagógica Enfocada en la Usabilidad de un Aplicativo Móvil Educativo en Estudiantes de Educación Superior Tecnológica de Ecuador

Darío Xavier Romero Santistevan
Ingeniero en Electrónica y Telecomunicaciones, Maestria en Ingeniería Biomédica, Docente del Instituto Superior Tecnológico Juan Bautista Aguirre
Silvania Gabriela Herrera Martínez
Licenciada en ciencias de la educación mención Lengua Inglesa y Lingüística, Directora del Departamentos de Idiomas del ISTSB, Instituto Superior Tecnológico Simón Bolívar
Ronald Darwin Vélez Zambrano
Ingeniero en electrónica y telecomunicaciones, Magister en Conectividad y Redes de Telecomunicaciones, Docente del Instituto Superior Tecnológico Juan Bautista Aguirre
Jhon Hennry Mendoza Cedeño
Magíster en gerencia educativa, Lcdo. En psicología y orientación vocacional, Unidad Educativa Fiscal Juan León Mera
Cesar Israel Mendoza Moyón
Licenciado en Ciencias Navales, Magister en Administración de Empresas, Instituto Oceanográfico y Antártico de la Armada, Armada del Ecuador

Resumen

El presente estudio se enfoca en la necesidad que tienen los estudiantes como la brecha digital que les impide desarrollar un uso efectivo de herramientas tecnológicas y que las instituciones de educación superior en Ecuador deben de implementar dichas tecnologías del aprendizaje como

herramientas didácticas para el fortalecimiento del conocimiento y la simulación de situaciones con apego a la realidad. Por tanto, el objetivo de esta investigación fue evaluar la usabilidad que tiene una aplicación móvil como herramienta para el aprendizaje por medio del análisis de descriptores: a. Pertinencia, b. Facilidad de uso, c. Personalización, d. Retroalimentación, e. Autenticidad, f. Habilidades del pensamiento, g. Trabajo colaborativo y h. Motivación, en función al desempeño pedagógico de un nuevo entorno como lo son las aplicaciones móviles. En consecuencia, se detalló una metodología con enfoque cualitativo por medio de un diseño no experimental y método inductivo basado en la descripción de las experiencias generadas por estudiantes con el aplicativo móvil de la institución. Como instrumento se seleccionó la encuesta estructurada por una escala de Likert valorada de (1-5) partiendo de "imperceptible" hasta "fuerte" en función a la aceptación de los ocho descriptores por parte de los encuestados. Por lo tanto, se planteó como población de estudio 1408 estudiantes y por medio de un muestreo probabilístico se calculó una muestra de 302. Así mismo, varios resultados pusieron a prueba las ventadas como también desventajas y dificultades que generó el aplicativo en el proceso de aprendizaje donde el 29,5 % de los estudiantes determina una motivación fuerte en el uso del aplicativo móvil, sin embargo durante el ejercicio de las clases el 59,3 % de los estudiantes han percibido frustración debido a la conectividad o al colapso del aplicativo.

Palabras claves: Usabilidad, Pertinencia, Personalización, Retroalimentación, Habilidades de pensamiento

Assessment of Pedagogical Quality Focused on the Usability of an Educational Mobile Application in Technological Higher Education Students

Darío Xavier Romero Santistevan
Ingeniero en Electrónica y Telecomunicaciones, Maestria en Ingeniería Biomédica, Docente del Instituto Superior Tecnológico Juan Bautista Aguirre
Silvania Gabriela Herrera Martínez
Licenciada en ciencias de la educación mención Lengua Inglesa y Lingüística, Directora del Departamentos de Idiomas del ISTSB, Instituto Superior Tecnológico Simón Bolívar
Ronald Darwin Vélez Zambrano
Ingeniero en electrónica y telecomunicaciones, Magister en Conectividad y Redes de Telecomunicaciones, Docente del Instituto Superior Tecnológico Juan Bautista Aguirre
Jhon Hennry Mendoza Cedeño
Magíster en gerencia educativa, Lcdo. En psicología y orientación vocacional, Unidad Educativa Fiscal Juan León Mera
Cesar Israel Mendoza Moyón
Licenciado en Ciencias Navales, Magister en Administración de Empresas, Instituto Oceanográfico y Antártico de la Armada, Armada del Ecuador

Abstract
 This study focuses on the need that students have, such as the digital divide that prevents them from developing an effective use of technological tools and that higher education institutions in Ecuador must implement these learning technologies as didactic tools for the strengthening of knowledge. and the simulation of situations with attachment to reality. Therefore, the objective of this research was to evaluate the usability of a mobile application as a tool for learning through the analysis of descriptors: a. Relevance, b. Ease of use, c. Personalization, d. Feedback, e. Authenticity, f. Thinking skills, g. Collaborative work and h. Motivation, based on the pedagogical performance of a new environment such as mobile applications. Consequently, a methodology with a qualitative approach was detailed through a non-experimental design and inductive method based on the description of the experiences generated by students with the institution's mobile application. As an instrument, the structured survey was selected by a Likert scale valued from (1-5) starting from "imperceptible" to "strong" based on the acceptance of the eight descriptors by the respondents. Therefore, 1408 students were proposed

as the study population and a sample of 302 was calculated through probabilistic sampling. Likewise, several results tested the advantages as well as disadvantages and difficulties that the application generated in the learning process where 29.5% of the students determine a strong motivation in the use of the mobile application, however during the exercise of the classes 59.3% of the students have perceived frustration due to the connectivity or the collapse of the application.

Introduction

En la actualidad la sociedad guarda mucha relación y dependencia hacia el uso de dispositivos tecnológicos, por ejemplo, teléfonos celulares, entre otros. Además, los individuos son miembros inmediatos como especialistas independientes, ya que realizan un uso máximo de datos avanzados a través de estos medios sin tener la oportunidad de realizar o reclasificar las TIC, según lo indiquen sus inclinaciones (no se apropia de la innovación). Las condiciones universitarias no se liberan del efecto de estas progresiones en nuestro período informatizado; los educadores y los estudiantes pueden beneficiarse de la consolidación de reliquias avanzadas que funcionan con las condiciones de aprendizaje y las mejoran (González D. , 2017).

La medida de aprendizaje educadora intervenida por las TIC hace concebible ajustarse a los requerimientos y atributos de los clientes en su preparación e inclinaciones. No es extraño discutir esta temporada de progreso, lograda por impulsos en los avances de datos y correspondencia, como el comienzo de otro período, al que se alude regularmente como la sociedad de datos. Con el libre ingreso a la innovación, es factible planificar y establecer condiciones virtuales que se ajusten y se alteren a las necesidades instructivas; que trabajen con el esfuerzo coordinado de los pensamientos y aumenten el tiempo disponible para el giro de los acontecimientos, la utilización y determinación de la sustancia, según sus requerimientos (Castro & Guzmán, 2007).

Las condiciones a nivel educativas han sufrido una transformación total debido a la pandemia provocada por el virus del covid-19 sin embargo, la tecnología ha surgido como un mecanismo que puede aportar en el desarrollo de los procesos de aprendizajes. A pesar de esto, la innovación por sí sola no cambia el modelo instructivo, las prácticas de instrucción o los estándares actuales; no es apto para tomar atención a los problemas y dificultades que inundan las situaciones universitarias. Fundamentos instructivos utilizan el aprendizaje de Internet, como él hace referencia, para

seguir haciendo ensayos de aprendizaje similares sin atender a nuevas necesidades (Pujals, 2018).

Se utilizan nuevos avances para seguir replicando antiguos orígenes instructivos. No hemos recordado que el tema del aprendizaje es un ser innovador insuperable. Se debe poner énfasis en la educación, en los procedimientos de instrucción de los instructores, en la correspondencia y difusión de los marcos de aprendizaje (fomentando las medidas de desarrollo sostenidas por las TIC) y no en centrar los esfuerzos en la accesibilidad mecánica y el potencial (Rincón, 2016).

La adquisición de innovación y el uso básico de la innovación no cambia la escena educativa. Es importante capacitar a los docentes, como cuestión de primera en la importancia en el procesos de aprendizaje y enseñanza actual, como también generar en los estudiantes las habilidades, destrezas y dominio esenciales para ayudarlos a descubrir enfoques simular los beneficios que genera la presencialidad. Dichas características que les permitirán que los estudiantes y la escuela afronten las dificultades y necesidades en esta nueva era. Por tanto, las TIC se suman al cambio necesario donde docenes y estudiantes requieren nuevas habilidades y cambios en las metas, para que puedan contribuir a su autoridad y logro respectivamente (Rodríguez, 2018).

Por otra parte, algunas organizaciones se comprometieron con la evaluación y ejecución de la gamificación en los productos como también en la administraciones de las mismas, con el objetivo específico de expandir el compromiso y la devoción con respecto a sus clientes y trabajadores; Algunas instancias las marcas que han utilizado adicionalmente la gamificación en sus aplicaciones versátiles son: programación AppleWatch, programación Nike +, Waze Navigator, Booking supervisor de reservas Booking y Uber Transportation System; específicamente estas aplicaciones portátiles han descubierto cómo hacer y mantener otra propensión a sus compradores aumentando el valor de los artículos y las administraciones que ofrecen utilizando la estrategia de gamificación. El método de Gamificación no es restrictivo para el área comercial o de exhibición, este procedimiento también es apropiado en diferentes regiones. En el campo instructivo, la Gamificación tiene una rama comprometida con la investigación de la utilización de partes del juego dentro del ciclo de aprendizaje, esta rama se clasifica como "Aprendizaje basado en juegos", esta rama permite al suplente probar su mantenimiento e información, a través de métodos más potentes y ejercicios de prueba que los que se utilizan actualmente en el entrenamiento convencional anunciado (Ortiz, Colón, & AgredaI, 2018).

La UNESCO alude a los Recursos Educativos Abiertos (REA) como la disposición abierta de los activos instructivos intercedidos por las TIC para el asesoramiento, uso y transformación por parte de un área local de clientes

con fines no comerciales. Los REA son componentes o materiales en diseño computarizado que se apropian de manera complementaria para su uso en la medida de aprendizaje de la instrucción, tanto por parte de instructores y suplentes como por parte de científicos. La dispersión de estos activos se realiza mediante licencias abiertas o Creative Commons para trabajar con su utilización, variación, inducción y reordenamiento público (UNESCO, 2019).

Estos activos potencian su utilización, actualización y personalización para fines de preparación, de los cuales es factible distinguir los aspectos más destacados y los objetivos de la didáctica del instructor para la disposición y desarrollo de la información por parte del suplente. bajo licencias abiertas, el cliente (suplente) puede crear sus propias variantes y recomendaciones de activos y sustancia. En este examen se consideran tres ángulos fundamentales para describir un REA: (1) instructivo, donde se consideran enfoques que permiten el aprendizaje dinámico a través de la gamificación y la correlación. (2) Digital, que permite la codificación de datos en un doble lenguaje para la creación y distribución del activo en un escenario virtual. (3) El abierto, que trabaja con la accesibilidad de activos en una posición de libre (Gallegos, 2015).

Un clima de aprendizaje virtual se retrata como un espacio de datos destinado a una interacción instructiva, donde los animadores transmiten según las reglas académicas que dirigen la mejora de puntos específicos con una razón de aprendizaje. Para su origen y ejecución, se separan un montón de segmentos, medidas y puntos de vista de marcas. La tabla adjunta resume una parte de estos componentes que se encuentran en la auditoría escrita (Naranjo, 2019).

Tabla 1 : *Conjunto de componentes y dimensiones de un ambiente virtual*

Clasificación	Propuesta - Categoría	Propósito	Fuente
Dimensiones	a) Orientación epistemológica general, b) modelos psicológicos y educativos de referencia; c) Dominio de conocimiento; d) rol del profesor; e) rol de aprendiz; y d) nivel de autenticidad de las actividades diseñadas.	Analizar ambientes de aprendizaje	(Coll & Monereo, 2008)
Elementos	a) Organizaciones, comunidades; b) actividades; y c) prácticas.	Caracterizar un ambiente virtual	(Valencia, huertas, & baracaldo, 2014)
Etapas	a) Diagrama visual del contenido; b) corrección; c) análisis de interoperabilidad entre sistemas y plataformas; d) cumplimiento de estándares; e) generación de contenido en otros idiomas; f) testeo y control de calidad; y g) arquitectura de la información.	Definir las etapas del proceso de producción de contenido	(Pérez-berenguer & garcía-Molina, 2016)

Espacios	a) Interactividad tecnológica potencial; b) Interactividad pedagógico potencial; c) Interactividad tecnológica real; y d) Interactividad pedagógica real.	Analizar referentes potenciales y reales del ambiente educativo.	(Mauri, onrubia, Coll, & Colomina, 2016)
Componentes operativos	a) Comunicación; b) Productividad; c) para involucrar al estudiante; d) entrega de cursos y evaluación del aprendizaje; e) colaboración en línea; f) Desarrollo de cursos.	Identificar las cualidades de cada entorno	(Landon, 1989)

Nota: Información tomada a partir de las fuentes citas en la misma tabla.

Además, las nuevas innovaciones son instrumentos que pueden sumarse a la obtención de información, surgiendo el e-picking como un mecanismo que permite al estudiante seguir aprendiendo fuera del aula, a pesar de que el educador es todavía fundamental para establecer el orden dentro del aula; por otra parte, se ha distinguido que el m-learning puede ser un factor fundamental para asegurar la cooperación de los adultos jóvenes para familiarizarse con las necesidades que las técnicas habituales no han logrado (Aguiar, Velázquez, & Aguiar, 2019).

A pesar de esto, existen algunos obstáculos para la unión de la innovación instructiva en la educación avanzada, que incluyen: la base, el esfuerzo del educador, el cumplimiento con su utilización y la priorización de estos dispositivos en ejercicios distintos al aprendizaje. Del mismo modo, aunque el m-learning se está extendiendo rápidamente en numerosos lugares del mundo, la investigación sobre las variables que impulsan su recepción es escasa (Herrera M. , 2018).

De tal manera, que el docente debe de liderar los procesos de enseñanza y aprendizaje por medio del uso de los dispositivos tecnológicos para que él mismo establezca los límites y n permita que el estudiante abuse con el control de los dispositivos (que son amplios en el campo del e-learning), por tal razón los educadores que eventualmente son el canal a través del cual se garantiza la cita de información; significativamente más cuando los nuevos avances han representado una progresión de dificultades para los marcos instructivos, donde la obstrucción de numerosos eventos a los cambios de la visión del mundo está más relacionada con los entrenadores que con los estudiantes (Mujica, 2020).

Ventajas del aprendizaje electrónico

Este apartado presenta los beneficios que ofrece la preparación en internet o la educación a distancia. En este sentido, los establecimientos de educación superior deben evaluar las estructuras que ha tomado la formación

a distancia, ya que las intranets y las redes de amplia región se han creado y resultan más ineludibles, dado que las estrategias de e-learning son tan viables para la instrucción, o considerablemente más que los salones de clases convencionales. De ahora en adelante, pueden otorgar libertades de aprendizaje a personas que en cualquier caso no se acercarían a la nueva información; Además, las combinaciones de sala de estudio y e-learning podrían ser una metodología superior en establecimientos instructivos. En este caso, llaman la atención sobre el acompañamiento como ventajas del e-learning: (Carneiro , Toscano, & Díaz , 2021).

- Ahorro. El e-learning infiere una enorme disminución de gastos y costes cuando se contrasta con el aprendizaje vis-à-vis, ya que con el aprendizaje por internet se logran considerables fondos de reserva en cuanto a transporte, materiales de exposición, entre otros.
- Rapidez y destreza. Depende del gigantesco beneficio de ser una interacción de aprendizaje donde prevalece la prontitud en cuanto a conseguir los datos importantes para un aprendizaje. Los datos son accesibles en el momento, de forma ágil y realmente disponible.
- Acceso justo a tiempo. La preparación a través del e-learning se realiza en el momento en que se requiere. En este sentido, el cliente controla fundamentalmente la hora de su preparación basada en la web.
- Acceso sólo para mí. Además de tener la opción de realizarlo cuando se necesita, se trabaja con un tipo de educación sustancialmente más individualizada y personalizada, tal y como indican los atributos académicos e innovadores.
- Material electrónico. Sustituye el diseño en papel por una configuración electrónica. La mayoría de las veces se trata de material multimedia variado como, por ejemplo, ejercicios de instrucción en vídeo o introducciones, entre otros.
- Barrera espacial. Con el e-learning, los obstáculos espaciales desaparecen, ya que es posible realizar cualquier tipo de preparación en Internet sin tener en cuenta la zona geográfica del cliente. Es lo que se conoce como deslocalización espacial.
- Actualización. En el e-learning los contenidos están en la red, es decir, tienen la ventaja de estar facilitados en espacios donde pueden ser revisados y actualizados continuamente. En este sentido, el beneficio no es ciertamente un refresco unidireccional, sino que tiende a ser terminado por los dos instructores y los estudiantes
- Multigadget. El e-learning permite el aprendizaje de una enseñanza desde un amplio abanico de gadgets. Con el e-learning es posible acceder a cualquier preparación desde un teléfono móvil, una tableta o un PC

- Conciliación. Al ser un tipo de educación deslocalizada, el e-learning permite algo crucial en la sociedad actual: la conciliación entre el día a día y la vida laboral. El e-learning hace posible que el aprendizaje y el día a día sean viables, fundamentalmente porque permite el plan adaptable al que se ha hecho referencia anteriormente

- Tutorización. Es un componente principal del e-learning. El hecho de que los alumnos no puedan tener contacto directo con el profesor que imparte el curso no impide que se gestione el avance del alumno a través de la tutoría. Hay algunas formas en las que los alumnos pueden tener contacto líquido con el educador/facilitador a través del correo electrónico o la videoconferencia, entre otros.

- Aprendizaje colaborativo. Aunque en el e-learning el aprendizaje es principalmente individual, esto no impide que determinados tipos de instrucción se centren en lo que se conoce como aprendizaje comunitario.

- Se trata de un aprendizaje virtual, pero en el que, a través de una etapa concreta, varias personas pueden realizar ejercicios, debates y conceptualizaciones para compartir pensamientos. Una ilustración razonable de un escenario comunitario sería Google Hangouts.

- Plataforma virtual. A pesar de ser una asociación de Internet, al igual que un aparato electrónico, en e-learning no es inesperado utilizar algún tipo de escenario donde se concentran todos los datos identificados con la instrucción. En la formación, muy posiblemente el escenario más combinado es Moodle

- Gestión de la información. La administración de los datos a través del e-taking no es, sin duda, la misma que la de la preparación en casa. En el e-learning el alumno parte de un gran volumen de datos al que tiene libre acceso.

- Titulación. Un número cada vez mayor de lecciones ayudadas a través del e-learning tienen una capacidad de autorización muy parecida a la de cualquier preparación en casa. Este punto de vista ha impulsado sin duda a numerosas personas a seleccionar este tipo de aprendizaje electrónico.

Pensando en la sustancia a la que se hizo referencia recientemente, es importante alentar a las organizaciones de educación avanzar en la adquisición de nuevas plataformas web y el e-learning, ya que ofrecen la forma de ayudar a la preparación y capacitación que se suma al intercambio de información, ya que estas nuevas modalidades en la instrucción pueden crear una integración entre el estudiante y docente desde un enfoque colaborativo que convierte a

este tipo de actividades en un puente de mejora a nivel sociedad (Oeganización Mundial del Comercio, 2018).

Desventajas del aprendizaje electrónico

Con relación a las desventajas Leiva (2016) describe que el aprendizaje electrónico móvil está basado en redes inalámbricas para el acceso al contenido educativo de forma efectiva proporcionando el intercambio de ideas para el proceso de adquirir nuevos conocimientos, sin embargo contar con conexiones a internet que no abastecen las necesidades educativas limita a los estudiantes y docentes la implementación de aquellas herramientas a favor de la educación o formación virtual. En cuanto a redes y tecnología incide además que dispositivo móvil utiliza el usuario ya que cada recurso cuenta con características diferentes el cual cambia el rendimiento, como son la duración de carga eléctrica, seguridad de contenidos, conectividad inalámbrica, sistema operativo, visibilidad de contenido puesto que generalmente cuando se refiere a un smartphone es de dimensiones reducidas y esto puede acarrear cierta dificultad al momento de proyectar información o no es compatible para el tipo de tecnología (Mejía, 2020).

Los factores o recursos identificados anteriormente pueden llegar a limitar las posibilidades del uso de dispositivos móviles como los smartphones, por parte de Ávila (2019) describe como una desventaja el déficit de desarrollo de las destrezas receptoras de los conocimientos curriculares, es decir al momento de tomar la decisión de continuar con el uso de tecnología para conocimientos significativos a nivel profesional como lo son en la educación superior es imprescindible contar con habilidades tanto comunicativas como digitales para todos los partícipes que además inciden en el proceso de aprendizaje. Con relación a los docentes un requisito indispensable en su formación continua es poseer destrezas digitales que facilite alcanzar las metas y resultados significativos establecido en las planificaciones curriculares, además el rol de los docentes es fundamental para el reconocimiento como también la identificación de inconvenientes para su posterior aclaramiento debido a que los estudiantes podrían no contar con un nivel de habilidades relacionadas con la asignatura.

Así mismo, los smartphones como dispositivos tecnológicos en el uso dentro del ámbito educativo no fueron tan aceptado por parte de las instituciones de educación superior, así lo demuestra Mejía (2020) puesto que poseen una gran variedad de aplicaciones que actúan como herramientas dependiendo de calidad y costos. Sin embargo, la implantación de los teléfonos inteligentes tendría repercusiones si en su debido caso no se da un seguimiento al proceso de aprendizaje ya que en lugar de generar conocimiento llegan a ser distractores por lo tanto es preferible marcar parámetros sin la necesidad de prohibición. Por tal motivo, los smartphone

según los expertos educativos deberían tomarse medidas regulatorias para evitar que la tecnología genere distracciones y desatienda las necesidades educativas, por ejemplo, permitir a los estudiantes el acceso a los dispositivos móviles cuando se requiera.

En base a lo anterior mencionado no cabe duda de que organizar y planificar un programa pedagógico adecuado encamina a resultados satisfactorios apegados a los objetivos educativos, sin embargo, existen ciertos criterios a tomar en cuenta que a futuro evitan estancar el aprendizaje mediante teléfonos celulares, por lo tanto, es necesario encontrar los instrumentos para maximizar su utilidad es decir buscar soluciones y evitar inconvenientes.

Aprendizaje electrónico móvil

Para abordar este punto, es importante explicar algunos términos. Así, el aprendizaje versátil, también llamado M-learning, alude a las condiciones de aprendizaje que dependen de la innovación portátil, apuntadas a mejorar y promover las medidas de instrucción y aprendizaje. En consecuencia, se puede ver muy bien que el aprendizaje polivalente se identifica con la escolarización fuera de la sala de estudios, es decir, la formación a distancia (Cruz, Aguilar, Colomo, Gabarda, & Domínguez, 2018).

Desde otro punto de vista, Kinshuk (2009) advierte que se trata de un patrón que surge debido a la multiplicación de los marcos de correspondencia actuales. En lo que a él respecta, Quinn (2010) lo imagina como la conjunción entre el registro portátil y el e-learning, pero con apertura a los activos necesarios, así como un soporte de aprendizaje viable según Brazuelo Grund y Gallego Gil (2011), muestran que El M-Learning se presenta como una ayuda para ciclos instructivos polivalentes, que requieren una alta inteligencia en la mejora del aprendizaje, con conciliación de contenidos y universalidad en los ejercicios psicológicos (García & Corona, 2020).

Actualmente, en circunstancias como la actual, se induce lo innato en la innovación intelectual, de tal manera que Cavaller (2016), remarca que ese es el camino al desarrollo; en consecuencia, los creadores lo imaginan como "La línea que aísla las consecuencias del examen mecanizado y la innovación psicológica es generalmente leve", ya que se conocen una gran cantidad de los avances ocultos del registro intelectual -como el aprendizaje profundo, en (IA) y las organizaciones neuronales , lo que lo convierte en una base para la recogida adaptable y compartida, convirtiéndose en un dispositivo importante para la dinámica.

Como indican las hipótesis planteadas, muy bien se puede ver que el aprendizaje electrónico versátil ofrece técnicas actuales de ayuda a la medida de aprendizaje instruccional mediante el uso de teléfonos móviles, por ejemplo, Tablet-PC, Mano derecha avanzada personal (PDA), MP3, PDA (Smartphone), celulares y computadoras, entre otros. En resumen, se suele

advertir que el aprendizaje electrónico portátil se introduce como un componente constantemente conectado a cualquier dispositivo portátil que tenga algún tipo de disponibilidad remota, convirtiéndose en un aparato típico en las existencias de numerosos individuos, donde se está convirtiendo en una respuesta a los problemas que enfrenta el ámbito escolar (Cavaller, 2016).

En este sentido, los interlocutores en la medida de aprendizaje educativo establecen una ayuda ya que, en su directo, la orientación se puede completar en cualquier lugar, como en cualquier momento. Por lo tanto, la utilización de teléfonos celulares, al igual que los nuevos avances, se suman a la orientación formal y casual, ya que posiblemente pueden cambiar la ejecución y la preparación instructivas, de ahora en adelante el significado de este examen (Chiquinquirá & Hernández, 2020).

Ventajas y desventajas del aprendizaje electrónico móvil en la educación superior

En la práctica educativa, las nuevas tecnologías han presentado diferentes dispositivos como también softwares que podrían facilitar el acceso a una educación facilitando en relación con el tiempo y dinero a los estudiantes. En primera instancia se desarrolló la educación a distancia en la cual se tomó como medio la tecnología sin embargo, esta representaba grandes retos en relación a calidad educativa llevando a otro nivel la tecnología aplicada a la educación pero para eso fue necesario que tanto estudiantes como docentes tengan los conocimientos para el manejo de dichos instrumentos creando así una brecha tecnológica para quienes podían acceder a las plataformas como también la adquisición de infraestructura y equipos importantes e indispensables para el desarrollo educativo en modalidades virtuales o diferentes a la presencial (Carneiro , Toscano, & Díaz , 2021).

Dentro de este contexto, Hernández & Morales (2010), señalan varias utilidades e inconvenientes en la aplicación del M-Learning. En este sentido, dentro de las bondades en la aplicación de la metodología indicada, se tiene:

- Aumento del tiempo útil y de la disponibilidad geográfica.
- Se puede ampliar la oportunidad de crear ejercicios educativos y de aprendizaje.
- Mayor autosuficiencia.
- Los estudiantes pueden modificar el teléfono celular según sus necesidades.
- Contenido ajustado al área real
- El celular puede mostrar los datos de lo más cercano a él respecto a la hora de la que necesitas obtener datos, intereses explícitos o hacia dónde te diriges.
- Necesidad de asociación.

- El acceso inalámbrico se puede escalar de manera útil para varios clientes.
- Ingreso inmediato a información y toma nota.
- Los usuarios pueden acceder rápidamente a cierta información que deben transmitir en un breve período de tiempo, entre otros.
- Confirmación segura.
- Los dispositivos móviles pueden ser un instrumento útil para distinguir al cliente y algunas técnicas de pago adaptables.
- Alta personalización.
- Presenta un entorno virtual con un panorama abierto para que los estudiantes puedan indagar y descubrir nuevas aplicaciones en función al desarrollo del aprendizaje.
- Alto desarrollo de la innovación.

No obstante lo mencionado anteriormente, la forma en que el desarrolla la innovación trae consigo algunas barreras dentro de la adaptabilidad tecnológico desde la perspectiva de los estudiantes como también de los docentes:
- Brecha digital
- Analfabetismo digital
- Retroceso en el proceso de aprendizaje
- Alto costo en la adquisición de nuevos equipos tecnológicos (hardware y software).
- Inconvenientes con el acceso a internet.

Continúan resaltando Hernández & Morales (2010), sobre algunos de los inconvenientes en uso del MLearning, dentro de los cuales se tiene:
- Resistencia al cambio por parte de ciertos suplentes o instructores.
- Dificultad para adaptarse a los teléfonos móviles.
- Falta de periféricos para el celular que limitan al cliente a modelos de aprendizaje esenciales.
- A excepción de las Tablet PC y las estaciones de trabajo, tienen problemas relacionados con la facilidad de uso debido a las pantallas pequeñas.
- La navegación suele estar restringida.
- Los costos de acceso a la red son altos.
- El trabajo colaborativo es menor.
- Necesidad de asociación remota que pueda verse influenciada por el área real del cliente.

A la luz de los pensamientos planteados, los científicos muestran las ventajas de MLearning; desde entonces, se presentan como otra cosmovisión para el aprendizaje comunitario. En esta línea, las condiciones constructivistas tienen ventajas y también inconvenientes ya que la utilización de esta metodología permitirá al estudiante realizar los ejercicios a su propio ritmo, ya que cada estudiante realmente querrá percibir la importancia de asumir compromisos que le reportarán beneficios. En resumen, uno de los objetivos preestablecidos en la instrucción contemporánea se cumpliría, ya que, al enfocarse en un número crítico de estudiantes, reaccionaría con un interés insatisfecho, así como expandir y trabajar con los resultados potenciales de la educación para aquellos individuos que por diferentes razones no puede ir a las condiciones de entrenamiento adecuadas habituales (Herrera B. , 2012).

M-Learning en la educación superior

Durante bastante tiempo, el modelo instructivo que depende de la utilización de teléfonos móviles se ha basado en varios tipos de comprensión, que pueden cambiar dependiendo de las cualidades de cada uno de ellos. No obstante, no son selectos, y pueden integrarse y lograr ejemplos combinados que tome lo mejor de cada tipo para hacer uno más completo (Hernández & Morales , 2010).

En lo que a él respecta, Hernández & Morales (2010) destaca que la utilización del M-Learning en la sala de estudio trabaja con la comprensión de la información; Incorpora la vista y el sonido y se centra en el clima, incita al respeto por la variedad, así como favorece el aprendizaje centrado en el suplente y en la circunstancia concreta. Por otra parte, potencia la colaboración y la correspondencia, además de permitir el intercambio de información entre personas del ámbito local instructivo (suplentes e instructor), da la distribución inmediata de sustancia y comentarios, entre otros.

Asimismo, Hernández & Morales (2010) destaca que el M-Learning es una situación virtual donde el desarrollo de la información comprende una interacción funcional ya que es a partir de la experiencia de suplentes y guías online que se genera una mejora única de tipo social, pero con importancia escolar. Por lo tanto, las técnicas de seguimiento o verificación deben evaluarse, al igual que para mantener el control de las aulas virtuales, la filosofía de M-Learning aborda un aparato fenomenal que proporciona registros que ayudan a medir la ejecución de los suplentes. En este sentido, con esta aplicación, la fundación instructiva intenta lograr una mejora constante. En este caso, el binomio escolar e innovador en este enfoque comprende una interacción funcional donde las partes que intervienen (establecimiento de educación avanzada, mentor y suplentes) asumen una parte dinámica e inteligente.

En otro orden de cosas, Herrera (2012) advierte que el uso del M-Learning es apremiante para el aprendizaje dependiente del pensamiento crítico, para la obtención de habilidades, en el trabajo de campo, en los exámenes exploratorios, entre otros. Desde otro punto de vista, Marqués (2013) sostiene que esta filosofía de aprendizaje versátil sostiene la evaluación evolutiva y sumativa, además de expandir la inspiración del suplente. En resumen, el aprendizaje electrónico versátil aborda una ventana innovadora para la metodología instructiva, que suma al desarrollo de la información, el objetivo de los problemas de aprendizaje, así como la expansión de conocimiento, destrezas y habilidades, que trabajan con el acceso de manera autónoma y universal debido a la utilización de teléfonos celulares compactos.

Herramientas de aprendizaje social (Social Learning tools)

También denominados "aparatos de aprendizaje social", se consideran instrumentos de aprendizaje amigables en el caso de que se hayan convertido en los activos utilizados en la medida de aprendizaje educativo con fines andragógicos e instructivos, supervisando la programación social o los medios basados en la web decididos a trabajar con el aprendizaje. en la comunicación entre individuos y marcos (Sánchez & Pinochet, 2017).

Por otro lado, Jubany i Vila (2012) Sostiene que, en estos días, las administraciones de organizaciones avanzadas permiten que las personas que son esenciales para ellas, sus conocimientos y sus esfuerzos coordinados sean divulgados de manera básica desde cualquier lugar y cuando sea, intercambiar datos, pensamientos y experiencias garantizando su propio y experto desarrollo, permitiendo la producción de marcos de correspondencia significativos y unión social.

Para el creador, hay dos opciones para que las organizaciones ingresen a la interacción de exhibición y con qué sistemas, una alternativa es dejarlos fuera del divisor del salón principal sin explotar su capacidad instructiva de la utilización pedante de los PDA. La otra alternativa es aprovechar la forma en que los suplentes son ahora parte de ellos, se registran las asociaciones, se trabaja con la valoración de ciclos y la identificación de circunstancias conflictivas fuera de la organización. Por otra parte, González (2014) comunica que, las organizaciones interpersonales y los edublogs como dispositivos de aprendizaje sinérgico han mostrado nuevas condiciones virtuales para el aprendizaje utilizando avances dinámicos, la web como la increíble maravilla sociocultural y la mejora de la web, junto con una variedad de aparatos, han abierto un gran número de oportunidades para diversos puntos de vista como la preparación, la utilización de modelos constructivistas en los modelos de educación y aprendizaje, las medidas de desarrollo y mejora, al igual que en el aprendizaje comunitario (Chiquinquirá & Hernández, 2020).

En ese orden de ideas, Montero & Gewerc (2015) han decidido en sus exámenes que la utilización de una organización informal partía de la necesidad de descubrir artilugios que consolidaran las partes sociales y colectivas del aprendizaje con el desarrollo que cada sujeto realiza en las condiciones individuales con las que aprende la persona en cuestión. Piensan que el desarrollo social de la idea de juventud y de las capacidades que necesitan los jóvenes para adaptarse a la nueva economía de la información también se utiliza como atractivo para incitar cambios instructivos.

Como lo indica la valoración de los creadores, con el argumento de partir de los requerimientos y supuestos trabajados en su interacción de la socialización con los avances, se debe proponer un cambio instructivo significativo, tanto en el programa educativo como en las instituciones educativas. Los nuevos avances se han convertido en otra situación instructiva que proyecta los resultados concebibles que ofrece la web y estimula al estudiante para que sea dinámico en el ciclo de aprendizaje interactuando con un área local de aprendizaje virtual (Carneiro , Toscano, & Díaz , 2021).

En este punto de vista, Amaro (2020) piensa que el aprendizaje colectivo y la utilización de la innovación son dos patrones que están imperando en cada una de las fases instructivas de la persona, es decir, desde la etapa esencial hasta la universitaria, descubriendo un gran número de usos, escenarios virtuales que se están llevando a cabo de forma dinamita, mejorando a un ritmo desconcertante para tener la opción de conseguir contenidos característicos de una asignatura, al tiempo que se avanza en la cooperación entre educadores, alumnos suplentes como esfuerzo conjunto entre alumnos suplentes (Chiquinquirá & Hernández, 2020).

En otro orden de ideas, Sánchez & Pinochet (2017), hacen referencia a que el interés por las organizaciones informales no radica tanto en la sustancia como en su capacidad para construir asociaciones y sumar estima, ya que es la importancia en desarrollo de las interconexiones. Hubs a pesar de la información individualizada. Para este creador, el término e-learning se utiliza para aludir al descubrimiento que se comparte y se trabaja con los estudiantes reales que combinan y rediseñan la apropiación de la sustancia, adquiriendo habilidades computarizadas y cumpliendo con los objetivos de preparación.

Para el creador, cuando el e-learning se incorpora en un marco o etapas de aprendizaje de los ejecutivos, se puede abrir un entorno avanzado recibiendo cualidades de disponibilidad, construyendo asociaciones con marcos externos, mediante mashups, que es lo que encierra lo innovador y la interacción de recombinar los datos existentes y crear nuevos datos con esa información el sindicato insta a los clientes a establecer asociaciones entre el contenido de los medios dispersos, creando y encontrando nuevos tipos de

datos que se muestran en varias organizaciones y espacios (González & Medina, 2018).

Continúan Sánchez & Pinochet (2017) expresando que mostrar el aprendizaje post-elearning reemplaza la transmisión directa de datos instructores por un modelo abierto de información dependiente de organizaciones interrelacionadas, abierto a nuevas agendas de preparación y a todas las multitudes, siendo dinámico todo el tiempo, considerando los estilos psicológicos de los sujetos y el surtido de gadgets que ofrecen acceso a información multisensorial verbal, compuesta, visual y sonora, aclimatando a otro método instruccional ajustado a una correspondencia portátil, adaptable, no directa, ajustada a los intereses y necesidades de los aprendices.

Para Sánchez & Pinochet (2017) los posibles mashups aplicados al entorno instructivo radica en la forma en que hacen concebible llegar a nuevas resoluciones o reconocer nuevas conexiones a través de la asociación y combinación de mucha información, de diversas fuentes, de una manera razonable, para lo cual existe son aparatos que dan un clima vivo que se puede coordinar desde universos virtuales para que el estudiante en un espacio similar pueda acceder a un show, un video o un wiki, por ejemplo, Active Worlds, Olive y Second Life, permiten la colaboración en el uso de estos recursos.

En la sociedad actual, la verdad instructiva está firmemente conectada a los avances y desarrollos mecánicos desde el M-Learning o aprendizaje electrónico y el avance del aprendizaje electrónico versátil, ambos son concebibles utilizando etapas de PC, lo que aborda un beneficio; pues, la información en la práctica amistosa debe ser considerada por las diversas áreas de extraordinaria importancia. En consecuencia, la prueba actual para las tertulias comprometidas con este tema, solicita el cumplimiento de prerrequisitos empresariales combinados con la preparación de un individuo con una preparación inigualable que incorpore la formación con implicaciones telemáticas, así como la utilización de etapas innovadoras a la transmisión y edad de información (Sánchez & Pinochet, 2017)

Volviendo a lo anterior, los científicos coinciden en que la utilización del enfoque M-Learning o aprendizaje portátil, se suma mutuamente al binomio de fundamentos instructivos del público en general; ya que aportan respuestas a los problemas de la sociedad globalizada; similar; Del mismo modo, no solo se suma y reacciona al problema del espacio real, sino que se puede utilizar de manera efectiva a pesar de cualquier emergencia o posibilidad mundial, también brinda ventajas de mejora del tiempo, economía en los espacios reales, disminución de costos que comienzan desde las distancias. y sucesivos desarrollos de las partes mediadoras. Posteriormente, tanto el e-learning como el e-learning portátil ofrecen una ayuda significativa en el área de la instrucción, entre diferentes motivos, se trata de una ruta de

vanguardia y exitosa para la era y transmisión de información que favorece el desarrollo de la sociedad actual de la Información y correspondencia (Chiquinquirá & Hernández, 2020).

Por último, los analistas advierten que hay que tener la certeza de que el M-Learning no aborda ni un ápice un sustituto de la preparación convencional ya que ambos pueden coincidir consumadamente atendiendo a los requerimientos, además, dado el vertiginoso ascenso de nuevas innovaciones, muy bien Reconocer que los estudiantes conocen bien los medios distintivos de PC, pero los instructores (educadores, entrenadores y facilitadores, entre otros) son las personas que manejan la innovación intelectual, además, su objetivo principal es mostrarles cómo actualizar y utilizar dichos teléfonos celulares o instrumentos, sin embargo con fines escolares posteriormente será la prueba que los educadores deben afrontar (Sánchez & Pinochet, 2017).

Método

Como metodología de la investigación se desarrolló un estudio con enfoque cualitativo debido al análisis e interpretación de los resultados en función a la percepción de los actores activos (estudiantes) en el proceso de aprendizaje. En consecuencia mediante un diseño no experimental, método inductivo que se enfoca en analizar el fenómeno del objeto de estudio por medio de un alcance descriptivo que establece una evaluación del uso del aplicativo con base a las siguientes descriptores (Burden & Kearney, 2017) (Ver Anexo 1):

- Pertinencia
- Facilidad de uso
- Personalización
- Retroalimentación
- Autenticidad
- Habilidades del pensamiento
- Trabajo colaborativo
- Motivación

Para el análisis de la información se procede al envió de la encuesta (formulario) hacia los estudiantes, esta encuesta está estructurada de acuerdo al instrumento proporcionado por autores Bedregal y Cornejo (2019) en la investigación titulado "Evaluación de la percepción estudiantil en relación al uso de la plataforma Moodle desde la perspectiva del TAM", además para la adaptación de los ítems para que los estudiantes sean capaces de comprender e interpretar los lineamientos y así mismo puedan seleccionar la respuesta que verdaderamente represente lo que ellos piensen. Dicho instrumento (anexo 2)

presenta un Índice de Validación de Contenido (IVC) de 1,00 (Rozas & Rojas, 2016).

Para el desarrollo de la recolección de información se tomó como unidad de análisis a los estudiantes de un Instituto Superior Tecnológico localizado en la ciudad de Daule, provincia del Guayas en Ecuador. Esta institución de educación superior se caracteriza por contar con una oferta de carreras amplia de diez carreras alineadas a las ciencias administrativas, informática, técnicas y tecnológicas tanto en modalidades presenciales como del sistema dual (50 % clases y 50 % en empresas formadoras) con una población de 1408 estudiantes matriculados en el II periodo académico 2020-2021 (anexo 3), en consecuencia, por medio de un muestreo probabilístico aleatorio simple se calculó una muestra de 302 estudiantes. Así mismo la técnica e instrumento de recolección de información utilizado fue la encuesta por medio de Google formularios (anexo 3), cuyos ítems fueron evaluados por una escala de Likert donde los encuestados valoraron cada descriptor de imperceptible a fuerte (1-5).

Como se denota en el párrafo anterior, la unidad de análisis son los estudiantes de la institución de educación superior y es relevante también recalcar que se tomó este caso de estudio con base a la problemática provocada por la crisis sanitaria que todo el mundo está pasando por la pandemia y el contagio del SARS-CoV-2, todas las instituciones educativas ya sea inicial, media y superior se encuentran en modalidad virtual. Sin embargo, la institución ya lleva varios años utilizando plataformas virtuales, así mismo el uso de aplicativos móviles fue determinante para sostener este proceso académico ya que la institución al ser pública y estar ubicada en una zona rural la mayoría de sus estudiantes son de escasos recursos y no cuentan con una infraestructura tecnológica adecuada. Por tanto, la opción de una aplicación móvil fue muy atractiva ya que por medio de smartphones los estudiantes pueden realizar trabajos autónomos, presentar tareas y rendir tanto lecciones como exámenes.

Análisis de resultados

En función con la encuesta realizada a los estudiantes esto se lo ha clasificado en función a las ocho dimensiones determinadas también como descriptores y lo que se busca es identificar y analizar la intensidad y perspectiva de estos actores en relación con las características virtuales – pedagógicas con respecto a las experiencias con la aplicación móvil utilizada en la institución.

Tabla 2. Presentación de resultados

| N°- | ítem | Resultados (Imperceptible --------------------------------- Fuerte) | | | | |
		1	2	3	4	5
1	¿Qué tan adaptables es el aplicativo móvil para el aprendizaje en relación con las necesidades económicas de estudiantes?	2,60%	3,60%	27,20%	40,40%	26,20%
2	¿Usted considera que todos los estudiantes fueron consultados en cuanto si cuentan o no con un dispositivo móvil?	43,60%	39,40%	4,00%	3,30%	9,70%
3	¿Qué tan fácil es el uso del aplicativo móvil para el aprendizaje con respecto a las gráficas, enlaces, navegación e intuitivo?	3,30%	7,30%	21,50%	39,40%	28,50%
4	¿Usted considera que la interfaz de la aplicación móvil implementada por la institución pueden provocar la desconcentración del estudiante?	26,20%	10,60%	6,00%	43,00%	14,20%
5	¿Qué tan personalizado es el aplicativo móvil en relación con la necesidad de los estudiantes?	3,30%	4,00%	18,90%	43,00%	30,80%
6	¿Usted considera que el diagnóstico realizado por la institución en cuanto a la capacidad de su dispositivo móvil puede soportar el aplicativo para un aprendizaje efectivo fue el apropiado?	27,90%	57,30%	7,30%	2,60%	4,90%
7	¿Qué tanto el aplicativo móvil ofrece a los estudiantes una retroalimentación específica y personalizada?	3,00%	6,00%	26,80%	39,70%	24,50%
8	¿Usted considera que actualmente tiene la capacidad de manejar correctamente las funciones del aplicativo móvil de la institución?	7,60%	3,30%	46,40%	17,90%	21,50%
9	¿Qué tanto el aplicativo móvil permite desarrollar habilidades a través de actividades de la vida real en entornos auténticos y basados en el contexto del estudiante?	1,70%	6,60%	24,80%	43,40%	23,50%

10	¿Usted considera que el aplicativo móvil puede suplir de gran manera la interacción entre docente y estudiante en el ámbito de compartir experiencias a nivel profesional de forma efectiva?	3,00%	7,70%	25,10%	39,70%	24,50%
11	¿Qué tanto el aplicativo móvil promueve el desarrollo de habilidades de pensamiento de orden superior, creación, evaluación y análisis?	2,00%	4,60%	22,80%	43,40%	27,20%
12	¿Usted considera que los contenidos que se imparten en los aplicativos móviles fueron lo suficientemente adaptados a la virtualidad?	51,60%	31,70%	9,80%	2,00%	4,90%
13	¿Qué tanto el aplicativo móvil fomenta la comunicación entre los estudiantes, la creación/modificación del contenido de forma colaborativa y facilidad al compartir dicho contenido online?	3,60%	5,30%	26,80%	39,10%	25,20%
14	¿Usted considera que la aplicación móvil generó una barrera de comunicación intrapersonal con sus compañeros de curso?	24,80%	31,70%	28,40%	8,20%	6,90%
15	¿Qué tan motivado te sientes para usar el aplicativo móvil y elegir entre otras opciones similares?	3,00%	5,30%	24,80%	37,40%	29,50%
16	¿Usted considera haber percibido frustración cuando el aplicativo móvil o su dispositivo no podían ofrecerle un acceso optimo a la clase?	59,30%	31,70%	5,00%	2,00%	2,00%

Pertinencia

Este instrumento ofrece dos perspectivas con respecto a la usabilidad del aplicativo móvil implementado en la institución de educación superior desde un visión que evaluó los atributos y otra que trata de identificar las barreras que impiden el desarrollo del proceso de aprendizaje por medio del aplicativo. En relación con la pertinencia los aplicativos móviles es justificado por la necesidad de que el futuro profesional adquiera competencias como razonamiento, capacidad de relacionarse e integrar conocimientos, así como trabajar en equipo (Serrano, 2019). En consecuencia, se logró identificar que en cuanto a la adaptabilidad de este instrumento tecnológico en relación con las necesidades existe una fuerte aceptación por parte de los estudiantes

encuestados (nivel 4= 40,4% y 5= 26,2%). sin embargo, no todos los estudiantes fueron consultados en cuanto si cuentan o no con un dispositivo móvil generando la imperceptibilidad de ellos (nivel 1= 43,6% y 2= 39,4%).

Facilidad de uso

Por otra parte, la necesidad de introducir un instrumento utilitario en la escolarización y dentro del mercado laboral surgió debido a la exigencia de fundamentos instructivos para llevar a cabo avances de aprendizaje e información (TAC) como dispositivos de instrucción para reforzar la información y recrear circunstancias con conexión con el mundo real (Guadarrama, 2021). Por lo tanto, la facilidad que genera el aplicativo por el uso de gráficas, enlaces y navegación obtuvo una fuerte aceptación por parte de los encuestados logrando las puntuaciones más altas en los tres niveles considerados fuertes (nivel 3= 21,5 %, 4= 39,4% y 5= 28,5%). Pero, en cuanto a la concentración de los estudiantes existe un porcentaje considerable que señala la ocurrencia de tal situación como fuerte (nivel 4= 43% y 5= 14,2%).

Personalización

Así mismo, en el desarrollo de aplicativos móviles versátiles, se utiliza la personalización de contenido, cuyo objetivo es mantenerse alejado de la sobrecarga de datos (infoxicación), ajustando la sustancia particular para cada tipo de estudiante, ya sea un individuo o una organización. La combinación de dispositivos y avances adecuados permite atender la variedad de puntos y beneficiarios, incluso utilizando herramientas externas que trabajan con la evaluación evolutiva y sumativa a través de la comunicación directa (Trabaldo, Soraide, & Kamijo, 2017). Así mismo, la personalización del aplicativo móvil en relación con las necesidades de los estudiantes fue valorado como fuerte debido a que la mayoría de los encuestados seleccionaron los dos niveles más fuertes (nivel 4= 43% y 5= 30,8%). Por otro lado, considerando el diagnóstico realizado por la institución en cuanto a la capacidad del dispositivo móvil en soportar el aplicativo fue determinado como imperceptible debido a la selección mayoritaria en los niveles menos fuertes (nivel 1= 27,9 %, 2= 57,3 %).

Retroalimentación

La creación de aplicaciones portátiles cruzadas para el refuerzo de tipos recíprocos de instrucción es una posible respuesta para la mejora continua del aprendizaje en estudiantes suplentes que están aprendiendo en la universidad o en cualquier nivel más significativo. Los insumos en aplicaciones versátiles se utilizan como ayuda en varias clases, aceptando las nuevas dificultades de hoy y de esta manera ofrecer algunas críticas dependientes del módulo Feedback que propondrá datos tomados de las

calificaciones evaluadas y con esto dará nuevos dispositivos utilizando la innovación actual (Santos, Hernández, Chau, Zepahua, & Torres, 2017). Según los estudiantes encuestados aprueban con una calificación fuerte sobre la retroalimentación de las clases desarrolladas en entornos virtuales se ajusta a los requerimientos temporales y tecnológicos de ellos con porcentajes significativos en los niveles más fuertes (nivel 4= 39,7 % y 24,5 %). Además, se evaluó la capacidad de que tienen los estudiantes en el manejo correcto de las funciones del aplicativo móvil cuyos resultados marcan una imparcialidad debido a que el 46,4 % de los encuestados seleccionaron el nivel 3 (nivel neutro).

Autenticidad

Los teléfonos celulares se utilizan en la instrucción como árbitros en la medida de instrucción y aprendizaje, dado que estos dispositivos se pueden utilizar para asesorar a diferentes materiales instructivos, esto implicaría que el uso debería promover la mejora de las habilidades asociadas con la tarea de dominio. así como ayudar a mejorar las habilidades de razonamiento y ayudar a los amigos, los teléfonos celulares pueden expandir la inspiración de los estudiantes dentro de la sala de estudio (Rodríguez & Juárez). Los estudiantes fueron evaluados con respecto a la capacidad del aplicativo móvil en el desarrollo de habilidades a través de actividades de la vida real en entornos auténticos y los resultados mostraron que son fuertes dicha afirmación (nivel 4= 43,4 % y 5= 23,5%). Así mismo, los encuestados declaran que el dispositivo tiene una capacidad fuerte en suplir la interacción entre el docente y el estudiante en el ámbito de compartir experiencias que enriquece la perspectiva profesional del estudiante.

Habilidades del pensamiento

Las aplicaciones móviles totalmente destinadas a apoyar y acompañar al estudiante en el camino hacia la adquisición de conocimiento como también la actualización de los grados de información y el grado de habilidades básicas de razonamiento inteligente o de pensamiento, se centra en la mejora de los datos y la correspondencia de los activos de las TIC, coordinados hacia la preparación, la apertura y la conveniencia, consolidando modelos instructivos contemporáneos de tipo constructivista (Arias & Constain, 2021). En función a la capacidad que tiene el aplicativo móvil en el desarrollo de habilidades de pensamiento de orden superior, creación, evaluación y análisis los estudiantes encuestados señalan la gran mayoría como fuerte debido a que han seleccionado los niveles más fuertes (nivel 3= 22,8 %, 4= 43,4% y 27,2%). Sin embargo, en cuanto a la adaptación de los contenidos en el aplicativo móvil fueron débiles o imperceptibles por parte de los estudiantes señalando

la mayoría en los niveles menos fuertes (nivel 1= 51,6 %, 2= 31,7 % y 3= 9,8%).

Trabajo colaborativo

Una columna significativa en los ciclos y espacios instructivos es el esfuerzo coordinado, que aprovecha las TIC, las personas que interceden en una interacción de aprendizaje, comúnmente se influyen, intercambian emprendimientos y supuestos y reconsideran un emprendimiento compartido que los impulsa a la realización compartida de otra titulación. de información y cumplimiento (Gil, 2019). Por tanto, según los estudiantes encuestados describen como fuerte en que el aplicativo móvil fomenta la comunicación entre los estudiantes, la creación/modificación del contenido de forma colaborativa y facilidad al compartir dicho contenido online (nivel 4=39,1 % y nivel 5= 25,2 %). por otro lado, los encuestados consideran imperceptible que la aplicación móvil generó una barrera de comunicación intrapersonal con sus compañeros de curso (nivel 1= 24,8 %, 2= 31,7 % y 3= 28,4 %).

Motivación

Finalmente, los procedimientos instructivos son en conjunto los activos que se aplican para trabajar con el aprendizaje de estudiantes suplentes, los que se identifican con la motivación son aquellos que significan revitalizar la información pasada e incrementar los grados de actitud de los estudiantes antes de una reunión de aprendizaje (Estrada, 2017). Así mismo se evaluó por parte de los estudiantes una motivación fuerte (nivel 4= 37,4 % y 5= 29,5 %) en el uso del aplicativo móvil como también la elección de elegir entre otras opciones similares. sin embargo, durante el ejercicio de las clases la mayoría de los estudiantes han percibido frustración debido a la conectividad o al colapso del aplicativo por tanto, una gran proporción de estudiantes seleccionar los niveles menos fuertes (nivel 1= 59,3 % y 2= 31,7%).

Conclusiones

En este estudio se han analizado diferentes perspectivas en cuanto a la usabilidad y la integración de la tecnológica en el desarrollo del aprendizaje desde la perspectiva de los estudiantes los cuales evaluaron las ventajas y desventajas al implementar un aplicativo móvil en el proceso de aprendizaje en una institución de educación superior técnica y tecnológica. Con este enfoque se puede describir que los reajustes en el diseño es un proceso que no se lo debe tomar a la ligera, la correcta aplicación mediante metodologías correctivas y retroalimentaciones de las experiencias de los usuarios evita poner a disposición de estos productos tecnológicos de aprendizaje de mala calidad. Por tanto, la evaluación periódica de la usabilidad es un proceso que además de visibilizar los distintos errores, se convierte en una herramienta de

control de calidad que permite desarrollar aplicaciones web confiables y usables. No obstante la evaluación comparativa entre ventajas y desventajas permite determinar barreras en la interfaz con mayor presencia en cada una de las dimensiones estudiadas, permitiendo así identificar las áreas que necesitan mayor atención.

El proceso de hacer usable a una herramienta tecnológica como las aplicaciones web no es una tarea sencilla, requiere de la asociación entre el contenido, la interacción y los procesos. Un contenido de calidad debe tratar de ser concreto y resumir al máximo su contenido. La interacción debe estar en función del público objetivo. Los procesos deben ayudar a encontrar una lógica en la interacción. La armonía de estos elementos más el monitoreo y la medición constante de los elementos ayudaran a evitar una percepción negativa por parte de los usuarios.

Por tanto la usabilidad hará de las aplicaciones web lugares de mayor tránsito donde no existan limitantes según el nivel de conocimiento de cada usuario, por lo contrario esta disciplina abrirá la posibilidad de desarrollar nuevos conceptos y teorías que a futuro puedan aportar a otras instituciones educativas a difundir el tema y a ampliar campos educativo, profesional y social con muchas posibilidades y aristas para su expansión y desarrollo a nivel de calidad en el aprendizaje.

La facilidad de uso se convierte en un tema básico para el reconocimiento de una aplicación, es así como la óptica tecnológica del estudiante permite extender el examen del plan centrado en el usuario, dando entrada al nivel de atributos relacionados con la calidad de programación. Las cualidades atribuidas a una aplicación son ideas dinámicas, debido a esto, no se pueden estimar directamente, para medirlas es importante relacionar varias medidas, por ejemplo, la característica o directriz, la eficiencia se puede evaluar utilizando una métrica que permite calcular el tiempo que tarda un estudiante en terminar una actividad establecida.

Sin embargo, existen grandes barreras que las instituciones de educación deben de considerar como la capacidad económica en la adquisición de dispositivos móviles, como también en el acceso óptimo a internet para el desarrollo de las clases. Además, la continuidad de estas dificultades genera retrocesos en el aprendizaje de los estudiantes creando frustración y la posible deserción estudiantil. Por tanto, es necesario que la institución realice un riguroso diagnóstico de la situación a nivel tecnológico de los estudiantes para establecer un aplicativo u otro medio a nivel tecnológico que aporte significativamente el desarrollo del proceso educativo.

Por lo tanto, los tipos de trabajo y los recursos utilizados serían ilimitados: desde abordar diversas reacciones, ejercicios de respuesta corta, ejercicios instructivos explícitos como examen, donde no solo el educador podría enviar tareas, contenido, señala y corrige los ejercicios, pero además

los estudiantes pueden cooperar en los remedios y presentar contenido de medios mixtos para toda la clase.

References:

1. Aguiar, B., Velázquez, R., & Aguiar, J. (2019). Innovación docente y empleo de las TIC en la Educación Superior. *Espacios*.

2. Arias, J., & Constain, G. (2021). Experiencia de diseño de aplicaciones móviles basada en estrategias de gamificación para el fortalecimiento de habilidades cognitivas. *Revista de la Asociación Interacción Persona Ordenador (AIPO)*, 2(1), 17-24.

3. Burden, K., & Kearney, M. (2017). Investigating and critiquing teacher educators' mobile learning practices. *Interactive Technology and Smart Education*. doi:10.1108/ITSE-05-2017-0027

4. Carneiro, R., Toscano, J., & Díaz, T. (2021). Los desafíos de las TIC para el cambio educativo. *Fundación Santillana*.

5. Castro, S., & Guzmán, B. (2007). Las Tic en los procesos de enseñanza y aprendizaje. *Revista de Educación Laurus*, 213-234.

6. Cavaller, V. (2016). La tecnología cognitiva. *Recuperado de https://n9.cl/6yegk*.

7. Chiquinquirá, R., & Hernández, J. (2020). M-Learning: Estrategia Para La Promoción Del Aprendizaje Electrónico Móvil En Instituciones De Educación Superior. *Universidad Privada Dr. Rafael Belloso Chacín*.

8. Coll, C., & Monereo, C. (2008). Psicología de la educación virtual. *Ediciones Morata*.

9. Cruz, A., Aguilar, A., Colomo, E., Gabarda, E., & Domínguez, R. (2018). Propuesta Multidiciplinares de innovación e intervención educativa. *Universidad Internacional de Valencia*.

10. Estrada, C. (2017). strategias Educativas De Motivación A Través De Una Aplicación Móvil Para Evocación De Saberes Previos En Estudiantes De Ofimática De Zegel Ipae. *Universidad César Vallejo*.

11. Gallegos, J. (2015). Las Prácticas Pedagógicas que realizan los asistentes de la educación, durante los recreos en los patios de la escuela públicas Básicas de Valparaíso y su relevancia en la gestión de la convivencia. *Universidad Autónoma de Barcelona*, 22-48.

12. García, R., & Corona, J. (2020). M-learning: strategy for the promotion of mobile e-learning in higher education institutions. *Universidad Privada Dr. Rafael Belloso Chacín*.

13. Gewer, A., & Montero, L. (2015). Colaboración y redes sociales en la enseñanza universitaria. *Revista Científica de Comunicación y Educación*.

14. Gil, J. (2019). Interconectados apostando por la construcción colectiva del conocimiento Aprendizaje móvil en educación infantil y primaria. *Píxel-Bit: Revista de Medios y Educación*, 54, 185-203.

15. González, D. (2017). Ambientes colaborativos virtuales para el aprendizaje individual. *Universidad de Costa Rica*, 1-29.

16. González, R., & Medina, G. (2018). Uso de dispositivo móviles como herramientas para aprender. *Pixel-Bit: Revista de Medios y Educación*, 217-227.

17. Guadarrama, J. (2021). Usabilidad de una app móvil para el aprendizaje y elaboración de estados financieros en México. *RIDE Revista Iberoamericana para la Investigación y el Desarrollo Educativo*, 11(22).

18. Hernández, R., & Morales, M. (2010). Dispositivos móviles en educación. *Revista América Learning & Media. Recuperado de https://n9.cl/ae16e*.

19. Herrera, B. (2012). El móvil en la educación: Un nuevo paradigma. Ventajas y desventajas de su uso. *Recuperado de https://n9.cl/hxw5m*.

20. Herrera, M. (2018). El refuerzo pedagógico como herramienta para el mejoramiento de los. *Universidad Andina Simón Bolívar*, 17-30.

21. Jubany i Vila, J. (2012). Sistema de Información Científica. *Pixel-Bit. Revista de Medios y Educación*, 239-240.

22. Landon, b. (1989). online educational delivery Applications: a web tool for comparative analysis. Obtenido de http://www.c2t2.ca/landonline/

23. Marqués, P. (2013). Claves para mejorar los aprendizajes integrando las tecnologías móviles en las clases" en Tecnología móvil e innovación en el aula. Nuevos retos y realidades educativas. *Universidad de La Rioja. Recuperado de https://n9.cl/aulz*.

24. Mauri, T., Onrubia, J., Coll, C., & Colomina, R. (2016). La calidad de los contenidos educativos reutilizables: diseño, usabilidad y prácticas de uso. *Revista de Educación a distancia*, 50, 1-9.

25. Mujica, R. (2020). E-Learning como estrategia pedagógica en la educación superior. *Revista Tecnológica Educativa Docentes*.

26. Naranjo, E. C. (2019). Estrategia de formación virtual basada en el modelo ADDIE para fortalecer competencias pedagógicas y tecnológicas de los docentes del colegio WESLEYANO NORTE. *Universidad EAN*, 30-42.

27. Organización Mundial del Comercio. (2018). El futuro del comercio mundial: cómo las tecnologías digitales están transformando el comercio mundial. *Organización Mundial del Comercio*.

28. Ortiz, A., Colón, J., & Agreda, M. (2018). Gamificación en educación: una panorámica sobre el estado de la cuestión. *Scielo*, 2-5.

29. Pérez-Berenguer, d., & García-Molina, J. (2016). Un enfoque para la creación de contenido online interactivo en las instituciones universitarias. *Revista Educación a distancia*, 51, 1-24.
30. Pujals, P. (2018). Modelo de comunicación para la enseñanza a distancia en internet. *Universidad Autónoma de Barcelona*, 14-31.
31. Rincón, A. (2016). Practicas innovadoras de investigación educativa de TIC que posibilitan el desarrollo profesional docente. *Universidad Autónoma de Barcelona*, 31-36.
32. Rodríguez, E. (2018). Importancia del manejo de competencias tecnológicas en las prácticas docentes de la Universidad Nacional Experimental de la Seguridad (UNES). *Universidad De Costa Rica*, 2-5.
33. Rodríguez, J., & Juárez, J. (s.f.). Impacto del m-learning en el proceso de aprendizaje: habilidades y conocimiento. *RIDE. Revista Iberoamericana para la Investigación y el Desarrollo Educativo*.
34. Sánchez, M., & Pinochet, G. (2017). El rol de las redes sociales virtuales en la difusión de información y conocimiento: estudio de casos. *https://www.redalyc.org/revista.oa?id=1872*, 107-135.
35. Santos, S., Hernández, L., Chau, A., Zepahua, B., & Torres, C. (2017). Aplicación web e-learning multiplataforma para recolección de datos de usuarios y retroalimentación automática basada en técnicas estadísticas. *Res. Comput. Sci.*, 135, 9-23.
36. Serrano, E. (2019). Modelo de Aprendizaje Basado en Casos y Problemas mediante la Integración de Capsulas de Autoaprendizaje y Aplicaciones Móviles Instrumentales en la Formación del Personal de Salud (CAPPS). *Revista de Ciències de l'Educació*, 1(2), 43-51.
37. Trabaldo, S., Soraide, M., & Kamijo, M. (2017). Diseño y desarrollo de materiales de aprendizaje personalizados en dispositivos móviles para diferentes asignaturas. *In IV Jornadas de TIC e Innovación en el Aula*.
38. UNESCO. (2019). Recomendación sobre los Recursos Educativos Abiertos (REA). *Organización de las Naciones Unidas para la Educación, la Ciencia, y la Cultura*, 1-5.
39. Valencia, N., huertas, A., & Baracaldo, P. (2014). Virtual learning environments: review of publications between 2003-2013 from the evidence-based pedagogy perspective. *Revista Colombiana de Educación*, 66, 73-103.

ANEXOS

Anexo 1: Descriptores

Net-Learning
SOLUCIONES PARA E-LEARNING

www.net-learning.com.ar - info@net-learning.com.ar

Rúbrica para evaluar la calidad de apps educativas

Nombre de la aplicación móvil _____

DESCRIPTORES / VALORACIÓN	EXCELENTE 4	BUENO 3	REGULAR 2	DEFICIENTE 1
Pertinencia	La app está estrechamente relacionada con el propósito para el cual fue creada y es adecuada para el estudiante	La app está relacionada con el propósito para el cual fue creada y es, en gran parte, adecuada para el estudiante	La app está poco relacionada con el propósito para el cual fue creada puede no ser adecuada para el estudiante	La app no está relacionada con el propósito para el cual fue creada ni tampoco es adecuada para el estudiante
Facilidad de uso	Los gráficos y enlaces son muy adecuados y la navegación es muy fácil. El uso de la app es muy intuitivo	Los gráficos y enlaces son adecuados y la navegación es fácil, aunque aprender a usar la app puede demandar cierto tiempo	Los gráficos y enlaces son adecuados y la navegación no es difícil, aunque aprender a usar la app puede demandar bastante tiempo	Los gráficos y enlaces son pobres y la navegación es difícil. Aprender a usar la app puede demandar mucho tiempo
Personalización	La app es completamente personalizable El estudiante puede modificar la configuración y las preferencias para ajustarla a sus necesidades	La app es personalizable. El estudiante puede modificar varios aspectos de la configuración y de las preferencias para ajustarla a sus necesidades	La app es parcialmente personalizable. El estudiante puede modificar muy pocos aspectos de la configuración y de las preferencias para ajustarla a sus necesidades	La app no es personalizable. El estudiante está imposibilitado de modificar la configuración y las preferencias
Retroalimentación	La app brinda al estudiante retroalimentación específica y personalizada	La app brinda al estudiante retroalimentación general	La app brinda al estudiante retroalimentación limitada	La app no brinda al estudiante ningún tipo de retroalimentación
Autenticidad	La app permite desarrollar habilidades a través actividades de la vida real en entornos auténticos y basados en el contexto del estudiante	Algunos aspectos de la app representan un entorno de aprendizaje auténtico y basado en el contexto del estudiante	La app ofrece actividades y entornos de aprendizaje que se desarrollan a modo de juegos o simulaciones	No hay actividades realistas y el entorno de aprendizaje es artificial y no está relacionado con la vida real
Habilidades de pensamiento	La app promueve el desarrollo de habilidades de pensamiento de orden superior: creación, evaluación, y análisis	La app permite el desarrollo de habilidades de pensamiento de orden superior: evaluación, análisis y aplicación	La app permite el desarrollo de habilidades de pensamiento de orden inferior: comprensión y memorización	La app es limitada en el desarrollo de habilidades de pensamiento de orden inferior: comprensión y memorización
Trabajo colaborativo	La app fomenta la comunicación entre los estudiantes, la creación/modificación del contenido de forma colaborativa, y facilita el compartir dicho contenido online	La app facilita la comunicación entre los estudiantes, permite crear/modificar el contenido de forma colaborativa, y facilita el compartir dicho contenido online	La app permite la comunicación y la colaboración online de forma limitada	La app no permite ningún tipo de comunicación ni colaboración entre los estudiantes
Motivación	El estudiante se siente muy motivado para usar la app y la elige como primera opción entre otras apps similares	El estudiante utiliza la aplicación según las indicaciones del docente	El estudiante utiliza la app de manera forzada y la considera como una tarea escolar más. A menudo se distrae al utilizarla	El estudiante evita el uso de la app o expresa su descontento cuando el docente le pide que la utilice

Anexo 2: Índice de validación de contenido

n°-	Ítems	Jueces			RCV
		Ing. John Tobar Litardo, Msc. PhD.	Lcda. Evelyn Pinargote Junco, Msc. PhD.	Ing. Galo Tobar Farias, Msc. PhD.	
1	¿Qué tan adaptables es el aplicativo móvil para el aprendizaje en relación con las necesidades económicas de estudiantes?	3	3	4	1,0
2	¿Usted considera que todos los estudiantes fueron consultados en cuanto si cuentan o no con un dispositivo móvil?	1	3	4	0,7
3	¿Qué tan fácil es el uso del aplicativo móvil para el aprendizaje con respecto a las gráficas, enlaces, navegación e intuitivo?	2	2	3	1,0
4	¿Usted considera que la interfaz de la aplicación móvil implementada por la institución pueden provocar la desconcentración del estudiante?	4	1	2	0,7
5	¿Qué tan personalizado es el aplicativo móvil en relación con la necesidad de los estudiantes?	3	3	1	0,7
6	¿Usted considera que el diagnóstico realizado por la institución en cuanto a la capacidad de su dispositivo móvil puede soportar el aplicativo para un aprendizaje efectivo fue el apropiado?	3	4	1	0,7
7	¿Qué tanto el aplicativo móvil ofrece a los estudiantes una retroalimentación específica y personalizada?	4	3	2	1,0
8	¿Usted considera que actualmente tiene la capacidad de manejar correctamente las funciones del aplicativo móvil de la institución?	2	4	3	1,0
9	¿Qué tanto el aplicativo móvil permite desarrollar habilidades a través de actividades de la vida real en entornos auténticos	4	3	4	1,0

	y basados en el contexto del estudiante?				
10	¿Usted considera que el aplicativo móvil puede suplir de gran manera la interacción entre docente y estudiante en el ámbito de compartir experiencias a nivel profesional de forma efectiva?	4	2	3	1,0
11	¿Qué tanto el aplicativo móvil promueve el desarrollo de habilidades de pensamiento de orden superior, creación, evaluación y análisis?	3	3	2	1,0
12	¿Usted considera que los contenidos que se imparten en los aplicativos móviles fueron lo suficientemente adaptados a la virtualidad?	3	3	3	1,0
13	¿Qué tanto el aplicativo móvil fomenta la comunicación entre los estudiantes, la creación/modificación del contenido de forma colaborativa y fallecida el compartir dicho contenido online?	3	4	4	1,0
14	¿Usted considera que la aplicación móvil generó una barrera de comunicación intrapersonal con sus compañeros de curso?	2	3	4	1,0
15	¿Qué tan motivado te sientes para usar el aplicativo móvil y elegir entre otras opciones similares?	3	4	4	1,0
16	¿Usted considera haber percibido frustración cuando el aplicativo móvil o su dispositivo no podían ofrecerle un acceso optimo a la clase?	4	3	2	1,0
Razón de validez de contenido - RCV	$RVC' = \dfrac{Cantidad\ de\ jueces\ que\ puntuaron\ entre\ 3\ y\ 4\ al\ ítem}{Total\ de\ jueces}$				
Índice de validación de contenido - IVC	$IVC = \dfrac{\sum_{i=1}^{M} CVR(aceptables)_i}{M}$			1	

Anexo 3: Población

No.	CARRERA	CANTIDAD
	PARÁMETROS DEL REPORTE CONSOLIDADO	
	Fecha Generación de Reporte: 2021-04-28 14:56:57	
	Periodo Lectivo: II PERIODO ACADÉMICO 2020 - 2021	
	Tipo de Reporte: Consolidado Por Carrera	
1	TECNICO SUPERIOR EN SEGURIDAD CIUDADANA Y ORDEN PUBLICO	77
2	TECNICO SUPERIOR EN SEGURIDAD PENITENCIARIA	34
3	TECNOLOGÍA SUPERIOR EN MEDICIÓN Y MONITOREO AMBIENTAL	36
4	TECNOLOGÍA EN DESARROLLO DE SOFTWARE	254
5	TECNOLOGÍA EN ENSAMBLAJE Y MANTENIMIENTO DE EQUIPOS DE CÓMPUTO	215
6	TECNOLOGÍA SUPERIOR EN CONTABILIDAD	288
7	TECNOLOGÍA SUPERIOR EN PROCESAMIENTO DE ALIMENTOS	45
8	TECNOLOGÍA SUPERIOR EN PLANIFICACIÓN Y GESTION DE TRANSPORTE TERRESTRE	69
9	TECNOLOGÍA SUPERIOR EN SEGURIDAD Y PREVENCIÓN DE RIESGOS LABORALES	58
10	TECNOLOGÍA SUPERIOR EN ADMINISTRACIÓN	332
	TOTAL	1408

Ab. ROMERO MACÍAS JOSÉ EDUARDO
SECRETARIO GENERAL

Anexo 3: Google formularios – Encuesta

Link:
https://docs.google.com/forms/d/e/1FAIpQLScWY29YmUFwBmIGdHtZMxaVy7RwHrEU
Mc1hvmsMWIEZVJ2ihw/viewform?usp=sf_link

Effects of Divorce in the Happiness of Children

Fabjana Bakiu Maksutaj
University of Tirana, Faculty of Social Sciences, Albania

Abstract

This study investigates the impact that parent's divorce has on the happiness of Albanian children in the city of Tirana. The age group was determined to be from 13 to 18 years old, because it related to adolescence, which is a difficult stage in which the child is prepared for the transition as an adult. The goal is to measure the level of happiness according to the subjective perception of the children for the time when they lived with both parents, and after that of divorce. Its achievement was accomplished by setting of such goals as: was the child happy before the divorce of the parents, is he happy after it now? Is he happy with the life he leads and would he liked to live with both parents again? If yes, what would it change in his life and would his happiness increase? Methodology involves a primary survey with the help of a structured questionnaire among 405 children from 19 public elementary and high schools in Tirana. The consequences of divorce to happiness of children are theoretically explained and give the opportunity to raise research questions in recent years. The research instrument includes questions about the level of happiness before and after parental divorce and the impact of parents' relationships after divorce on happiness for this segment of children. The data analyse have led to conclusions and recommendations on social policies to be followed towards this segment in the future.

1.   Introduction

"If we have happy children today, we will have a better and healthier society tomorrow[1]"

The beginning of this study was born over the great concern of the increased numbers of divorces during the last 30 years in Albania, and on the impact that these divorces have on the happiness of children. As divorce has become a growing trend in Albanian society, increasing not only the number of single-parent families, but also the number of children living in these families, the other concern is about what is the emotional state of these children, and how capable are they of facing this challenge that life has unfairly set before them.

Researchers position themselves in two different directions in terms of the consequences that divorce leaves on children. One group includes those who support the thesis that divorce does not cause great psychological consequences and that it is a necessary evil. The second group of researchers defends the thesis that divorce causes profound psychological consequences for children which will be very crucial in their later adult life and in the decisions they will make during their lives regarding the decision to make sustainable connections, and future family creation.

Studies have shown that: "Family disruption during adolescence does lead to a substantial loss of income for children, regardless of the race and educational background of their parents (McLahanan & Sandefur 2005, p.86). It is concerning that divorce has begun to have consequences even in the relationships that parents have with their children. The traditional Albanian family, even in the conditions of the divorce, has valued the children more than themselves and in any case has placed them on the personal motives of the couple quarreling, keeping the children away from the conflicts of the marriage and the intimate consequences of the divorce (Tushi, 2012).

Munevver Mertoğlu in his study of 2020 about "Factors Affecting Happiness of School Children" confirms that " The happiness level of students whose parents are not divorced (3,20) is higher than the that of students whose parents are divorced (3.03)" (p.18). Also "Students whose parents are not getting along well and divorced are less happy than the students whose parents are getting along well and together is an important finding as rates of divorce has increased rapidly compared to previous years" (p.19).
"When parents divorce each other, another sort of divorce occurs between the parents and their children. The primary effect of divorce (and of the parental conflict that precedes the divorce) is a decline in the relationship between parent and child" (Cited in. Fagan & Churchill, 2012, p.3).

---

[1] Author's note.

Also, "Single parenthood reduces children's chances in at least two ways: by lowering their aptitude for school and by lowering their motivation as well (Mc.Lahanan & Sandefur 2005, p.46)".

1.1.   Why is Happiness so Important, Especially for Children?

Happiness is one of the main goals in human life, for having the best quality of life and the best possible well-being. For adults, who are able to act, this concept is more aware and aims to be achieved more often and more powerfully, while for children it depends mainly on the adults who take care of them, and other circumstances of course. This is why it is very important to pay special attention to the happiness of children because if we raise happy children today we will have a better and healthier society tomorrow. But children cannot do it alone without the help of adults and without the help of institutions.

1.2.   Concepts of Happiness

Dan Haybron in his article about "Happiness" states: "There are roughly two philosophical literature on "happiness," each corresponding to a different sense of the term. One uses 'happiness' as a value term, roughly synonymous with well-being or flourishing. The other body of work uses the word as a purely descriptive psychological term, akin to 'depression' or 'tranquility'(Haybron, 2020).

Most empirical studies suggest that happiness is a predictor of psychological, social and personal well-being and happiness is a subjective experience related to positive feelings across the life span and different cultures." (Verrastro, Ritella, Saledino, Pistella, Baiocco & Fontanesi L. 2020)

"Overall happiness is the degree to which an individual judges the overall quality of his/her own life-as-a-whole favorably. In other words: how much one likes the life one leads" (Veenhoven, 2012, p.5). (This definition is explained in more detail in Veenhoven (1984:22-25) (cited in Veenhoven. P.5.)

Furthermore, the family structure can constrain family availability to provide its functions related to the social, human, and time resources they devote to children for assuring their well-being. (Dervishi, Sado, 2013, page 377).

2.   Purpose and Objectives of the Study

The purpose of this study is to measure the level of happiness in children of age 13-18 years, with divorced parents, before and after parents' marriage dissolution. It aims to answer specific questions like the following, in order to obtain a concrete result of the emotional situation in which the children are living.

- Who do you live with?
- Does your father work?
- Does your mother work?
- Does the noncustodial parent pay the economic obligation set by the court?
- How difficult is it for you to live with only one of your parents?
- Would you like your parents were not divorced?
- Would you like to live with both parents?
- Why would you like to live with both parents?
- Did you feel happy when living with both parents?
- Are you happy now?

3.   Methodology

Subjective perception of happiness was used in this study. Positive psychology studies have found that happiness, and its pursuit during one's lifetime, is an indicator of personal satisfaction and subjective wellbeing (Donaldson et al., 2015; Parks et al., 2012), (Cited in. Verrastro et.al, 2020). Its level is determined by children's perceptions of happiness, based on their emotional state over the experience of parental divorce. The participants are children of divorced parents, between 13-18 years of age in public schools in Tirana. The sample was made up of 19 public schools which were identified to have the highest number of children with divorced parents, 9 of which were elementary, and the rest were high schools. 500 questionnaires were distributed, of which 405 questionnaires were answered and returned.

4.   Findings

Demographic Information: Of the 405 respondents, 60.49% of the population were females and 39.51% were males. 77.23% of children lived with their mother, and 14.11 lived with their father, 6.93 lived with the mother's family and 1.73 % lived with the father's family. 74 % of the mothers were employed versus 26 % of them who were unemployed, compared to 80.38 % of the fathers who were employed, versus 19.62 of them who were unemployed. Even most of the fathers are employed, 51,85 % of the children confirmed that the non-custodial parent never pays the financial obligation and only 16,3 % of them contribute every day financially. Meanwhile, 3,7 % pay it once a month and 2,47 % pay it more than once a month. Only 23,7 contribute once a week and 1.98 % of the children did not answer this question. In general, it means that more than half of the divorced children and their family members suffer lower economic income compared with those before the divorce.

Happiness of the Children Before and After the Divorce of the Parents

In general the data show that the happiness of children decreases after the parents' divorce. For the part of the children who "feel always happy", it turns out that their number has decreased after their parent's marriage dissolution.

Also, the data show that there is a relatively high percentage of children who have never felt happy, even when they lived with both parents, and after their divorce too. This percentage turns out to have increased and this high number of unhappy children is due to the existence of a high level of conflict in the Albanian families which go through a divorce. This conflict is present before marriage dissolution and still continues to be after divorce, which affects the inner world, the peace of mind, and the hearts of children by making their experience a childhood, unlike other peers.

Happiness Before Divorce: Children were asked if they were happy when they lived with both parents. 39.35% of them confirmed that they never felt happy, or felt happy sometimes when they lived with both parents, versus 60.64% of the total who felt always happy or felt happy most of the time.

Happiness After Divorce: When children were asked if they were happy now (living with one of the parents), they answered: 44.76%, of them, never feel happy, feel happy a few times or feel happy sometimes, comparing to 55.78% of them who confirmed that they feel always happy or most of the time.
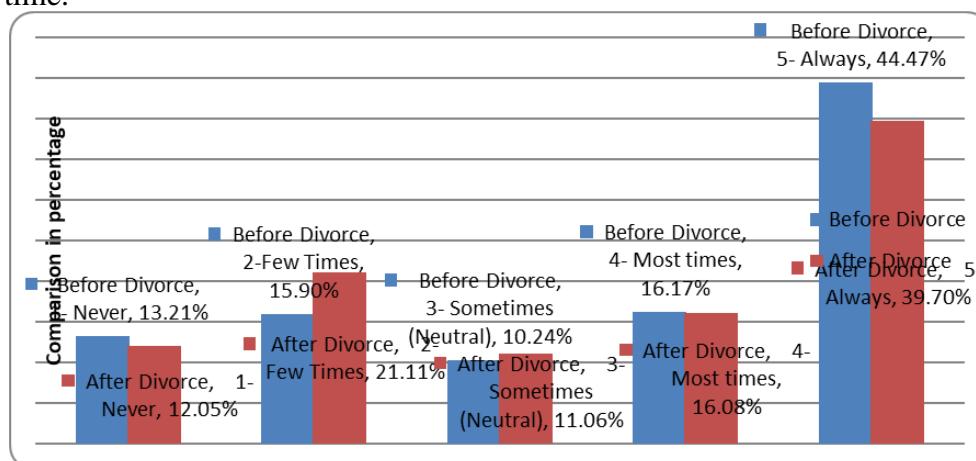
Table 1. Level of Happiness Before and After Divorce

The difficulty of Living with One of the Parents

When children were asked if they found it difficult to live with only one parent, they answered: 27.23 % of them find it difficult, very difficult, or extremely difficult. Translated into numbers, it means that 110 children of the whole sample, face great difficulties in living with one of the parents. This number is considerable and needs urgent attention from both parents, in order

to better co-parent and improve their children's lives in this regard. Meanwhile, 40.59 % of them answered it was not difficult at all and 32.18 % said this is neither easy nor difficult.
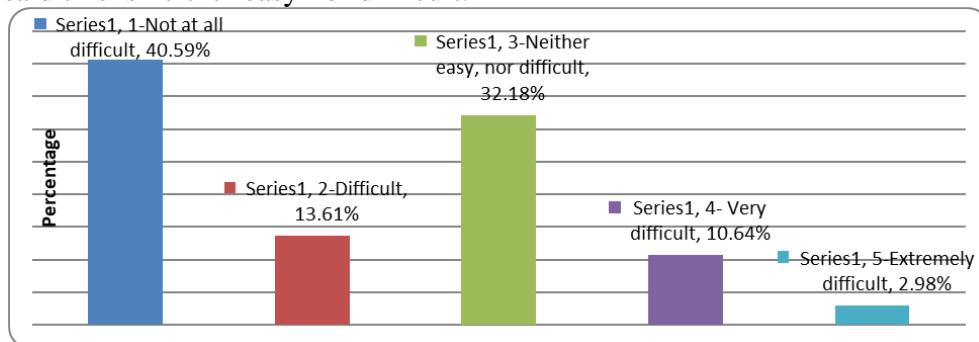
Table 2. Difficulty of living with only one parent

Children's Wish that Their Parents Were not Divorced

When children were asked if they wanted their parents were not divorced, most of them, 88.51 % answered they wished their parents were not divorced and the rest, 19.14 % agreed with their divorce.

The Children Were Asked if They Would Like to Live With Both Parents

Most of them 44.59%, answered they would always like to live with both parents, while 20.15 said they would never want to live with them both. 17.88 % of children think sometimes about living with them, and 17.38% of children think of this many times or most of the time.
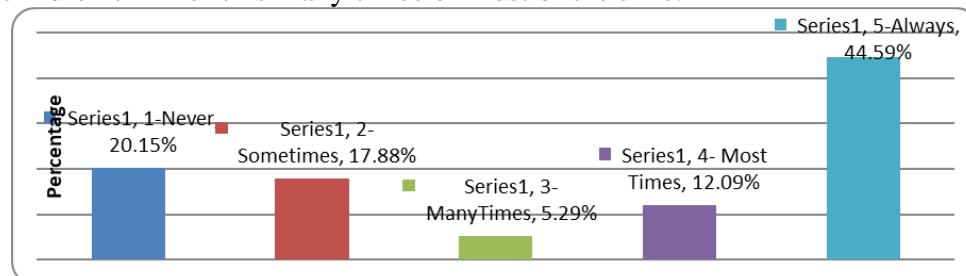
Table 3. Children's desire to live with both parents

The Reasons Why the Children Would Like to Live with Both Parents

When children were asked this question, most of them 37.2%, answered that they would feel more spiritually calm if they lived with both parents, followed by 28.1% who said that their life would be better, more beautiful, and calmer. 22.21% of them said they would be happy with both parents, followed by 7.26% who have accepted that they would have better economic opportunities and 5.23 % would attend the school or activity they wanted.
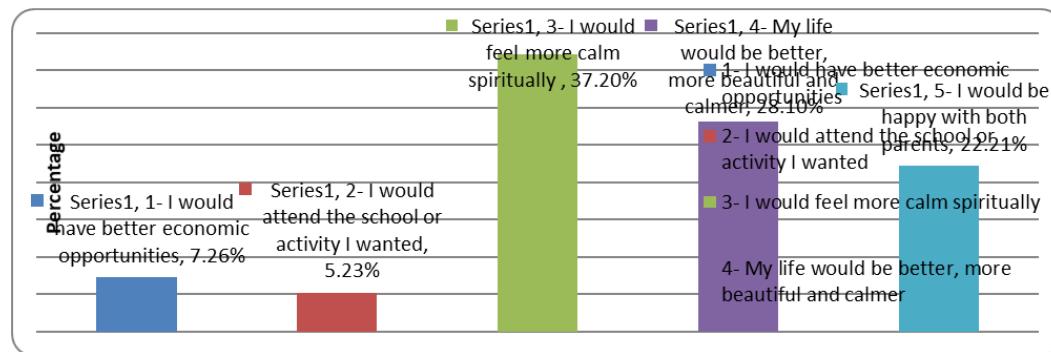
Table 4. The Reasons the Child likes to Live with Both Parents

Which is the Relationship Between Your Parents?

Although divorce has occurred and sposes live no longer together, it turns to be that 44.7% of them continue to have bad or very bad relationships with each other, and only 22.6 have positive or very positive relationships. The number of parents that do not have good relationships is considerable and affects the level of happiness of their children by lowering it compared to the level before the divorce. A study, taken in Albanian court in 2012 by Valbona Treska, confirmed this too: " *69.2% of divorce petitions qualify as a conflicting or violent divorce where in addition to spouses in the process, the conflict also generates in the child / s or environments family of each of the spouses*" (p.591).
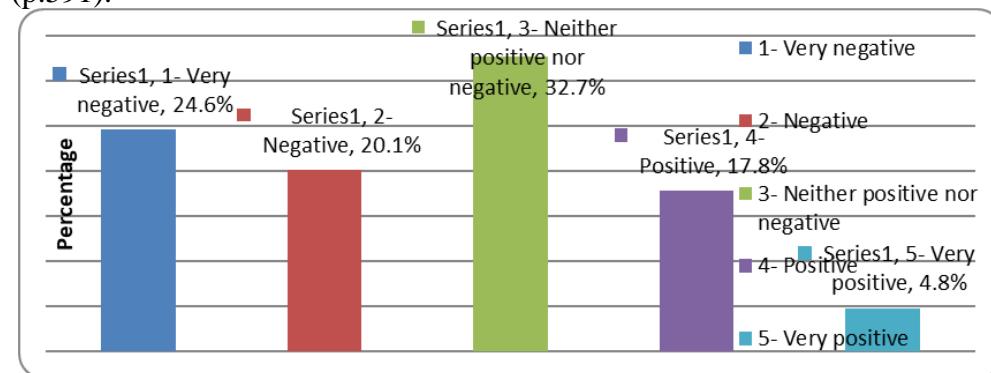
Table 5. Relationships between divorced parents

Conclusion

This study aimed to determine the level of happiness in children aged 13-18 years and found that their happiness, in general, has decreased after parental divorce. Most of the children who took part in the study would liked their parents were not divorced. If this could happen, they would feel calmer and their life would be more beautiful, and they would feel better and happier. In general, more than half of the divorced children and their family members suffer lower economic income compared with that before divorce, but only a

small number of children are interested in having better economic opportunities or having the education they want. This is a significant fact, which tells us that the lives of children with divorced parents are troubled and that there is a lack of peace in their minds and souls. In a few words, they are not worried about the economic situation, before the spiritual one.

The study revealed that a quarter of children are unhappy, both before and after parental divorce. This number is related to the conflicting relations of the spouses that existed between them before they broke up and went to divorce, but that still continue to be conflicting even after they divorced.

Recommendations

It is clear that children, parents, and society as a whole will have long-term consequences due to divorce. But the most important in this study was the happiness of children which has a great cost to their quality of life. Therefore, it is very important to pay attention to their well-being and happiness in the long run, by all, parents, family members, friends, teachers, and of course the state.

Parents, in particular, should take special care to maintain a good relationship with each other in order to co-parent as best as possible, even after their divorce, making the child feel the warmth of a family in order to not feel abandoned or marginalized. The non-custodial parent should not only meet their children more often, but these meetings should be qualitative in order to increase the attachment between parent and child relationship.

For those couples who have less serious disagreements such as violence, gambling or alcoholism, family and mutual friends should play a major role in advising each spouse, not to end the marriage, but to try to fix their problems and improve their relationship, in order to not go to divorce. If it were possible, why not reunite and try again from the beginning. If love once existed between them, it can always exist. This is a hope for all those children whose parents have problems and see divorce as the one solution. The children of these families deserve a better and more qualitative life, without the worry of divorce inside their mind and soul. Teachers should also pay attention to this category of children in their daily life to support and encourage them in the learning process, but also beyond it, so that the child does not feel excluded from the rest of the peers.

The state should provide better services for families applying for a divorce. Courts, but not only, must provide counseling services, more than once, for the salvation of the family and for the benefit of all its members, especially children, who suffer the consequences of separation more than all. Also, school psychologists should provide counseling services for children whose parents are in the process of divorce or who are already divorced, in order to support them how to cope with it, without injury and suffering. They

should prepare them to become psychologically healthy adults and hopeful for a better future than that of their parents.

References:

1. Rodríguez-Pose, A & Von Berlepsch,V. (2012). *Social Capital and Individual Happiness in Europe*, College of Europe, Department of European Economic Studies, Bruges European Economic Research Papers, file:///C:/Users/BiNKA/Downloads/beer25.pdf
2. Dan. H "*Happiness*", The Stanford Encyclopedia of Philosophy (Summer 2020 Edition), Edward N. Zalta (ed.), URL = https://plato.stanford.edu/archives/sum2020/entries/happiness/ This entry was first published on Wed Jul 6, 2011. It was last modified on May 28, 2020.
3. McLahanan, S. & Sandefur, G. (2005). *Growing Up with a Single Parent*, Harvard University Press, Cambridge Massachusetts, London England.
4. Mertoğlu, M. (2020). *Factors Affecting Happiness of School Children,* Journal of Education and Training Studies, Vol. 8, No. 3, p.; March 2020, doi:10.11114/jets.v8i3.4674
5. Neufeld, G. & Mate, G. (2006). *Hold on to your Kids*, Ballantine Books
6. Wolfinger, N. (2005). *Understanding the Divorce Cycle*, The Children of Divorce in their own Marriages, © Cambridge University Press.
7. Fagan. P, & Churchill, A. (2012). *The Effects of Divorce on Children* https://downloads.frc.org/EF/EF12A22.pdf).
8. Veenhoven, R. (2012), *Happiness:* Also known as "life-satisfaction" and "subjective well-being" : https://www.researchgate.net/publication/278665173
9. Treska.V. 2012, Divorce Trends And Their Psychological Causes in Albanian Couples, Journal of Institute Alb-Shkenca, Copyright © Institute Alb-Shkenca, https://www.apa.org/pi/families/resources/develop.pdf
10. Verrastro, V. Ritella, G. Saledino, V. Pistella, J. Baiocco, R & Fontanesi, L. (2020). *Personal and Family Correlates to Happiness amongst Italian Children and Pre-adolescents*, International Journal of Emotional Education, Volume 12, Number 1, April 2020, pp.48-64
11. Wallerstein, J. S. Lewis, J.M & Blakeslee, S. (2000). *The Unexpected Legacy of Divorce*, The 25 year Lendmark Study, © Library of congress, Cataloging -in-Publication Data).
12. Dervishi, Z. Sado, L. Spaho, A. (2013). *Family Structure and Functioning and the Implications for ChildWell-being in Albania,* Academic Journal of Interdisciplinary Studies, MCSER Publishing-Rome, Italy, Vol. 2, No. 9 October 2013.

The Role of Social Capital in the Employability of University Graduates in Zambia: A Case of University of Zambia Graduates

Eliphas Machacha, PhD
The University of Zambia, School of Humanities and Social Sciences,
Department of Social Work and Sociology, Lusaka, Zambia

Abstract
The research presented in this paper was designed to investigate the role of social capital in the employability of University Graduates in Zambia: A *Case of University of Zambia Graduates*. The study focused on the period between the years 2000 and 2015. In this study social capital was operationalised as *social connections* that can be used in search of jobs. Employability was operationalised as *the ability to get employed or get a job*. This research used a sequential mixed method research design to investigate the research problem. The study was carried out in the City of Lusaka. 208 University of Zambia Graduates and 16 employers participated in this study. Data were collected using a questionnaire and interviews. Statistical Package for Social Sciences (SPSS) was used in the management and analysis of quantitative data while thematic analysis was applied in the analysis of qualitative data. The results from this study indicated that UNZA Graduates attach a lot of importance to the use of social connections in search of job opportunities in the labour market. However, only powerful social connections were effective in this process and were not available to everyone. The results also revealed that social connections through relatives and close friends were more effective in their employability than social connections through acquaintances and potential employers. In conclusion, this study showed that social connections facilitated by relatives and close friends through people of

influence in society were more effective but, to a large extent, they depend on one's social status.

1.   Introduction

This research study was designed to investigate the role of social capital in the employability of University of Zambia (UNZA) Graduates in Zambia. The study focused on graduates who graduated from the University of Zambia between the years 2000 and 2015 inclusive. The rationale for targeting the period between the years 2000 and 2015 was based on the following reasons. First, according to official statistics, formal employment in Zambia had declined to just about 10% of the labour force in 2001 from approximately 75% in 1975 largely due to the privatisation programme which was embarked on by the new Government of the Movement for Multiparty Democracy (MMD), as part of the market led reforms which they designed in the 1990s upon assuming office (AfDB/OECD, 2004). These MMD reforms included an initiative to slim down the oversized public service which led to massive losses of employment for many public service employees. During this same period the country experienced a further and steady decline in employment as many of the newly privatised companies started collapsing, while some of them started streamlining their labour force thereby pushing the number of the unemployed people higher (AfDB/OECD, 2004).

When there is a decline in the size of the labour market, the situation leads to a scramble for a few job opportunities that may be available against thousands and thousands of job seekers. So in order to beat the competition, many job seekers may resort to the use of alternative methods to get employed. Such methods may involve the use of social capital. In particular, the impact of graduates' social capital, which is generated through social connections or social networks, on the job search process is the single research gap most in need of filling up in the research agenda of labour market scholars in the world, and the Zambian context. According to sociological literature social capital is understood as "networks or social connections that are governed by shared norms, values, social obligations, exchanges and understandings that facilitate co-operation within or among groups of people" (Halpern, 2005). The understanding of how social capital works is an important concern for sociological inquiry. Questions concerning how people find jobs and how vacancies are filled are claimed to be among the most under-researched topics within the labour market analyses. In the case of employability as a variable of interest for this study, it is argued that graduate employability is more than just being able to find a job immediately after graduation, rather employability

refers to the acquisition of personal attributes and achievements such as knowledge, skills, resourcefulness, resilience and abilities that make graduates more likely to be successful in gaining employment or their chosen occupations, whether paid employment or self-employment (The UK Quality Assurance Agency, 2019).

Politically, Zambia is considered a stable country with successful democratic elections held every five years. Zambia's political stability can be assessed in terms of the number of times the country has ushered in new governments peacefully and democratically. According to the 2012 and 2017 Zambia Labour Force Surveys (CSO, 2012; 2017), which were conducted by the Central Statistical Office, the political and socio-economic data indicates that Zambia became independent from the British Colonial government on 24th October, 1964. On this day, the United National Independence Party (UNIP) under the leadership of Dr. Kenneth David Kaunda was ushered in and formed the first Government of the Republic of Zambia. Geographically, Zambia is a landlocked country in Southern Africa. It covers a total area of 752,612 square kilometres, located between latitudes 8° and 18° south and longitudes 22° and 34° east. Its neighbours include the Democratic Republic of Congo to the north, Tanzania to the north-east, Malawi to the east, Mozambique, Zimbabwe, Botswana and Namibia to the south and Angola to the west (CSO, 2018).

University Education and the Labour Market

The value of a university degree, at least when it comes to finding a job, is not unique to any country anywhere in the world. According to Hamermesh (2011), an international labour economist, argued that there is a correlation between a university degree and the likelihood of finding a job which can be seen around the world. However, exactly how much university credentials pay off differs from country to country. In the case of Zambia, as extant literature on the political and socio-economic events of the 1990s through to 2000 in Zambia shows, these events caused far-reaching changes in both higher education and the labour market, which fundamentally altered university graduates' relationships with the labour market and the structure of opportunities available to them. For instance, more universities were opened up during this period to operate and offer degree programmes alongside the oldest universities in the country, namely the University of Zambia and the Copperbelt University, this development translated into more university graduates being offloaded onto the declining labour market in Zambia (Culkins, 2013).

It is overwhelmingly believed that finding a first job or simply changing jobs should be relatively easy for people with university education, because a university degree lends an advantage to job seekers who possess it

over those that do not (Hamermesh, 2011). The labour market entry should be comparatively smooth for such a group of people, as they are deemed to be well qualified (Blossfeld et al, 2008). However, this picture could not be said to be the same for university graduates in Zambia. In Zambia, the decline in the labour market began towards the end of the Presidency of Dr. Kenneth Kaunda, mid 1980s and the trend peaked in the 1990s, and eventually leading to Mr. Fredrick Chiluba taking over as President of the Republic of Zambia in 1991 (ILO, 2008); this trend has continued to date. Competition for jobs in Zambia, like everywhere else in the world, has become intense leading to a widely held notion that university education is no longer a passport to secure employment for the 21st century graduates. Globally, the number of new graduates is increasing, while available jobs are fewer (Nabi and Holden, 2008). Given a situation like this, one would argue that whilst upward mobility for university graduates depends crucially on their educational qualifications, 'other resources may be available to help them get employed in the labour market' (Goldthorpe and Jackson, 2008). Therefore, understanding 'other resources' or factors that enhance chances of university graduates, University of Zambia graduates included, getting employed in the labour market becomes vital. The point of interest here is that 'other resources,' rather than their educational qualifications may be available to help university graduates successfully land job opportunities in the labour market (Goldthorpe and Jackson, 2008). Such 'other resources' could refer to social capital. Conventional wisdom, born out of experience, informs us that close competition for jobs and contracts are usually won by those with friends in high places (Woolcock, 1998).

Research Problem and Aim of the Study

The extensive review of extant literature on social capital and the labour market revealed a dearth of prior studies on the role of social capital in the employability of university graduates in Africa in general, and Zambia in particular. Therefore, the aim of this study was to investigate the role of social capital in the employability of University of Zambia graduates in the labour market in Zambia by focusing on the type of job search methods they use in finding jobs and to learn whether or not social capital plays any influence in their endeavour to find jobs.

Literature Review
Theoretical Review

This section presents a short and concise theoretical framework of this study. A theoretical framework is the 'blueprint' or guide for a research (Grant and Osanloo, 2014). It is a framework based on an existing theory in a field of inquiry that is related and/or reflects the hypothetical position of a study. It is

a blueprint that is often 'borrowed' by the researcher to build his/her own house or research inquiry. The theory within which this study was embedded and conducted was the **social capital theory**. This theory explains social connections, based on social obligations, social norms, values and exchanges among actors and how these practices contribute to one's success in life. Social capital is embedded in a set of socially situated and culturally defined relations (Portes and Alejandro, 1998; Putnam, 2002; Lin, 2008).

The theoretical review of literature on social capital reveals that there are three forms of social capital that have been proposed. These include bonding, linking, and bridging social capital (Lin, 2008; McGonigal, 2007; Woolcock and Narayan, 2000):

Bonding social capital refers to the interaction between similar types of people such as family members and close personal friends. It links to people based on a sense of common identity ("people like us") such as family, close friends and people who share the same culture or ethnicity.

Bridging social capital is a type of social capital that describes connections that link people across a cleavage that typically divides society (such as race, or class, or religion). Bridging social capital is different from bonding social capital, which is *within* social groups and is characterised by dense networks with people feeling a sense of shared identity and belonging where bridging social capital links people that are not very close to one another such as acquaintances or distant friends.

Linking social capital refers to connections with organisations and institutions and assists in accruing support from people in authority. For instance, active membership of social, education, political, religious, and voluntary organisations may contribute to an individual's social capital.

Therefore, human interaction results in social connections – social networks – that work to make life more fulfilling and that make our economic efforts more productive. These social connections are critical in our social world and they range from micro or small groups to large scale bureaucratic organisations (Ballantine, 2006). Social capital, then, is the value that is derived from belonging to networks, based on the idea that access to resources is cultivated through connections among and between people. The social connections that develop networks are built up over time through repeated exchanges (of information, emotions, or favours) and are linked to other forms of capital. In contrast, reductions in levels of social capital may contribute to feelings of disconnectedness and loss of trust, control, autonomy, and belonging. Social capital is, at least for Coleman and Putnam, a good thing: it can be transformed into all kinds of resources, from jobs to information to better health (Briggs, 2007).

Empirical Review

Over the past several decades, researchers have attempted to determine and understand through rigorous investigations the role of social capital in influencing people's successes and achievements in their lifetime, including finding jobs in the labour market. For instance, Granovetter (1973), in a random sample of professional, managerial and technical job changers, his proposition was confirmed in his study and also in many subsequent studies, that a substantial proportion of individuals find their jobs via their contacts with friends, relatives, colleagues, or acquaintances. One major missing link in this study, and in many others, was their omission of the level of educational qualifications of job seekers in their studies, which presumably is an important variable in as far as studying labour market processes is concerned. Matloob Piracha and a group of other researchers (2013), conducted a longitudinal study in which they analysed the role of social capital on immigrants' labour market outcomes in Australia. Their conclusion, just like Granovetter (1973), was that social capital works, and for Matloob (2013), social capital is particularly important for immigrants, but it only affects the probability of getting a white-collar job. Once again, there was no reference to educational levels of the research subjects so as to check their influence in finding such jobs in the labour market. In the same vein, a study by Bartus, Tamás (1998) also discovered, through a longitudinal and cross-sectional study, a positive relationship between social capital and getting a good job among secondary school leavers in Hungary. But of course, one would argue that this category of job seekers may indeed rely more on social capital to find jobs in the labour markets than their educational qualifications compared to university graduates who, probably may not need such 'other resource' to assist them in getting a job, because they are probably adequately qualified to obtain any job that suits them on merit compared to secondary school leavers.

In the African context, a review of extant literature on the role of social capital in the employment of job seekers in Africa revealed a dearth of prior studies on this subject. However, this researcher was able to find a few studies which this researcher could relate to, on social capital, that had been done in Africa. For instance, Anthony Gewer (2009) carried out a study in South Africa for his PhD on the features of social capital that enhance the employment outcomes of Further Education Training Colleges (FET) in 2009, in which he sought to problematise the notions of bonding and bridging social capital in the South African context and understand how social capital operates for young people who pass through the FET College system. This study reported that personal networks were critical in the employment of young people in South Africa, but they tend to be ineffective in impoverished environments for finding meaningful employment on initial entry into the

labour market. This had a potential to further entrench social inequality in the country.

Similarly, in West Africa, Christophe J. Nordman and Laure Pasquier-Doumer (2014) in their study on the role of Family Networks in transitions in West African Labour Markets in Ouagadougou, Burkina Faso, in 2014, endeavoured to shed light on the role of family networks in the dynamics of workers on the labour market of a West African country. The main issue which was tackled in this research was the extent to which one's network was essential in labour market transitions, in particular from unemployment to employment. In their findings they learned that family networks had a significant effect on the dynamics of workers in the labour market and that this effect differs, depending on the type of transition and the considered dimension of the family network. The network size appeared to not matter much in the labour market dynamics. Strong ties, however, played a stabilising role by limiting large transitions. Their negative effect on transitions is reinforced with high levels of resources embedded in the network. In the Zambian context, Moonga Mumba for his PhD in 2014, conducted a study on the role of informal networks in youth self-employment in Zambia, in which he analysed the role of informal networks and learned how different informal connections help the self-employed youth access different business related resources such as information, finances, skills, customers and space. In his conclusion, the researcher stated that there tended to be a dominant reliance on strong ties (mostly one's family and friends) among the self-employed youth, as the main source of support.

In conclusion, the evaluation of data from the reviewed extant literature on social capital and the labour market shows that there is no concrete information on how individuals graduating from universities might or might not entirely rely on their educational qualifications to get jobs in the labour market. The question that arises from the literature is, besides their educational qualifications from university; how do university graduates use social capital (understood as social connections) to find jobs in the labour market? In addition, the review of literature in this paper has to a large extent established that most of the research studies that have already been carried out on social capital and the labour market have been done in developed countries, focusing particularly on migrants in the United States of America, Europe and Australia. However, there is a lack of empirical data on how, specifically, university graduates may rely on social capital other than their education to find jobs in the labour market, particularly in the context of developing countries, such as Zambia.

Research Methodology
Research Goals and Research Questions

This research had two goals: the first and main goal was to investigate if there was any relationship between social capital and the prospects of finding a job in the labour market among University of Zambia Graduates in Zambia. The second goal of this research was to contribute to the discussion of the theory and the forms or dimensions of social capital as a concept. Therefore, in addressing these research goals, the research protocol was designed as follows.

Location of Study Area

This study was conducted in the City of Lusaka in Lusaka Province of Zambia: The selection of this study area was based on the understanding that the labour market in Zambia is larger and concentrated in large cities like Lusaka City. It is generally understood that cities are usually the centres of economic activities and opportunities.

Figure 1: Map of Zambia

Source: Vector Stock (2021)

Research Design

This study employed the sequential mixed method research design with a bias towards quantitative data. According to Bryman (2012), a research design represents a structure that guides the execution of a research method or a set of research methods and the analysis of the subsequent data. Consequently, this study employed both quantitative and qualitative methods in addressing the research problem. Using a mixed methodology can help understand the research problem in greater depth. It can help increase confidence in the findings, providing more evidence while offsetting possible

shortcomings from using a single approach. Whereas undertaking research using mixed methodology can be time consuming it can help to address broader questions adding insight that could otherwise have been missed (Creswell, 2007).

Study Population

The study population included male and female University of Zambia (UNZA) students who graduated between 2000 and 2015 inclusive, from the nine Schools which make up the University of Zambia, across all fields of study that are offered at the University; who were resident in the city of Lusaka; and who were in formal employment at the time of the study. Focusing on university graduates provided the study with an advantage of satisfying the requirement of increasing statistical strength of the research in the sense that university graduates have similar characteristics with respect to human capital such as number of years spent in the university and labour market experiences, and demographic characteristics (age, marital status).

Sample Size and Sampling Technique

208 study participants who included male and female University of Zambia (UNZA) students who graduated between 2000 and 2015; from the nine Schools which make up the University of Zambia; across all fields of study that are offered at the University; resident in the city of Lusaka; and who were in formal employment at the time of the study were randomly sampled using the university alumni register as a sampling frame, which was sorted out in Microsoft excel. In addition to University graduates, 16 employers were purposefully picked for in-depth interviews.

Data Collection, Management and Analysis

The type of data that were collected in this research included both quantitative and qualitative data (QUANT + qual.) by using a questionnaire for University Graduates and in-depth interviews for employers. Quantitative data were managed and analysed using Statistical Package for Social Sciences (SPSS), which enabled this researcher to generate descriptive statistics, summarised and presented in tabular and graphical forms. In the case of qualitative data, thematic analysis (TA) was used in which themes were generated from transcribed data obtained from key informants (employers).

Positionality and Reflexivity

In dealing with key informants (employers) for qualitative data in this study, this researcher recognised the fact that being a University of Zambia (UNZA) Graduate himself, he was part of the subjects he was studying (University of Zambia Graduates). And also the fact that he is an employee of

the University of Zambia, he was aware that his *ontological and epistemological beliefs on the employability of University of Zambia Graduates could influence this research* in terms of his personal values, beliefs and opinion about the employability of UNZA Graduates.

Findings and Discussion
Demographic characteristics of Study participants

The findings show that the overall response rate was 100% owing to the fact that non-responses were being replaced with the readily available sample units on the sampling frame. The findings also revealed that there were more male participants in the study who represented about 66% of the sample than female participants who represented about 34% of the sample. The average age of the respondents was just slightly below 30 years, and more than half of the participants, about 55%, were single and had never married before at the time the survey was being carried out. About 41% were either married or engaged to be married or were cohabiting. On the question of whether or not they had any children, about 74% reported to have no children while 26% reported to have children at the time of the study. These demographic variables indicate the degree of family responsibility and economic dependence which may have affected the respondents' job search activity in the labour market. The survey reveals that the majority of study participants (about 79%) graduated from the University of Zambia in the years from 2011 to 2015, and about 21% in the years from 2001 to 2010. The majority (54%) of the graduates obtained their Degrees in the Arts-based fields of study from the School of Humanities and Social Sciences, and School of Education. This number of graduates in the Arts-based fields of study also caters for those who graduated from the Institute of Distance Education (IDE).

In terms of their parents' educational levels, more than half (53%) of the participants in the sample had a father with higher education, that is, either college education or university education, while about 33% of the participants in the sample had a mother with higher education, either college education or university education. It can be seen here that the educational level among mothers is obviously increasing in the current generation, reflecting the increase in study rates among females than in previous generations.

Table 1: Demographic profile of respondents (N = 208)

Variable	Index	Frequency	Percentage
Sex	Male	138	66
	Female	70	34
Age	20 – 24	13	6.3
	25 – 29	133	63.9
	30 – 34	34	16.3
	35 – 39	18	8.7
	40 – 44	7	3.4
	No Response	3	1.4
Area of residence	High Cost	60	28.8
	Medium Cost	130	62.5
	Low Cost	16	7.7
	No Response	2	1
Degree obtained	Bachelor's Degree	202	97.1
	Master's Degree	6	2.9
	PhD	0	0
Year graduated	2001 – 2005	17	8.2
	2006 – 2010	28	13.4
	2011 - 2015	163	78.5
Study Programmes	Arts/Humanities	112	53.8
	BA (Edu)	30	14.4
	BALIS	15	7.2
	BSc (Agric.)	6	2.9
	BSc (Edu)	20	9.6
	BSc (Eng.)	9	4.3
	BSc (Env. Health)	8	3.9
	BSc (Med.)	5	2.4
	LLB	3	1.4
Marital status	Married	59	28.4
	Engaged	21	10.1
	Cohabiting	5	2.4
	Never married	114	54.8
	Separated	7	3.4
	Divorced	1	0.5
	No Response	1	0.5
Do you have children	Yes	55	26.4
	No	153	73.6

Key: Arts = Bachelor of Arts (Social Sciences); Humanities = Literature and Languages; BA (Edu) = Bachelor of Arts with Education; BALIS = Bachelor of Arts in Library and Information Science; BSc (Agric.) = Bachelor of Agriculture Science/Agricultural Economics; BSc (Edu) = Bachelor of Science with Education; BSc (Eng.) = Bachelor of Science in Engineering; BSc (Env. Health) = Bachelor of Environmental Health; BSc (Med) = Bachelor of Medicine and Surgery; LLB = Bachelor of Laws
***Source:** Survey data (2018)*

Socio-economic characteristics of study participants

The socio-economic situation of one's family can affect one's life chances in society. Therefore, in this study there was a provision for

respondents to indicate their thinking of their family's socio-economic situation, this refers to the family which respondents were staying with at the time of the study. The data on the socio-economic situation are summarised as follows. The study revealed that 0.5% of the respondent indicated that they were poor (0 - 2 USD/Day), 5.3% indicated that they were near poor (2 - 4 USD/Day), 27.9% of the respondents indicated that they were living in an emerging middle class (4 - 10 USD/Day), the majority (54.3%) of the respondents indicated that they were living in middle class families (10 - 20 USD/Day), 8.6% indicated that their families were in the upper class (20 + USD/Day), and 3.4% of the respondents did not respond to the question.

Employment Situation of Study participants

In terms of the respondents' employment status at the time of the study, it was revealed that approximately 95.2% were in formal employment, with the Government of the Republic of Zambia (GRZ) and private institutions being the largest employers where most of them were doing office work as administrators and specialists. The figures are broken down as follows, 38.5% of the respondents were employed by the Government of the Republic of Zambia (GRZ), 39.9% were employed by the Private Institutions, 9.6% were employed by Non-Governmental Organizations (NGOs), 1% of the respondents were Self-Employed, 7.2% were employed by the Religious Institutions, and 3.8% did not respond to the question. Some of the respondents who did not respond to the question on their employment status at the time of the study are those who were already in employment while studying for their Degrees at the University of Zambia (UNZA).

On the question of their first formal employers after they finished their studies at UNZA, the largest number of respondents indicated institutions in the private sector as their first employer after they graduated from UNZA, the percentage standing at 53% in the private sector, 28% in GRZ, and 13.5% in NGOs. In Zambia today, the Government of the Republic of Zambia (GRZ) is one of the largest employers of University Graduates. It became so following the massive privatisation of the parastatal sector beginning in the mid-1990s going into the 2000s by the Movement for Multiparty Democracy (MMD) government which had taken over from the United National Independence Party (UNIP) in 1991.

While the private sector expanded as a result of the privatisation process, the public sector which was dominated by parastatal companies (government owned companies) shrunk in size leaving the government as the major player in providing employment to University graduates. The fundamental role of the parastatal sector was to act as the main agent of the state in fostering economic development of the country (Turok, 1981). These state controlled companies, even though not obliged, undertook government-

favoured programmes such as the training and employment of Zambians. Under such an arrangement, the labour market was relatively stable; it was a stability that was guaranteed by a considerable degree of central planning by the government involving the setting up of a large civil service as the government aimed at ensuring self-sufficiency. The parastatal sector was crucial to the government's employment creation and job security agenda. Zambians were guaranteed jobs as a way of tackling poverty via access to incomes. In the main, employment became a key development imperative and an artery of social policy. However, beginning in 1991 to 2001, the MMD government adopted a market-oriented economy under which they embarked on a massive privatisation of state-run companies and enterprises. Fredrick Chiluba's administration introduced a robust economic policy that focused on improving efficiency in both the public and private sectors through the creation of appropriate market conditions and implementation of market-enhancing policies. The cornerstone of this policy was liberalisation of the economy.

Job Search Methods

Labour market entrants are able to choose within a wide range of job search methods. They may send direct applications to employers, they may respond to job advertisements through various media such as newspapers, magazines, television, radio and internet, they may search through employment agencies, or utilise informal search methods such as connections through relatives, friends, acquaintances and potential employers. The results revealed that 34.1% of the respondents used social connections to obtained their first job, 26% indicated they made unsolicited or direct applications to obtain their first job, 13.5% said that they responded to Newspaper job advertisements to obtain their first job, 2.9% of the respondents responded to Television job advertisements to obtained their first job, 0.5% of the respondent responded to a Radio advertisement to obtain his/her first job, and another 0.5% indicated that they already had a job the time they were obtaining their Bachelor's Degree from UNZA, as shown table 1 below.

Table 2: Methods Respondents used to get their first job

Method of getting first full time job		*Frequency*	*Percent*
	Through social connections	71	34.1
	Made unsolicited or direct applications	54	26.0
	Responded to Newspaper adverts	28	13.5
	Responded to Television adverts	6	2.9
	Responded to Radio adverts	1	0.5
	I already had a job	1	0.5
	Campus interviews	2	1.0
	I was nominated by UNZA	1	0.5
	I was nominated by my School at UNZA	2	1.0
	I was nominated by Department at UNZA	15	7.2
	Job advert discovered through social media	21	10.1
	Through Internship	6	2.9
Total		**208**	**100.0**

Source: Survey data (2021)

Furthermore, 1% of the respondents indicated that they attended campus interviews (conducted by their current employer on campus) to obtained their first job, 0.5% were nominated by UNZA to obtained their first job, 1% were nominated by their School at UNZA to obtained their first job, 7.2% were nominated by their Departments at UNZA to obtained their first job, 10.1% responded to a job advertisement through social media and the internet (such as Facebook; LinkedIn etc.) to obtain their first job, and 2.9% of the respondents used internship to get their first job as shown above.

How long it took find the first job

Study participants were also asked to indicate the time it took them to find their formal employment after graduating from the University of Zambia. The study revealed that the majority of UNZA Graduates in the period under consideration took in the range of 7 to 12 months to land their first formal job (approximately 73%), with about 1.5% outliers who indicated it took them about 3 and half years to get their formal job after graduating from UNZA. The approximately 73% who found their first job within seven to twelve months were falling within the normal range of the time that a job seeker is expected to find employment. Globally, labour market experts believe that it should take a job seeker approximately three to six months to land their first employment, of course after making many applications to various organisations (ILO, 2008). The implication of these findings was that, the Zambian labour market was still doing fairly well in the sense that it could absorb such a large number of graduates within a period of twelve months, even though the figure was not telling us anything about the quality of the jobs these UNZA Graduates were getting in that period. We could not categorically

tell whether or not these jobs were commensurate with the educational qualifications of the graduates.

When it comes to their level of satisfaction with their current jobs at the time of the study, the results of the study show that 8.7% were very dissatisfied, 13% of respondents were dissatisfied, 27.4% were neither satisfied nor dissatisfied while 39.9% indicated that they were satisfied and 9.1% of the respondents were very satisfied. This means approximately half of the respondents, 49% were actually satisfied with their current jobs at the time of the study while 21.6% were not satisfied with their current jobs, 27.4% were undecided about their level of satisfaction or dissatisfaction with their jobs, 2% of the respondents did not respondent to the question on job satisfaction. The level of dissatisfaction can only be explained in a situation where such respondents had different educational backgrounds but had found themselves working in different professions or jobs. When there are fewer job opportunities in the labour market against hundreds of thousands of job seekers, job seekers become desperate to get a job and they end up getting any job opportunity that comes their way, this is what leads to job dissatisfaction in addition to other factors.

Employers' views and experiences

In this study interviews were conducted with a total of 16 employers from the public, private and Civil Society Organisations sectors. The employers consisted of people who are involved in the hiring of job applicants for job openings that fall vacant in their organisations. Six employers or their representatives were interviewed from public institutions, including parastatal companies (government owned corporations), and another six from private institutions while four interviewees were drawn from Civil Society Organisations. There were 10 males and 6 females, the average age of the informants was 35 years. In terms of the educational qualifications, 10 of them indicate a Bachelor's Degree as their highest level of qualifications while 6 indicate a Master's Degree as their highest level of qualifications.

Recruitment and Selection Methods

In the findings, almost all of the key informants revealed that the most popular methods of recruiting people, including UNZA Graduates, for job vacancies involve what are referred to as 'traditional' or 'formal' methods. The commonest method among these methods is the use of advertisement of job vacancies in the media (print and electronic media), and the most popular method is the newspaper advertisement. In addition to this long standing tradition of recruiting job applicants or job seekers, where there was special need in terms of human resource development, some employers indicated that they select certain tertiary institutions offering certain Degree programmes,

and engage such institutions to select graduating students in specific fields of study to be employed in their organisations. After receiving applications from qualified applicants, the study discovered most employers use interviews as a method for selecting the most qualified individuals to fill up the vacancies. Some of them use interviews in combination with other techniques such as aptitude tests and other types of tests. Employers were also asked to indicate if factors such as social connections of job seekers, the gender of job applicants, UNZA Degree, and the type of university one attended play a role in the hiring of such job seekers or applicants.

> *"It is generally believed that nowadays job seekers rely on social connections with potential employers, either through friends or acquaintances or relatives to get employed in Zambia."*
> *"We don't look at which university a person graduated from but we look at the competences an individual has in terms of knowledge and skills."*

Furthermore, the findings revealed that many organisations are equal opportunity employers in as far as gender or sex of job seekers is concerned. Many organisations support people of all kinds of backgrounds regardless of their sex or gender.

> *"Gender or sex does not really matter when recruiting in my organisation. Equal opportunities are given to both males and females. What matters is one's qualifications. My organisation actually promotes gender parity*

In interpreting these findings this researcher begins by first and foremost acknowledging that this study was the first of its kind in Zambia to study how University of Zambia Graduates in the current era can activate their social capital and make use of social connections, as part of what we can refer to as 'informal' job search methods, to find employment in the competitive labour market in the country. Social connections have always been a common feature among human beings for as long as humanity has existed on earth. People turn to social connections and activate them when faced with a challenge or a problem or a need which may require a solution from other people or when they are in a vulnerable position. Over the past several decades, researchers have attempted to determine and understand through rigorous investigations the role of social capital in influencing people's successes and achievements in their lifetime, including finding jobs in the labour market. This researcher has joined this group of researchers who have attempted to understand this social phenomenon.

We have learned in this study that the labour market is believed to be an employer-controlled process. It is the employer who demands that a

curriculum vitae (CV) should be submitted by a job seeker, and decides when to hire, who to interview, and who not to interview, who to offer the job, and how much money to offer to the new employee. The employer, therefore, is always in the driver's seat in the labour market. It is a fact that the average job seeker in Zambia relies largely on his or her CV to find a job and subsequently may not be successful. One major reason is that the job seeker is competing with thousands of other job seekers. In such circumstances, the job seeker needs to be equally creative either in writing the CV, or skip it altogether and become an aggressive job seeker.

Many studies have conceptualized the way people search for a job into two categories; that is "formal and informal" search methods. Formal job search methods are those that involve formal intermediaries such as the use of advertisements, employment agencies, college interviews and many others. Informal job search methods are those that do not involve formal intermediaries, but may be based on people's social relations with friends, relatives and employers (Wanberg et al, 2010). This study focused on the role that social connections play in the employability of University of Zambia Graduates in the 2000s era. These social connections can be created through families or friends or both, and they fall in the category of informal job search methods.

Conclusion

This study has attempted to answer a very common belief and aphorism among job seekers that finding a job in Zambia usually depends on one's social connections rather than one's qualifications. Findings of this study provided an account of the challenges university graduates experience while looking for employment and also provided a nuanced understanding of the levels of employability within the Zambia context. One of the most striking findings in this study across the economic divide was the belief in the power of social connections in helping job seekers to find jobs.

References:
1. AfDB/OECD (2004) African Economic Outlook: Income Poverty target in Sub-Saharan Africa. Paris: African Development Bank and OECD
2. Ballantine, J.H., (2006) Our Social World Condensed: Introduction to Sociology. Thousand Oaks: SAGE Publications
3. Bartus Tamás (1998) Social Capital and Earnings Inequalities: The Role of Informal Job Search in Hungary. Budapest.
4. Blossfeld, H.P. Buchholz, S., Bukodi, E. and Kurz, K. (2008) Young Workers, Globalization and the Labour Market. Comparing Early

Working Life in Eleven Countries. Cheltenham, UK/Northampton, MA: Edward Elgar.

5. Briggs de Souza (2007) Social Capital and the Cities: Advice to Change Agents, National Civic Review 86(2):111 – 117

6. Bryman, A, (2012) Social Research Methods. Oxford: Oxford University Press

7. Central Statistical Office (2018) Labour Force Survey Report. Lusaka: CSO

8. Central Statistical Office (2017) Labour Force Survey Report. Lusaka: CSO

9. Central Statistical Office (2012) Labour Force Survey Report. Lusaka: CSO

10. Creswell, J. W. (2007). Research design: Qualitative, Quantitative, and Mixed methods Approaches (2nd ed.). Thousand Oaks, CA: Sage.

11. Culkins, N., (2013) Beyond Being A Student: An Exploration of Student & Graduate Start-Up's (SGSU's) Operating From University Incubators In Journal of Small Business and Enterprise development. 20, 3, p. 634-639

12. Gewer, A (2009) PhD Thesis, unpublished: Feature of Social Capital that Enhance the Employment Outcomes of FET College Learners. Johannesburg: University of Witwatersrand.

13. Goldthorpe, J.H. and Jackson, M. (2008) 'Problems of an Education-Based Meritocracy', in A. Lareau and D. Conley (eds.), Social Class. How Does it Work? Russell Sage Foundation Press.

14. Granovetter, M. (1995) [1974] Getting a Job: A Study of Contacts and Careers. Chicago: University of Chicago Press.

15. Granovetter, M. (1973) 'The strength of weak ties', American Journal of Sociology, 78, 6, 1360-80.

16. Grant, C. & Osanloo, A., (2014) Understanding, Selecting, and Integrating a Theoretical Framework in Dissertation Research: Creating the Blueprint for 'House'. Administrative Issues Journal: Connecting Education, Practice and Research, Pp. 12-22

17. Halpern, D et al, (2005) Social Capital. Cambridge: Polity Press

18. Hamermesh, D. (2011) Beauty pays: Why attractive people are more successful. Texas: Princeton University Press.

19. ILO (2008) Decent Work Country profile: Zambia. Geneva: International Labour Office

20. Lin, N. (2008) 'A Network Theory of Social Capital', in J. Deth, D. Castiglione & G. Wolleb (eds.), The handbook of social capital, 50-69. Oxford: Oxford University Press

21. Matloob, P, Massimiliano, T, Matias V, (2013) 'Social Capital and Immigrants' Labour Market Performance, IZA DP No. 7274

22. McGonigal, J. et al (2007) Social capital, social inclusion and changing school contexts: A Scottish perspective. British Journal of Educational Studies, 55(1), 77-94.
23. Mumba, H, M, (2014) PhD Thesis, unpublished: Informal Networks and Youth Self-Employment in Zambia. Lusaka: UNZA.
24. Nabi, G, & Holden, R. (2008) Graduate entrepreneurship: Intentions, education and training. Education and Training, Vol. 50, No. 7, pp 545-551.
25. Nordman, C. J and Pasquier-Doumer, L (2014) Transitions in a West African Labour Market: The Role of Family Networks. IZA Discussion Paper No. 8349
26. Portes, and Alejandro, ed. (1998) "Social Capital: Its Origins and Applications in Contemporary Sociology." Annual Review of Sociology 24: 1-24.
27. Putnam, R.D. (ed.) (2002), Democracies in Flux: The Evolution of Social Capital in Contemporary Society. Oxford: Oxford University Press.
28. The Quality Assurance Agency, QAA (2019) The UK Quality Code for Higher Education. Canterbury: University of Kent
29. Woolcock, M. & D. Narayan (2000) 'Social capital: Implications for development theory, research and policy', World Bank Research Observer 15 (2): 225-249.
30. Woolcock, M. (1998) 'Social capital and economic development: Toward a theoretical synthesis and policy framework', Theory and Society 27 (2): 151-208.
31. .Turok, B (1981) Control in the Parastatal Sector of Zambia. The Journal of Modern African Studies, 19, pp 421-445.
32. Wanberg, C. R., Zhu, J., & vn Hooft, E. A. J (2010) The job search grind: Perceived progress, self-reactions, and self-regulation of search effort. Academy of Management Journal, 53(4), 788–807

Transitioning to the New Normal in Education: A Case Study of Chinese School Leaders in the Philippines

Gina Pecson
Philippine Christian Gospel School, Cebu City, Philippines
Angeline Pogoy
Cebu Normal University, Cebu City, Philippines

Abstract

This paper focuses on exploring the different changing roles and leadership practices of the two Chinese private school leaders in basic education in the new normal with its challenges and opportunities. This case study approach was done through semi-structured interviews and supplemented with documents including e-mails, written reports, meeting notes, and other related documents used for triangulation to strengthen the credibility of outcomes. It also enables different interpretations and meanings to be included in the data analysis. The findings revealed that the two Chinese private school leaders have adapted the four leadership practices successfully in their respective institutions, as they went through the process of restructuring the teaching and learning in the new normal where challenges and opportunities were enormous. These four leadership practices were Situational Leadership, Instructional Leadership, Benchmarking Leadership, and Distributed Leadership that school leaders had to modify and adapt depending on the situations to accommodate an ever-changing environment during and after the COVID-19 pandemic. The adaptability of different changing roles and leadership practices depending on its situations are the essential qualities of school leaders to rise above the circumstances and thrive in crisis during and after the COVID-19 pandemic.

Keywords: Chinese private school leaders, new normal, leadership practices

1.   Introduction

*Chinese private school leaders are considered as "endangered species" because they are scarce and insufficient for demand. This makes their administrative and instructional leadership as valuable as precious gems. Their roles and functions are crucial in planning, organizing, leading, and controlling the whole organization to ensure student academic success and enhance teachers' quality (*Day & Sammons, 2013*). Thus, the COVID-19 pandemic has brought enormously increasing demands in pivoting their leadership styles and skills in such a crisis* (Fernandez & Shaw, 2020)*.*

School leadership within Organization for Economic Cooperation and Development (OECD) countries like Australia, Canada, Finland, Korea, New Zealand, United Kingdom, and the United States has changed significantly (Pont, Nusche & Moorman, 2008). They are confronted with an ever-increasing set of demands (Pont *et al*., 2008) due to the increased levels of competition in economic globalization and technology for the sake of improvement in education (United Nations Educational, Scientific and Cultural Organization UNESCO, 2016). This prepares the 21st-century learners with the needed knowledge and skills in a fast-changing environment (Day & Sammons, 2013). Ironically, we are living in this generation with a 21st century school but still delivering a 20th-century curriculum (Hayes-Jacobs, 2014 as cited in Zhang, Bohley & Wheeler, 2017). Certainly, their roles are crucial in the effectiveness of quality education (Laila, 2015) in this rapid change of globalization and digitalization (Litz, 2011). However, many countries put much attention in investing their resources for teacher training, learning materials, equipment, and facilities. Paradoxically, very few have thought of investing on the potential of school leadership as a means of improving quality education (UNESCO, 2016). Therefore, it is critically important to develop competent school leaders with a global perspective to understand and analyze other countries' educational systems to partner and learn from them (Zhang *et al.*, 2017).

Specifically, school leadership in the Philippines Region X has exemplified four leadership practices such as managerial, participative, moral, and instructional leadership (Pasia, 2019). All these have played multiple roles in facilitating transition efforts. However, Cruz, Villena, Navarro, Belecina, and Garvida (2016) revealed in their study that even though school leaders in Region IV-A have a satisfactory level in their managerial performance, there are some weaknesses that needs to be enhanced. Likewise, Hechanova, Caringal-Go, and Magsaysay (2018) showed in the study that it is important to understand change in leadership scheme as a result of also managing change in organizations. It was also suggested that there is no one-size-fits-all approach in leadership. In addition, the Philippine public and private school

leaders must be skillful in engaging with the people to achieve organizational goals (Hechanova *et al.,* 2018).

Furthermore, the roles of school leaders are intensified in fulfilling their responsibilities in instructional and administrative management as they experienced during the COVID-19 pandemic. This has brought undisputable chaos in the education system which has led to 1.6 billion learners out of school during this crisis (UNESCO, 2020 as cited in Harris & Jones, 2020). Drastically, it has changed the world's education system by restructuring teaching and learning with the use of different modalities (Netolicky, 2020). The urgent decision for an online class or blended learning brought stress to different stakeholders who may require varied changes in strategies, styles, and attitudes (Heifetz & Laurie, 2001 as cited in Fernandez & Shaw, 2020). Likewise, parent involvement plays a critical role in the success of students in the new normal education (Toure & Guoxin, 2016). Having known these facts, school leaders must act swiftly (Derksen, 2020 as cited in Netolicky, 2020) with strategic planning and management taken in a time of crisis (Netolicky, 2020 as cited in Harris & Jones, 2020). This has become very challenging on their part for having less than three to four months (March to July) to strategize before the opening of the school year (2020-2021).

As a result, the roles of school leaders are so complex in dealing with human relations management, administrative tasks, and tough decision-making as they are often faced with conflicting stakeholder views (Netolicky, 2020). In such a crisis, school leaders need to connect to learn from others as well as learn to connect with others (Delahunty, 2018). They also need to set the direction of the school as they plan, implement, and evaluate cross-functional decisions to achieve its organizational objectives and maximize the right people with their potentials (Athapaththu, 2016). The communication channel should be properly coordinated. Henceforth, effective leaders who use different leadership practices may affect the organizational effectiveness or performances, and influence followers to achieve the desired goals and to reduce attrition rate (Nanjundeswaraswamy & Swamy, 2014).

To date, research studies were conducted only among the public and private schools. However, there was no related literature or study found about school leaders among the Chinese private schools in the Philippines. Notably, the most obvious difference between a regular Philippine private or public learning institutions from a Chinese learning institution here in the Philippines is the teaching of the Chinese language as part of the curriculum to preserve its Chinese traditions, culture, and heritage. This follows the rules of class hours set by the Philippine higher education committee, i.e., teaching six hours per week (Yang, 2014).

This study aimed to explore the leadership practices of the two Chinese private schools as they went through the process of restructuring the teaching

and learning in the new normal with its challenges and opportunities. Specifically, this study sought to answer the following research questions: (1) How did the Chinese private school leaders in basic education navigate during the process of restructuring the teaching and learning in the new normal? (2) How did they respond to issues, concerns, gaps, and challenges before, during, and after the restructuring of the teaching and learning in the new normal? (3) What are some opportunities brought by the restructuring of the teaching and learning in the new normal? (4) How did all these things affect the school community personally and professionally during and after the COVID-19 pandemic?

2. Research Methodology

A case study is utilized as an ideal in-depth understanding of research design that occurs within the data (Merriam, 1998 as cited in Zainal, 2007). This study utilized a very limited number of individuals as the subjects because the research requires a close examination of people, topics, and issues (Hays, 2004 as cited in Armfield, 2007). Furthermore, it was very appropriate in this study because little research has been made (Merriam, 1998 as cited in Zainal, 2007) especially among the Chinese private schools in the Philippines. The objectives set was to describe the data as they occur and it must be written in a narrative form (McDonough & McDonough, 1997 as cited in Zainal, 2007). There are six steps to follow in doing a case study design. First, determine the research question and generally starts with how or why. Second, choose the case and state how the data is to be gathered. Third, prepare to collect the data. Fourth, collect the data in the field and organize them. Fifth, analyze the data. Then, lastly, report the data (Glen, 2015).

2.1. Research Environment

This study was conducted in two different private schools across the Philippines. The first Chinese private school was from the island of the Visayas with a total of 730 students and a total of 80 faculty and staff members located in Cebu City. The second one was from the island of Mindanao with a total of 654 students and a total of 66 faculty and staff members located in General Santos City. These two schools were chosen based on the following criteria: enrolled students with majority from Chinese middle-class to affluent families, accredited schools, good quality of education, medium scale of population size, good location and proximity to the city.

2.2. Research Participants

The participants in this study were both female and seasoned Chinese Private School Leaders who have been serving as school leaders for two decades and more.

2.3.   Research Sampling

Purposive sampling was used in this study where in-depth investigation and deeper appreciation of the cases was done by not making a sweep statement of the findings (Ishak, Bakar & Yazid, 2014). Interviews were conducted to the selected participants due to their qualities, extreme time, and cost-effectiveness to enhance the study's effectiveness (Etikan, Musa & Alkassim, 2016).

2.4.   Research Instrument

The researchers were the main instrument of this study, as they played the crucial role during interviews and the interpretative process as pointed out by Pezalla, Pettigrew, and Miller-Day (Xu & Storr, 2012). As data were collected, data were also questioned and informed commentaries were provided (Morse, 1998 as cited in Xu & Storr, 2012).

2.5.   Data Gathering

This case study was done through semi-structured interviews and supplemented with documents including e-mails, written reports, meeting notes, and other documents which may serve as triangulation to strengthen the credibility of outcomes, and enable different interpretations and meanings to be included in the data analysis (Flicker, 2014 as cited in Shanks & Bekmamedova, 2018). Permission was secured from the school leaders before the conduct of the interview with transmittal letters sent through email to seek permission to conduct the study. Interview guide questions and informed consent were also sent to the participants through email.

2.6.   Data Collection

Semi-structured interviews were conducted with the two participants through Zoom Meeting to provide richer and deeper insights. Furthermore, this is to gather multiple data sources to enhance data credibility (Yin, 2003 as cited in Baxter & Jack, 2008) and to add richness, breadth, and depth to data collection (Yin, 2009). These sources that served as triangulation like documentation and archival records were done to crosscheck the trustworthiness of the information in this study (Rahim & Daud, 2015 as cited in Shoaib, Bahaudin & Mujtaba, 2016). Data storage may include audio recordings, note-taking, filing of hard copy documentation, interview transcriptions, and other documents related to this study were stored electronically.

2.7.   Data Analysis

Coding is vital in the process of identifying concepts, similarities, and conceptual reoccurrences in the data because it is the linkage between data

generation and theory development (Chun, Birks & Francis, 2019). Transcription of the interview was done in its verbatim form and codes were constructed about the concepts related to this study. Themes were formulated through the progress of line-by-line coding and integration of sub-categories through constant comparison, modification, and analysis of concepts.

In this study, data were synthesized and significant statements were trimmed down before the interpretation without compromising the data as pointed out by Sharan (2009) and Harrison, Birks, Franklin, and Mills (2017). This is to increase the credibility of the interpretation (Merriam, 1998 as cited by Yazan, 2015) and the rigor of the study (Harrison *et al*., 2017).

2.8. Rigor and Trustworthiness

Trustworthiness or rigor of qualitative research and transparency of the conduct of the study is crucial to the usefulness and integrity of the findings (Connelly, 2016). This is because it refers to the degree of confidence in data, interpretation, and methods used to ensure the quality of a study (Pilot & Beck, 2014 as cited in Connelly, 2014). Rigor was done carefully and accurately in the process of data transcription, analysis, and interpretation. Likewise, triangulation through other data sources like documentation, archival records such as meeting minutes, written reports, and other documents related to this study were also done to crosscheck the trustworthiness of the information in this study (Rahim & Daud, 2015 as cited in Shoaib *et al*., 2016). Hence, whatever the results may be, it should remain as it is so that the value, consistency, truthfulness, and neutrality will be ensured (Cypress, 2017). Thus, this shows the trustworthiness of this study.

2.9. Ethical Considerations

Informed consent was explained and given to each participant before the interview began. Each participant was given a pseudonym. Names in transcripts were changed or deleted. Field notes with their pseudonyms were kept separately and other identifying information was kept confidential. Ethical considerations are very critical to any research, and proper steps must be taken to ensure that participants are fully aware of their participation and role (Skordis-Worrall, Haghparast-Bidgoli, Batura & Hughes, 2015). To safeguard the participants' rights and firms' information, the names of the firms in the report were not included to protect the privacy of the individuals and company.

3. Results and Discussions

The analysis of transcripts revealed four major themes that best describe the experiences of the informants. Each theme was labeled in a phrase

deduced from the formulated meanings of the responses of the informants. The four major themes as derived from the present set of transcripts were as follows:

3.1.   THEME 1. Adapting with the Current Change

From the very beginning of the interviews, it was highlighted that both school leaders admitted that they must embrace change as revealed by the following statements:

Participant 1

Change is constant which means that we have to expect that change is occurring continuously. As early as April, the decision for the online class was made already. Also, health protocols and a skeletal workforce are strictly followed in school. For this school year, we are after the efficiency of the teachers even if they work from home.

Participant 2

If it is not mandated by the government, we go face-to-face but if it's really mandated, we have no choice. That's why I really told the teachers to explore on their own first because we cannot meet together. They should study whatever apps that are available online, and then we'll just decide later on what kind of apps we're going to use on our teaching if the government would mandate the online teaching. Teachers may work in school if they prefer to do so, except during the holidays.

Both school leaders have experienced when they were caught in such an unfavorable time (Harris & Jones, 2020) where they do not have any choice but to wait for the announcement from the government about health protocols, school calendar for SY 2020-2021 from the Department of Education, and other procedures. Admittedly, they knew that this change was so sudden and had no choice but to use social media for communication when lockdown or strict quarantine was implemented. In such a situation, these school leaders were quick to think, plan, and respond according to the current needs of the organization and employees. They both have shown characteristics of flexibility and adaptability based on the existing work environment and the needs of an organization (Yukl & Mahsud, 2010; McCleskey, 2014). This type of leadership is called the situational leadership approach which was developed by Hersey and Blanchard in 1982. It states that leaders should be flexible enough to change their style to fit the context (Lynch, 2015).

Therefore, both participants have exemplified their situational leadership style to suit the requirements of the organization. Both participants believed that the efficiency of the teachers is what makes it important now even if they work from home.

3.2.   THEME 2. Building Up People

Amidst the immense responsibilities of the school leaders, both participants put much effort into engaging themselves with the instructional programs and the professional growth of the teachers. By working directly with their principals or coordinators, these participants were also able to monitor, evaluate, and develop teacher's performances and skills through mentoring and coaching. These are their statements:

Participant 1

There were numerous free webinars from different publishing companies about online teaching and learning. Teachers were asked to join the webinars in as much as they can to learn some skills in preparation for the online class.

As early as May, there were numerous times of instructional coaching between the department coordinator and teachers at the same time. There were also peer mentoring among the teachers for those trial periods of delivering their lessons using zoom meetings or google meet, while we were still exploring some apps and LMS.

Participant 2

I requested everyone to start exploring the apps. When it was around May, the government informed us that the quarantine would be lifted, so we decide to report for work in June and we assigned the subject coordinators in-service training. Assigned also was a workshop for the different apps that were available so that the teachers will be familiar with all the different apps.

Additional pieces of training were given to those who were not very techy. We had a seminar on how to prepare online tests…we had training on how to prepare lessons and strategies. So, more focus, more time was given to the training of the Chinese teachers.

With the sudden shift to online distance learning, school leaders highly encouraged the teachers to join numerous webinars during the quarantine period in preparation for the online class. The internet gives teachers the vast opportunity to explore many educational applications to develop their 21st century skills in communication and critical thinking ((Kakampoura, Katsadoros, Nounanaki & Kolokythas, 2017). However, there are many times that instructional supervision is not effective, and this could be due to busyness or lack of theoretical knowledge on how to conduct instructional help for teachers (Zepeda, 2012). As an instructional leader, the principal must be knowledgeable in the curriculum, methods of instruction, and able to support teachers (Blase & Blase, 2004 as cited in Wilson, 2012). They must be competent in formulating educational policies and conducting in-house workshops (Blase, 1987 as cited in Hussin & Abri, 2015). Unfortunately,

many teachers are not satisfied with the instructional leadership of their school heads due to some supervisory issues like inefficiency, incompetence, and lack of interest (Darishah, Daud & Fauzee, 2017). It was also reported that teachers felt uneasy during supervision as if they are engaged in cold war tactics where neither side trusts the other (Blumberg, 1980 as cited in Duffy, 2017). Therefore, the role of school leaders is critical in creating a school culture void of fear or ridicule to give constant support, encouragement, and motivation towards teachers (Alzoraiki, Rahman & Mutalib, 2018 as cited in Baptiste, 2019).

On the contrary, both participants in this study have shown their instructional leadership skills even if they have coordinators or principals under them. As early as April and May of 2020, these two school leaders spent many hours exchanging conversations with their principals/coordinators about the current pedagogical problems and solutions for the implementation of blended learning. They also encouraged their teachers to attend many webinars and explore different apps that would help them for their online classes. With the advent of technology, teachers can go beyond the usual lecture or discussion since research showed that there were still many teachers who used the conventional way of teaching that caused decreased motivation and less engagement of the students (Kirkup, Schagen, Wheater, Morrison & Whetton, 2007; Nentwig, Parchmann, Grasel, Ralle & Demuth, 2007; Wahono, 2011 as cited in Sunyono, 2018). Consequently, all these webinars would benefit the teachers in creating a learning environment that will increase the student motivation and academic performances (Oksuz, 2015).

Therefore, these school leaders have shown a role model in improving teachers' instructional skills that creates a continuous culture of professional growth and learning. Trainings bring a lot of beneficial results such as job satisfaction, organizational, commitment, improved employee skills, and productivity (Hughey & Mussnug, 1997 as cited in Masadeh, 2012).

As shown above, both school leaders have exercised their instructional leadership style with the pursuit of improving teachers' professional growth and academic learning, which require them to set an exemplary model in the pedagogical skills.

3.3. THEME 3. Connecting with People

Both school leaders realized that networking with other leaders is critically important in the first quarter of this pandemic year (2020), as nobody has ever thought that such a crisis would change the education system drastically. They knew that making connections would help them in soliciting ideas and suggestions regarding blended learning. These are their statements:

Participant 1

In such a pandemic time, network with other school leaders has become very helpful in giving some tips and ideas on how to go about the online class for the new normal. There were some schools as early as May that were able to come up with their Primer for the SY 2020-2021 with all the Do's and Don'ts for parents to understand better about the online class. These were indeed very helpful, and we were able to get and adopt some of their policies in our own institution. We need to build a strong connection with your people not just within the institution but also outside your institution.

Participant 2

I got in touch with a school leader... because when the lockdown happened, they had already shifted to the August school calendar. I asked him about the number of hours being used for synchronous and how many for the asynchronous. He was very helpful, he gave me a lot of tips, and he shared with me all the information. Aside from that, I called up my niece who is in Canada because they also had online learning at that time…I received the same answer that it is impossible to have a whole day of online teaching. These data were very helpful. No man is an island! It is really important to know people in the same industry.

Through collaboration with other school leaders, it brings a lot of benefits to complete one's vital tasks such as coordination with staff, allocation of resources, and delegation of tasks. In this rapidly changing time, there should be a professional environment for knowledge sharing, dissemination of best practices among the professionals, and policymakers which will make them effective leaders (Pont, Nusche & Moorman, 2008). The purpose of this collaboration is to share information and best practices for continuous improvement (Stroud, 2010). This is one way of benchmarking which can greatly enhance an organization's performance by discovering the tools and technologies. Thus, this is achieved by providing numerous indicators on where we are now and where we are heading, and also improving our ability to realize our goals (Stroud, 2010). According to Garg and Ma (2005), as cited in Singh (2010), benchmarking leadership style is essential in improving the organizational performance by looking into different organizations and adapts their outstanding practices in the systems of technology, management, leadership, and styles.

As shown above, both participants have shown their benchmarking leadership style which they believed that building collaboration with other school leaders became very helpful on how to start with the planning stage. Eventually, it paved the way to finish the whole process of the implementation of blended learning for this school year.

3.4.   THEME 4. Distributing the Tasks

Many school leaders perform both micro and macro tasks in their respective organizations. With such immense responsibilities, how can they survive and sustain their passion and strength? Interestingly, both participants in this study have shown their leadership skills in distributing the tasks to be more efficient and effective. These are revealed in their long discourse:

Participant 1

Most of the time, I used Viber to communicate with the coordinators of Preschool, Elementary, and High School departments. It is a simultaneous job of communicating with these coordinators at the same time with the admin office head regarding the plan for online enrolment… As early as April and May, the decision for the online class was made known to department coordinators. Therefore, their tasks were given in terms of the class schedules, how many days of synchronous and asynchronous classes were made, teachers' loads, core subjects to teach, etc.

Participant 2

We divided the responsibilities among ourselves. My ECE coordinator is very good with graphics, so I requested her to prepare announcements to inform the parents about the enrolment. I requested the principal to create a private Facebook account to enroll all the parents and the students so that it would be easier to communicate with them. Then for the cashiers, we came up with a system should in case the parents go there and enroll or even if they did enroll online. For accounting department, she created an online system on the payment of tuition fees so that parents don't need to go the school, as they could just pay online.

It was explicitly shown through the long discourse of both participants that they knew their people very well, and delegate their tasks according to their talents, skills, and expertise. They mobilized their teams to create more opportunities for change, to strengthen their skills and talents for improvement (Hargreaves, Boyle & Harris, 2014; Shava & Tlou, 2018), and to make the work easier and faster in such a limited time. Trust and empowerment are two essential ingredients in creating a successful organization where team members would feel their individual worth and commitment to the organization. Both participants demonstrated their good listening skills and cared about the inputs of everyone in their team members.

With such leadership practices, both participants have applied Distributed Leadership Theory, a theory coined by Edwin Hutchins in the early 1990s in their organization where controlling and commanding management system is no longer effective. Rather, they used shared leadership practices in the school according to their expertise (Shava & Tlou, 2018; Dampson, Havor & Laryea, 2018). This type of leadership allows the

organization to maximize its potentials and expertise in a more democratic manner (Dampson *et al.*, 2018). However, this type of leadership is not something done by just an individual to others. Effective leader must have the skill to work well with his followers to achieve the organizational goals as they adapt to the changing times and demands in this complex world (Nahavandi, 2009 as cited in Asaari, Dwivedi, Lawton & Desa, 2016). In sum, leadership should not be solely done by one heroic individual, but a collaborative work of every individual in an organization.

Overall, the findings revealed that these two Chinese private school leaders have encountered different issues and challenges during this pandemic in preparation for the opening of the school year 2020-2021. Amidst the crisis, they have exhibited their excellent leadership practices and styles such as situational leadership, instructional leadership, benchmarking leadership, and distributed leadership successfully in their respective institutions as they went through the process of restructuring the teaching and learning in the new normal. These leadership practices allowed them to thrive during this pandemic because they were able to adapt to the current change, build-up their core people, connect with other school leaders from different institutions, and distribute the tasks well to maximize the potential and expertise of the people in their institutions.

Conclusion

In navigating the education reforms out of necessity in the new normal, the two Chinese private school leaders in basic education have shown their exemplary leadership models and practices to meet the demands and challenges of the various stakeholders. School leaders need to understand leadership style that acknowledges the democracy and delegation of tasks to empower and utilize the potentials of the people within the organization. Thus, the adaptability of different changing roles and leadership practices depending on its situations are the essential qualities of school leaders to rise above the circumstances, and thrive in the crisis during and after the COVID-19 pandemic.

References:

1. Asaari, M. H. A. H., Dwivedi, A., Lawton, A. & Desa, N. M. (2016). Academic leadership and organizational commitment in public universities of Malaysia. *European Scientific Journal*, *12*(16).
2. Armfield, S. W. (2007). *A descriptive case study of teaching and learning in an innovative middle school program.* North Zeeb Road, Michigan; Pro-Quest Information & Learning Company.
3. Athapaththu, H. K. S. H. (2016). An overview of strategic management: An analysis of the concepts and the importance of

strategic management. *International Journal of Scientific and Research Publications*, *6*(2), 124-127.

4. Baptiste, M. (2019). No teacher left behind: the impact of principal leadership styles on teacher job satisfaction and student success. *Journal of International education and leadership*, *9*(1), 1.

5. Baxter, P. & Jack, S. (2008). Qualitative case study methodology: study design and implementation for novice researchers e qualitative report, *13* (4), 544-559. Retrieved from hEp. *nsuworks. nova. edu/tqr/vol13/iss4/2*.

6. Connelly, L. M. (2014). Ethical considerations in research studies. *Medsurg Nursing*, *23*(1), 54-56.

7. Connelly, L. M. (2016). Trustworthiness in qualitative research. *Medsurg Nursing*, *25*(6), 435.

8. Cruz, C. D. P., Villena, D. K., Navarro, E. V., Belecina, R. R. & Garvida, M. D. (2016). Towards enhancing the managerial performance of school heads. *International Review of Management and Business Research*, *5*(2), 705-714.

9. Cypress, B. S. (2017). Rigor or reliability and validity in qualitative research: Perspectives, strategies, reconceptualization, and recommendations. *Dimensions of Critical Care Nursing*, *36*(4), 253-263.

10. Dampson, D. G., Havor, F. M. & Laryea, P. (2018). Distributed Leadership an Instrument for School Improvement; The Study of Public Senior High Schools in Ghana. *Journal of Education and e-Learning Research*, *5*(2), 79-85.

11. Darishah, P., Daud, Y. & Omar, F. M. S. (2017). Teaching and learning supervision by school management, attitude of teachers and competency of teaching. *International Journal of Development and Sustainability*, *6*(10), 1367-1381.

12. Day, C. & Sammons, P. (2013). *Successful leadership: A review of the international literature*. CfBT Education Trust. 60 Queens Road, Reading, RG1 4BS, England.

13. Delahunty, J. (2018). Connecting to learn, learning to connect: Thinking together in asynchronous forum discussion. *Linguistics and Education*, *46*, 12-22.

14. Duffy, F. M. (2017). *Reimagining Instructional Supervision: Supervising Knowledge Work*. Rowman & Littlefield.

15. Etikan, I., Musa, S. A. & Alkassim, R. S. (2016). Comparison of convenience sampling and purposive sampling. *American Journal of Theoretical and Applied Statistics*, *5*(1), 1-4.

16. Fernandez, A. A. & Shaw, G. P. (2020). Academic leadership in a time of crisis: The Coronavirus and COVID-19. *Journal of Leadership Studies*, *14*(1), 39-45.

17. Glen, S. (June 12, 2015). Case Studies: Case Study Definition and Steps. StatisticsHowTo.com: Elementary Statistics for the rest of us! https://www.statisticshowto.com/case-studies/

18. Hargreaves, A., Boyle, A. & Harris, A. (2014). Uplifting leadership: How organizations, teams, and communities raise performance. John Wiley & Sons.

19. Harrison, H., Birks, M., Franklin, R. & Mills, J. (January, 2017). Case study research: Foundations and methodological orientations. In *Forum Qualitative Sozialforschung/Forum: Qualitative Social Research, 18*(1).

20. Hechanova, M. R. M., Caringal-Go, J. F. & Magsaysay, J. F. (2018). Implicit change leadership, change management, and affective commitment to change: Comparing academic institutions vs business enterprises. *Leadership & Organization Development Journal*, 39, 914-925

21. Hussin, S. & Al Abri, S. (2015). Professional development needs of school principals in the context of educational reform. *International Journal of Educational Administration and Policy Studies*, *7*(4), 90-97.

22. Ishak, N. M., Bakar, A. & Yazid, A. (2014). Developing sampling frame for case study: Challenges and Conditions. *World Journal of Education*, *4*(3), 29-35.

23. Laila, A. (2015). The effective school: The role of the leaders in school effectiveness. *Educational Research and Reviews*, *10*(6), 695-721.

24. Litz, D. (2011). Globalization and the changing face of educational leadership: Current trends and emerging dilemmas. *International Education Studies*, *4*(3), 47-61.

25. Lunenburg, F. C. & Lunenburg, M. R. (2013). Convergent roles of the school principal: Leadership, managerial, and curriculum-instructional. *International journal of education*, *1*(1), 1-9.

26. Lynch, B. (2015). Partnering for performance in situational leadership: a person-centred leadership approach. *International Practice Development Journal*, *5*.

27. Masadeh, M. (2012). Training, education, development, and learning: what is the difference? *European scientific journal*, *8*(10).

28. McCleskey, J. A. (2014). Situational, transformational, transactional leadership, and leadership development. *Journal of business studies quarterly*, *5*(4), 117.

29. Nanjundeswaraswamy, T. S. & Swamy, D. R. (2014). Leadership styles. *Advances in management*, *7*(2), 57.
30. Netolicky, D. M. (2020). School leadership during a pandemic: navigating tensions. *Journal of Professional Capital and Community*.
31. Pasia, A. J. (2019). Educational Leadership Strategies to Facilitate a School Transition into The Philippine K To 12 Basic Education Curriculum. *International Journal of Education and Research*, *7*(7).
32. Pezalla, A. E., Pettigrew, J. & Miller-Day, M. (2012). Researching the researcher-as-instrument: An exercise in interviewer self-reflexivity. *Qualitative research*, *12*(2), 165-185.
33. Pont, B., Nusche, D. & Moorman, H. (2018). Improving School Leadership, Volume 1 Policy and Practice.
34. Shanks, G. & Bekmamedova, N. (2018). Case study research in information systems.
35. Shava, G. N. & Tlou, F. N. (2018). Distributed Leadership in Education, Contemporary Issues in Educational Leadership. *African Educational Research Journal*, *6*(4), 279-287.
36. Shoaib, S. & Mujtaba, B. G. (2016). Use it or lose it: Prudently using case study as a research and educational strategy. *American Journal of Education and Learning*, *1*(2), 83-93.
37. Singh, S. K. (2010). Benchmarking leadership styles for organizational learning in Indian context. *Benchmarking: An International Journal*, 17 (1), 95-114.
38. Skordis-Worrall, J., Haghparast-Bidgoli, H., Batura, N. & Hughes, J. (2015). Learning online: A case study exploring student perceptions and experience of a course in economic evaluation. *International Journal of Teaching and Learning in Higher Education*, *27*(3), 413-422.
39. Stroud, J. D. (2010). Understanding the purpose and use of benchmarking. *Isixsigma. February*, *26*.
40. Toure, A. & Guoxin, Z. (2016). An investigation study between two genders, public and private schools, through the achievement of the pupils in the exact sciences: A case study of selected secondary schools in Conakry, Guinea. *European Scientific Journal*, *12*(1).
41. United Nations Educational, Scientific and Cultural Organization (UNESCO, 2016). Global education monitoring report summary 2016: education for people and planet: creating sustainable futures for all.
42. Wilson, N. L. (2012). *The principal's role in developing the classroom management skills of the novice elementary teacher.* [Doctoral Dissertation, University of Tennessee].
43. Xu, M. A. & Storr, G. B. (2012). Learning the concept of researcher as instrument in qualitative research. *Qualitative Report*, *17*, 42.

44. Yang, S. (November, 2014). Several thoughts on current Chinese education in the Philippines. In *International Conference on Education Technology and Social Sciences. https://down load. atlantis-press. com/article/14695. pdf*.

45. Yazan, B. (2015). Three approaches to case study methods in education: Yin, Merriam & Stake. *The qualitative report*, *20*(2), 134-152.

46. Yin, R. K. (2009). How to do better case studies. *The SAGE handbook of applied social research methods*, *2*(254-282).

47. Yukl, G. & Mahsud, R. (2010). Why flexible and adaptive leadership is essential. *Consulting Psychology Journal: practice and research*, *62*(2), 81.

48. Zainal, Z. (2007). Case study as a research method. *Jurnal kemanusiaan*, *5*(1).

49. Zepeda, S. J. (2012). Professional development: What works. Eye on education. *Journal of Educational Administration*, *51*(5), 728-730.

50. Zhang, G., Bohley, K. A. & Wheeler, L. (2017). Global perspective and the implications for school leadership. *Journal of Academic Administration in Higher Education*, 13(2), 9-14.

Effect of Cognitive Behavioural Therapy on Pupils with Attention Deficit Hyperactivity Disorder in Two Selected Primary Schools in Cape Coast Metropolis, Ghana

Dr. Felix Senyametor
Department of Education and Psychology
University of Cape Coast, Ghana
Dr. Vera Arhin
Rebecca Kaedabi-Donkor
Dr. Lydia Aframea Dankyi
Kwame Nkrumah
College of Distance Education
University of Cape Coast, Ghana

Abstract

This study focused on investigating the effect of the Cognitive Behavioural Therapeutic treatment (CBT) on pupils with Attention Deficit Hyperactivity Disorder (ADHD) at Bekkyford and Felicomfort Primary Schools in Cape Coast, Ghana. The quasi-experimental design was used for the study. The sample for the study was 43 participants which include 8 parents, 6 teachers, 16 siblings of participants, 13 pupils made up of 9 males and 4 females. The pupils were purposively sampled for the study with the aid of the Scheduled for Affective Disorders and Schizophrenia for School-Aged Children (K-SADS). Data were collected with the Scheduled for Affective Disorders and Schizophrenia for School-Aged Children (K-SADS), questionnaire, and Clinical Global Impression Severity Scale (GCI-I). The results revealed that three out of the 9 males (representing 30 percent) reported minimal improvement in their symptoms regarding impulsivity and inattentiveness. There was a significant difference between the experimental

group (M = 18.70, SD = 2.243) and the control group (M = 08.45, SD = 4.185), t(37)= 8.023; sig.=.003, P<.05 with respect to the CBT. It was recommended that parents, teachers and siblings should be included in all psychosocial interventions for people with ADHD for lasting and effective management of the symptoms.

Keywords: Attention deficit, hyperactivity cognitive, behavioural therapy, disorder

1.   Introduction

Attention Deficit Hyperactivity Disorder (ADHD) is one of the commonest neurobehavioural disorders among children of school-going age as well as adults. The National Centre for Birth Defects and Developmental Disabilities (NCBDDD) (2021) refers to Attention Deficit Hyperactivity Disorders as a neurodevelopmental disorder in children and adolescents which results in inattentiveness, impulsivity, or being overly active. Hansa and Bhargava (2021) also defined ADHD as a brain disorder that adversely affects how people pay attention, remain calm and control their behaviours. This could be precipitated by factors, brain injury, and exposure to environmental hazards like alcohol and tobacco use in the first trimester of pregnancy.

Hansa and Bhargava (2021) further added that ADHD is the most frequently diagnosed brain disorder in pupils with males most likely to suffer from it than females. It is usually observed in the formative years when a child begins to exhibit challenges paying attention. This disorder exists in three forms subject to which type of conditions are most conspicuous in the individual. The forms according to the NCBDDD (2021) are: First, Predominantly inattentive presentation, which occurs when it becomes very difficult for the patients to organise themselves to complete a task, pay rapt attention to details and follow the lines of dialogue or instructions. Individuals easily forget instructions and are unable to pay attention to details of everyday routines. Second, Predominantly Hyperactive-Impulsive Presentation: Persons suffering from this condition often play around and are flippant. It is also challenging for such individuals to remain calm for an extended period during dinner, doing home assignments and class exercises among others. Young children often run, jump up and down incessantly. Adults and children who are impulsive may rudely interrupt others during conversation, have difficulty listening, waiting, and taking their turns in activities. An impulsive person usually suffers multiple accidents and injuries than other people. The third one is a Combined Presentation, which registers the combination of the previous two (Predominantly inattentive and Predominantly Hyperactive-Impulsive presentations) conditions which is a very severe form of ADHD. The NCBDDD (2021) posited that it is normal for children to experience

challenges concentrating and behaving well sometimes. However, children with ADHD just fail to outgrow these behaviours.

Research has shown that pupils suffering from ADHD conditions struggle to pay sustained attention to issues requiring deep concentration, appear not to listen when spoken to, fail to comply with directives, and usually do not finish academic tasks. Others face challenges putting their tasks and activities in order and going through mentally demanding activities, easily strayed by inconsequential environmental stimuli, and are forgetful (Flores & Parra, 2014; APA, 2013). Pupils suffering from ADHD shout out responses before questions are completed, suddenly interrupt or interfere with others´ conversations to the extent of triggering problems in social, academic, and job places (APA, 2013; Shillingford, Lambie & Walter, 2007).

The impulsive persons rush through assigned tasks thereby omitting accurate responses. This is the condition referred to as the impulsive cognitive style, which is the penchant to solve cognitive tasks quickly and inaccurately (Lopez, Serrano, Delgado, Llano, Albe-rola, Sacristán, Pérez & Camina (as cited in Flores & Parra, 2014). Impulsive pupils often act on incomplete information and instructions to solve or answer questions without thinking thoroughly, because they omit key steps for an accurate problem-solving approach which require observation, gathering of relevant information, analysing, rejecting redundant data, devising an action plan, scrutinizing every possible answer, foreseeing the possible consequences of each answer, making a decision, checking the answer, congratulating oneself if the answer is accurate or probing the information and all alternatives again to see whether if the answers are correct or wrong (Orjales, 2002).

Studies conducted have shown that the multiplicity of family-related factors including high birth order, large family sizes, and single parenting were associated with ADHD conditions (Hurtig et al., 2007). Abolfotouh (as cited in Al Hamed et al., 2008) confirmed in his study conducted in Saudi Arabia that families more than four were two and half times likely to suffer behavioural disorders compared to smaller families. They further revealed that high birth order of five or more was three times more likely to experience behavioural disorders than families with low birth order. Maternal-related issues such as low birth weight and artificial infant feeding practices have also been reported by some studies to be considerably linked with ADHD (Sasaluxnanon & Kaewpornsawan, 2005). Children with ADHD are at a bigger risk of a broad range of adverse consequences, such as depression, academic failures, dropout, learning disabilities, and conduct disorders (Children and Adults with Attention-Deficit/Hyperactivity Disorder (CHADD), 2003).

The effect of CBT on ADHD

CBT is a psychosocial intervention that aims at improving psychological wellbeing. CBT focuses on challenging and changing unhelpful mental distortions and behaviours, improving thereby emotional regulation and the development of self-coping techniques that target solving current problems (Beck, 2011). Research has, however, shown that patients who received CBT showed a significant reduction of ADHD symptoms as compared with the control group on the Clinical Global Impression Self-Report Scale (p<0.001) and the Clinical Global Impression Clinician-Report Scale (p<0.001) (Pettersson & Atten, 2017). Peterson further revealed that participants who received CBT had a significant lessening in functional impairment with the controlled group on the Global Assessment of Functioning (p<0.001) and the Weiss Functional Impairment Rating Scale Parent Version (p<0.05). In a related study, Doyle and Terjjesen (2005) also established that patients who received CBT reported increasing treatment compliance, managing many of the emotive and social difficulties that accompanied the disorder, preventing further difficulties, and assist the student and family in reducing difficulties and enhancing the quality of their lives and their relationships.

Orjales (2002) found that CBT was able to help children to regulate their own behaviours in line with rules, control their daily activities, use techniques to conduct themselves properly, select relevant data from irrelevant information, self-gauge their judgments, and develop healthy self-esteem and cordial relationships with others. For example, children with ADHD register stop-signal reaction time owing to cognitive impairments rather than behavioural inhibition deficit (Alderson, Rapport & Kofler, 2008). This means that those children are so uninhibited that they cannot stop and take a moment to think about something ahead of time.

DuPaul, Reid, Anastopoulos, Lambert, Watkins, and Power (2016), with the aid of the ADHD Rating Scale-5(DSM-5) developed by the American Psychiatric Association (2013) examined the fit of a correlate, two-factor structure of ADHD to determine whether ADHD symptom ratings varied across child and demographic characteristic. The samples used include: (1) 2,079 parents and guardians (N = 2,079; 1,037 males, 1,042 females) completed ADHD symptom ratings for their wards between 5 and 17 years old (M = 10.68; SD = 3.75) and (2) 1,070 teachers (766 female, 304 male) completed ADHD condition ratings for pupils (N = 2,140; 1,070 males, 1,070 females) between 5 and 17 year olds (M = 11.53; SD = 3.54) who went through preschool to 12th grade. The results showed that males were higher in symptom frequency than their female counterparts; older pupils were rated less than younger children, especially for hyperactive-impulsive conditions.

The findings revealed that CBT produced a higher positive impact in reducing ADHD symptoms in girls than boys (DuPaul et al, 2016)

Some studies have revealed that prominent symptoms and impairments related to the disorder persist into adulthood in approximately one-half of cases (Faraone & Mick, 2000, Mick, Faraone, Biederman & Spencer, 2004). There appears to be developmental variance in the ADHD symptom profile across the life span. Longitudinally derived data in ADHD youth growing up indicate that the symptom cluster of hyperactivity and impulsivity decays over time, while the symptoms of inattention largely persist (Millstein, Wilens, Biederman & Spencer, as cited in Timothy, Wilens, & Thomas, Spencer, 2013).

A meta-analysis on the difference between patients of ADHD who went through treatment with only CBT, those who did not go through CBT at all but had placebo and those who had only pharmacological treatment revealed that, even though pharmacological treatment proved very useful in treating ADHD, the patients did not attain complete remission as compared to patients who went through treatment with only CBT along with coping strategies. Those who did not go through CBT at all had no improvement in their symptoms (Faraone, Spencer, Aleardi, Pagano, Biederman, 2004; Mick, Faraone, Biederman, 2004). A follow-up study a few years later by Weiss, Murray, Wasdell, Greenfield, Giles & Hechtman (2012) confirmed that both the experimental group and control group between the ages 18 to 66 experienced great improvement in their conditions and functioning, however, pharmacological treatment (medication) did not significantly improve outcome over and above use of CBT.

Research has further shown that non-pharmacological (educational remediation, individuals and family psychotherapy) interventions are superior to pharmacological interventions in the management of ADHD (Steven & Safren, 2021). Steven and Safren (2021) revealed that psychopharmacological intervention proved effective in reducing the ADHD symptoms such as attention deficits, high activity, and impulsive conditions by 50 percent with some few cases of relapse, while non-pharmacological intervention like CBT proved very effective in reducing symptoms associated with functional impairments by 70 percent with no relapses because it equips the participants with coping and problem-solving strategies that last lifetime. Patients with no interventions however experienced aggravated symptoms of ADHD.

1.2. Problem Statement

Attention Deficit Hyperactivity Disorder (ADHD) is quite common in most schools, especially basic and second-cycle institutions but sadly, most teachers and managers of these institutions lack the expertise to detect, treat or refer for treatment (Doyle & Terjjesen, 2005). Students with ADHD are

often not understood by most teachers. This often generates a lot of disciplinary issues in the schools. Some schools in the Cape Coast Metropolis are no exception. As part of our occasional rendering of psychological services in the Cape Coast Metropolis, we had the opportunity to visit Bekkyford and Felicomfort Primary schools to identify pupils with psychological needs and how to put interventions in place to treat them to enhance their academic outcomes. Nine students (6 from Bekkyford and 3 from Felicomfort schools) were initially identified as truants.

Through interaction, their teachers and the management of the school vehemently complained to us about their truancy, inattentiveness, lack of patience, and poor academic performances. We, therefore, assessed the pupils using the Scheduled for Affective Disorders and Schizophrenia for School-Aged Children (K-SADS-PL).

A few studies conducted on the effect of CBT on ADHD in America, Canada, and British Columbia were on adults between the ages of 18 and 70, which revealed significant positive effects of the CBT on the participants with ADHD (Kaufman et al, 1997; Doyle & Terjjesen, 2005; Weiss, Murray, Wasdell, Greenfield, Giles & Hechtman, 2012; Steven & Safren, 2021; Dupaul et al, 2016; Pettersson & Atten, 2017; NCBDDD, 2021). In the light of the foregoing findings, one wonders whether Cognitive Behavioural Therapy (CBT) would have the same positive impact on participants who were pupils between 9 and 11 years in the current study. It appears there has not been any scientific research in the existing literature on the phenomenon at Cape Coast in the Central Region of Ghana. This is the research gap in the existing literature that this study has come to fill.

1.3.   Purpose of the Study

The objective of this study was to examine the effect of Cognitive Behavioural Therapy on students with Attention Deficit Hyperactivity Disorder. The study objectives are to investigate the:

Effect of Cognitive Behavioural Therapy on pupils with Attention Deficit Hyperactivity Disorder with respect to impulsivity and inattentiveness at primary schools in the Cape Coast metropolis.

Effect of Cognitive Behavioural Therapy on pupils with Attention Deficit Hyperactivity Disorder with respect to distractibility and avoidance of tasks at primary schools in the Cape Coast metropolis.

The difference in symptoms between participants who went through the CBT (the experimental group) and participants who did not (the control group).

1.4.   Research Question

What is the effect of Cognitive Behavioural Therapy on pupils suffering from Attention Deficit Hyperactivity Disorder with respect to impulsivity and inattentiveness at primary schools in the Cape Coast metropolis?

What is the effect of Cognitive Behavioural Therapy on pupils suffering Attention Deficit Hyperactivity Disorder with respect to distractibility and avoidance of tasks at primary schools in the Cape Coast metropolis?

1.5.   Hypothesis

[1]H_0: There is no statistically significant difference in symptoms between a participant who went through the CBT (the experimental group) and participants who did not.

2.0.   Methodology
2.1.   Research Design

This study employed the Quasi-experimental design to examine how two non-equivalent groups fared concerning the CBT. The strength of this design is that it enabled us to compare scores of the participant before and after the intervention in the treatment group with the control group. The limitation of this design, however, is the lack of randomization. This restricted the study's ability to establish a conclusive causal relationship based on the study.

2.2.   Population

The target populations were all students and their siblings from Bekkyford and Felicomfort primary schools totaling 506 made up of 191 males, 114 females, and 201 siblings (97 males and 104 females) in the Cape Coast metropolis. The accessible population was 238 made up of 91 siblings, 11 teachers, 75 pupils (comprising 34 males, 41 females), and their parents (68) from both schools.

Parents and siblings were part of the study because psychosocial interventions for ADHD patients are possible and effective, if they are involved in the treatment process to understand the process, better understand the condition of their relative (the patient) and cooperate with the researchers or physicians and the patient to ensure successful assessment and treatment of symptoms (Weiss, Murray, Wasdell, Greenfield, Giles & Hechtman 2012; Steven & Safren, 2021).

2.3.   Sampling Technique

A sample of 43 participants was selected for the study. It includes 8 parents, 6 teachers, 16 siblings of participants, 13 pupils made up of 9 males and 4 females with the aid of the Scheduled for Affective Disorders and Schizophrenia for School-Aged Children (K-SADS) developed by Kaufman, Birmaher, Brent, Rao, Flynn, Moreci, Williamson, and Ryan (1997) the participants were purposively sampled for the study. The students were identified through the K-SADS-PL assessment interview. The parents and teachers of the participants were also identified and purposively sampled for the study.

2.4.   Instruments for Data Collection

Three data collection instruments were used in this study; a closed-ended questionnaire, Scheduled for Affective Disorders and Schizophrenia for School-Aged Children (K-SADS), and Clinical Global Impression Severity Scale (GCI-S). The questionnaire (adapted from the GCI-I and K-SADS) was used to solicit responses on how participants felt after the CBT. The K-SADS was used as a diagnostic tool to identify and select participants with ADHD for the study. The GCI-S was used to assess participants after the CBT intervention to measure their level of improvement. The Scheduled for Affective Disorders and Schizophrenia for School-Aged Children (K-SADS) developed by Kaufman, Birmaher, Brent, Rao, Flynn, Moreci, Williamson, and Ryan (1997) was developed in line with the Diagnostic and Statistical Manual of Mental Disorders, 3rd and 4th editions (DMS-III-R/DMS-IV). The K-SADS according to Kaufman, Birmaher, Brent, Rao, Flynn, Moreci, Williamson, and Ryan (1997) is a "semi-structured diagnostic interview designed to assess current and past episodes of psychopathology in children and adolescents ages 6-18 according to DSM-III-R and DSM-IV criteria". This instrument was adopted. It has three sections (A, B, and C). Section A focuses on substances (alcohol, wee, cigarette, and any other substance in general), Section B, addresses current and past substance abuse. The last section covers affective disorders, psychotic disorders anxiety disorders, and behavioural disorders (section C). Only sections B and C were adopted and used in this study. The strength of this instrument lies in diagnosing psychotic, affective, and anxiety disorders which is the crux of ADHD (Kaufman et al, 1997).

The GCI-S is a 7 seven-point rating scale that requires researchers to rate the severity of the participants diagnosed with ADHD at the time of assessment relative to past experience with them (Alane, Emmanuelle & Bruno 2007). This instrument has three (GCI-S, GCI-I, and GCI-E) levels for measuring the severity of the present condition, improvement in the condition

after the intervention, and assessing the efficacy index of the therapeutic effect of treatment respectively.

2.5. Data collection Procedure

The K-SADS was administered through interviews of participants and their parents and finally achieving the summary of the ratings. A single diagnostic module of K-SADS was used for multiple interviews of the participants during treatment to assess the change of symptoms. The process spanned six months. The GCI-S instrument was used to establish the baseline symptoms for participants with ADHD (this served as a pre-test). The assessment of participants after the CBT intervention was done using the GCI-I (this also served as the post-test).

Ethical Issues

The study employed the following ethical issues about the involvement of respondents in the study and collection of data: Informed consent, anonymity, confidentiality, privacy, and debriefing. To assist participants to make an informed choice regarding whether or not to participate in the study voluntarily or not, issues about possible risks, intrusion of privacy, the risk to dignity, physical harm, and how they would be compensated as well as benefits of the research were communicated to them. This was done through the issuance of consent forms to the participants, parents, and siblings to fill. Freedom to withdraw from the study at any given time in the process of the study too was thoroughly explained to them.

As part of masking the identities of respondents, Pseudonyms such as Bekkyford School (Treatment Group) and Felicomfort School (Control Group) were used in the study. Furthermore, participants were not required to provide their names on the questionnaire administered. They were assured that any private information about their beliefs, opinions, and records disclosed would not be shared with any other party without their authorization or knowledge. In line with the principle of debriefing, the objectives of the study, instruments, and methodology aspects of the study were thoroughly discussed with the participants.

Explication and Analysis of Data

Qualitative data were edited and delineated into themes such as impulsivity, inattentiveness, avoidance, and distractibility. The data were explicated using the GCI-I assessment tool to establish how participants' symptoms have improved. Hypothesis one was tested using the independent sample t-test.

2.6.   Pretest

In line with Alane, Emmanuelle and Bruno (2007) we used this adapted instrument (GCI-S) to measure the present level of severity of the participants' ADHD which served as a baseline score for the pretest. In harmony with Guy and William *(as cited in Wikipedia, 2020) the following ratings were administered at level one for participants to tell how they feel about their conditions*

> Normal, not at all ill (able to sit still and listen to teacher till lessons end, complete assignments, take time to answer questions correctly, get good grades for exams and exercises)
>
> Borderline mentally ill (able to sit still and listen to teacher till lessons end, complete assignments, take time to answer questions correctly, get good scores for exams and exercises)
>
> Mildly ill (once a while able to sit still and listen to teacher till lessons end, complete assignments, take time to answer questions correctly, get good scores for exams and exercises)
>
> Moderately ill (a few times notable to sit still and listen to teacher till lessons end, complete assignments, take time to answer questions correctly, get good scores for exams and exercises)
>
> Markedly ill (sometimes not able to sit still and listen to teacher till lessons end, complete assignments, take time to answer questions correctly, get good scores for exams and exercises)
>
> Severely ill (anxious, angry, and depressive, not able to sit still and listen to teacher till lessons end, complete assignments, take time to answer questions correctly, get good scores for exams and exercises)
>
> Among the most extremely ill participants (anxious, angry, and depressive, all the time not able to sit still and listen to teacher till lessons end, complete assignments, do assignments, take time to answer questions correctly, get good scores for exams and exercises)

2.7.   Pre-test Results

After the GCI-S was administered all 13 participants were identified and categorized as those having problems with impulsivity and inattentiveness, 9 out of the 13 had problems with distractibility avoidance and of responsibility, anxiety, and depressive symptoms (Found on scale number 6 and 7). Based on this result, interventions were planned for the participants. Two unrandomised intact groups were used. Nine pupils made up of 6 males and 3 females at Bekkyford Primary school formed the experimental group, and 4 participants made up of 3 males and 1 female formed the control group at Felicomfort Primary School.

3.0.   Intervention

Since the behaviour of the people who exhibit ADHD characteristics has to do with thinking and feelings, Cognitive Behavioural Therapy (CBT) was adopted in modifying the participant's behaviour. CBT is the most cutting-edge, research-supported treatment for numerous psychological behaviour problems and disorders.

In CBT, ADHD children are taught to use self-instruction, self-monitoring, self-reinforcement, and motivational strategies to develop self-control of their attention and impulse behavioural problems (Purdie, Hattie & Carrol, 2002). By so doing, any associated distress can be reduced by teaching new information-processing skills and coping mechanisms (*Beck, 2011*). It is against this background that we chose to embark on a 6-month intervention using the CBT. The CBT was focused on behavioural change in line with Miechenbaum and Goodman (as cited in Orjales, 2007). These include:

3.1.   Self-instructional Training to treat Impulsivity and Inattentiveness

Self-instructional training is a cognitive technique that was used to teach participants the procedure of beneficial thoughts for solving problems to replace negative thoughts created (Orjales, 2007). The self-instructional training for the experimental group in this study was based on the model developed by Miechenbaum and Goodman (as cited in Orjales, 2007) which challenges the impulsive and inattentive participants to restructure their cognitive processes in problem-solving the right way and patiently. Parents of the control group were counseled to seek pharmacological treatment for their wards.

The procedure is as follows: 1) Firstly, I watch and say what I see, 2) what do I have to do? 3) How would I do it?, 4) I have to pay attention carefully (and look at all possible answers), 5) I can do it!, 6) Great! I did a good job/ I did not get the correct answers. Why? (I review all the steps) Ahhh!. This is the reason why! Next time I wouldn´t make any mistakes (Orjales, 2007). The participants were taken through these techniques of spoken mediation and self-talk. This helped participants to pay extended attention and stayed focused on a task. At the same time, the cognitive self-instructional training of Miechenbaum and Goodman assists children with processing cognitive thoughts into adaptive acceptable behaviours. This model is often engaged to assist learners with impulsivity challenges. For instance, ADHD pupils who shout out responses before waiting for their turn during classroom discussion were taught to give the responses silently to themselves, without interrupting the whole class; they were also taught to say words of restraint to themselves, such as "I can patiently wait my turn or "I know the answer, but I´ll wait my turn patiently". The procedures of this training are as follows: a) participants

were trained to become aware of their maladaptive thoughts, b) we modeled the acceptable behaviours while uttering effective actions strategies, c) the participants then performed the targeted behaviours while uttering acceptable self-instruction and executing them out (Shilingford, Lambie & Walter, 2007). Participants were further trained and taken through the process of daily thinking of only positive and healthy things that they could do for themselves irrespective of what others think of them. They were also encouraged to say well-meaning words to themselves for confidence building. For example, they were taught to say "I can be the best and well-behaved pupil in class only if I try a little harder". This self-talk was used throughout the three months.

3.2.   Avoidance and Distractibility

Children with ADHD usually have a problem staying on task without being distracted and avoiding tasks. Steven and Safren (2021) procedure was adapted to treat participants as follows:

Assignments in Mathematics, reading passages in the English language and Social studies were given to participants in their homework notebooks with dates. Participants were taught to locate the list of tasks in the notebooks and work on them. This session also included repeated training of participants in problem-solving targeted at helping participants to overcome distractibility and avoidance of tasks. Tasks in their notes books were broken down into easier and manageable units and steps for them. Assignments were inspected each day to check on participants' progress. The last part of this aspect of the CBT was training participants to prioritise assignments and tasks given to them, by categorizing them into A (most urgent but involving), B (urgent but not very involving), C (not urgent and less involving). We were careful not to use the word 'difficult' as most children with ADHD are easily frustrated and put off by associating tasks with that word. There were trained to see every new task assigned to them as relatively easy by breaking them into smaller and manageable units before working on them. They were also counseled on the importance of education and each task assigned to them. This session was meant to help them respect the urgency of responsibilities or tasks to enable make informed decisions and be able to stay on tasks and not avoid them.

3.3.   Intervention for Teachers and Parents

Research has shown that most parents and teachers are ignorant of the existence of ADHD and how it impacts the behaviour of children (Pettersson & Atten, 2017). Steven and Safren (2021) however found that providing psychosocial support for families and teachers in the form of coping strategies is key to easing symptoms in children with ADHD. The following support

was, therefore, administered to parents, teachers, and siblings of the participants:

Therapy for participants' Families and Teachers: Parents, teachers, and siblings of participants were invited to attend the CBT along with them. This was done to enable them to understand the conditions of the participants better and be able to assist them at home and school to overcome their problems thereby improving their relationships with the participants.

Training for Parents and Teachers: parents and teachers were taught techniques and strategies to increase safety for the participant at home and school if they register aggressive or violent behaviours. The ultimate objective of this training was to assist parents, teachers and siblings interact more effectively with the participants to help improve and regulate their behaviours.

They were, therefore, taken through the following coping strategies.

Enforcing limits concerning rules at home and school

Providing clear instructions

Breaking down tasks into smaller units for participants in increasing levels of difficulty and making sure tasks are not beyond them.

Making sure that positive behaviours of participants regarding sitting still and staying focus on doing chores and assignments are rewarded

Using time-out after bad behaviours and outburst

Being consistent and eschewing getting into arguments and verbal exchanges with the participants over consequences or what happened

Creating room for the participants to vent their frustrations and if possible provide a pillow to punch or yell into.

3.4. Post Intervention

The GCI-I was also used to assess how the participants' ADHD symptoms had improved or worsened relative to the baseline at the onset of the intervention. In line with Guy and Williams (as cited in Alane, Emmanuelle & Bruno, 2007)) ratings, the following were used as themes for interview of participants to express how they felt and improved after the intervention, which was based on self-reports from participants and parents:

Extremely improved condition

Improved a lot

Improved slightly

There is no change in symptom

Slightly worse

Much worse

Very much worse

3.5.   Results on Impulsivity and Inattentiveness

The CGI-I assessment interview was used to assess participants of the experimental group at the end of the CBT after three months. The assessment together with participants' self-report batteries fell on 1-2 on the GCI-I scale. Six out of 9 participants representing 70 percent were able to perform targeted behaviours while uttering acceptable self-instruction and trying them out while 3 (all males) out of 9 representing 30 percent reported minimal improvement (3 on the scale). The finding supports that of DuPaul et al., (2016) who found that generally, boys were higher in symptom frequency than girls. This finding further corroborates that of Pettersson and Atten, (2017) who found that participants who underwent CBT recorded a remarkable improvement in their conditions compared with the control group on the Clinical Global Impression Self-Report Scale and the Clinical Global Impression Clinician-Report Scale.

3.6.   A sample of Self-reports from Participants, Teachers, and Parents regarding CBT impact on Impulsivity and Inattentiveness

A pupil said *"I've stopped roaming about in class and able to finish my class exercises"*

Four other pupils also indicated that *"My three friends and I were awarded by our class teacher for always paying attention and doing our class work and doing better than others"*

A teacher reported that *"I never knew that the indiscipline I always see in class regarding to those pupils was due to ADHD. Relatively, their symptoms have drastically reduced. I'm applying the coping strategies to help them more"*

A Basic 5 teacher also said *"the symptoms of my pupils with respect to impulsivity and inattentiveness are not completely gone but are relatively better than before"*

A parent said "*My child is now relatively better. He now takes time to respond wisely and correctly to questions"*

A certain parent also spoke on behalf of two others that *"our children are not completely cured but relatively are better able to sit still we are helping them do their home works.*

A parent from the control group reported that *"As for children only prayers can help them"*

3.7.   Results on Avoidance and Distractibility (Research question Two)

Participants were assessed together with independent assessors (parents and teachers) through the interview based on the GCI-I. Independent assessment and participants' self-reports contained a rating of GCI-I indicated 6 out of 9 representing 80 percent only reported 'much improved' symptoms

on the GCI-I scale (number 2) while 2 (all males) representing 20 percent (number 4 on the scale) reported 'no change'. The finding is in congruence with that of DuPaul et al, 2016 who found that CBT produced a higher positive impact in reducing ADHD symptoms in girls than boys. This finding is also in line with Steven and Safren (2021) who reported 56 percent improvement for participants who went through CBT as compared to 13 percent who did not undergo CBT. Parents were also participants because, most of them could not identify and help managed pupils with ADHD, thus needed intervention. They were also used as assessors because they lived daily with their wards with ADHD and could easily assess and tell whether or not there was an improvement in the conditions of their wards as a result of the CBT administration.

3.8. A sample of Self-reports from Participants, Teachers, and Parents regarding CBT impact on Impulsivity and Inattentiveness

A parent reported that *"In fact, I've seen great change in my two children; they are able to do house chores and remaining focused better than before"*

Six other parents also reported that *"now because we are applying the coping strategies and the training we received to help our children, their running away from tasks and troubles are relatively reduced. The condition is not completely gone but gradually with our help it will go'*

Two pupils also said "*now, were are able to stay in school, finish copying notes from the board"*

Another parent reported however said that *"honestly, l did not see any change in my child. I'll apply the coping strategies to see whether there will be a change"*

Two parents of the control group said that *"our children are still misbehaving. We'll take them to hospital"*

The post-intervention interview assessment with the GCI-I and self-reports from participants pointed to the fact that the CBT contributed significantly to the reduction in symptoms of participants with ADHD compared with the control group. There was a question about the extent of the difference in improvement in symptoms of the treatment group and the control group. This was addressed by testing the hypothesis of the study using a t-test.

3.9. Hypothesis One: There is no statistically significant difference between participants who went through the CBT (the experimental group) and participants who did not.

After the intervention and findings that emanated from the qualitative results, for triangulation purposes, we went further to find out whether there

existed any significant difference between the treatment group and the control group regarding the effect of the CBT. The results are presented in Table 1.

Table 1: Results on the Difference between the Treatment Group and the Control Group concerning CBT

		MeanSD	t	df	P-value (sig-value)	η²
CBT	Treatment	18.702.243	8.021	37	.002*	0.87
	Control	08.454.185				

Source: Field data (2021) *p<0.05, df= 37 (N = 13)

The results in Table 1 show a significant difference between the experimental group (M = 18.70, SD = 2.243) and the control group (M= 08.45, SD = 4.185), t(37) = 8.023; sig.=.002, P<.05 concerning the CBT. The eta square statistics (0.87) indicated a large effect size. This shows that 85 percent of the variances regarding the improvement in the symptoms of participants with ADHD could be explained by the effect of CBT on them. This finding is in line with that of Pettersson and Atten (2017) who found that participants who received CBT showed a considerably reduced symptom of ADHD compared with the control group on the Clinical Global Impression Self-Report Scale and the Clinical Global Impression Clinician-Report Scale. The finding further corroborates that of Steven and Safren (2021) who reported 56 percent improvement for participants who went through CBT as compared to 13 percent who did not undergo CBT. The findings further corroborate that of Faraone, Spencer, Aleardi, Pagano, and Biederman, 2004; Mick, Faraone, and Biederman, 2004 which revealed that, even though pharmacological treatment proved very useful in treating ADHD, the patients who went through it did not attain complete remission as compared to patients who went through treatment with only CBT along with coping strategies. Those who did not go through CBT at all had no improvement in their symptoms.

4.0.   Key Findings
Based on the study, the following key findings emerged:

Six out of 9 participants representing 70 percent reported very much improvement in their symptoms. They were able to perform targeted behaviours while uttering acceptable self-instruction and trying them out.

Three (all males) out of 9 representing 30 percent reported minimal improvement in their symptoms regarding impulsivity and inattentiveness

Six out of 9 representing 80 percent only reported 'much improved' symptoms on the GCI-I assessment scale (number 2) regarding avoidance and distractibility.

Two (males) representing 20 percent (number 4 on the GCI-I scale) reported 'no change' regarding anxiety, depressive thoughts, avoidance, and distractibility.

There was a significant difference between the experimental group (M = 18.70, SD = 2.243) and the control group (M= 09.55, SD = 4.196), t(37)= .802; sig.=.003, P<.05 concerning the CBT. The eta square of 0.85 shows that 85 percent of the variances in the improvement of symptoms of participants with ADHD could be explained by the effect of CBT.

Conclusion

Dealing with an individual with ADHD can be very frustrating and overwhelming indeed. This is because such individuals often lose touch with the realities of life. Based on the findings of this study, ADHD individuals generally have shortfalls in executive functions; the ability to reason and strategise ahead, organise, control impulses, and complete tasks. The earlier and more consistently this problem is addressed for children, the greater chance they have for success in life. All stakeholders including psychologists, parents, and teachers can do a lot to help in containing the symptoms as pertained in this study. ADHD is a neurodevelopmental disorder that cannot be completely cured but could be effectively managed through psychosocial interventions and coping strategies associated with it. The psychosocial treatments as administered in this study are only effective if close relatives and parents are involved in the treatment process and cooperate with the patients and the therapists.

Recommendations

In line with the findings of the study the following recommendations are made:

Ghana Education Service (GES) should employ well-trained educational and school psychologists for the basic schools to be able to identify and help students with psychopathological problems like ADHD.

The Ministry of Education together with the GES should organize in-service training for basic school teachers on the field to equip them with some basic skills to identify and help children with psychological and maladaptive behavioural problems like ADHD.

Parents and guardians whose wards are suffering from ADHD should seek psychosocial treatment as a first-line solution.

Parents and guardians who are on pharmacological treatment should combine it with psychosocial treatment which so far has proven superior to pharmacological interventions.

Parents, teachers and siblings should be included in all psychosocial interventions for people with ADHD for lasting and effective management of the symptoms.

Limitation of the Study

This study could not establish whether or not parents of participants who were told to seek pharmacological interventions for their wards did so. We could not follow up on this, because we were not in the position to confirm whether or not pharmacological treatment was followed to the latter as directed by physicians to parents to be administered to their wards. That process, therefore, could not be controlled by the researchers. This study, therefore, could not confirm whether or not the psychosocial intervention employed in this study was superior to pharmacological interventions as reported in other studies. This study was also, conducted in only two schools, thus, has very limited generalisability.

References:

1. Alane, K., Emmanuelle, C., & Bruno, F. (2007). The improved Clinical Global Impression Scale development and validation in depression. *BMC Psychiatry*. *7* (7) 147-244

2. Alderson, R. M., Rapport, M. D. & Kofler, M. J. (2007). Attention-Deficit/Hyperactivity disorder and behavioural inhibition: A meta-analytic review of the stop-signal paradigm. *Journal of Abnormal Child Psychology, 35*(5), 745-758.

3. Alderson, R. M., Rapport, M. D., Sarver, D. E. & Kofler, M. J. (2008). ADHD and behavioural inhibition: A re-examination of the stop-signal task. *Journal of Abnormal Child Psychology, 36*(7), 989-998.

4. Al Hamed, J.H., Taha, A. Z., Sabra, A. A., & Bella, H. (2008). Attention Deficit Hyperactivity Disorder (ADHD) among Male Primary School Children in Dammam, Saudi Arabia: Prevalence and Associated Factors. *Journal of the Egyptian Public Health Association 83*(4), 166-182

5. American Psychiatric Association (APA). (1994). *Diagnostic and Statistical Manual of Mental Disorders* (4th ed.). American Psychiatric Association.

6. American Psychiatric Association (APA). (2000). *Diagnostic and Statistical Manual of Mental*

7. *Disorders* (4th ed). American Psychiatric Publishing

8. American Psychiatric Association (2013). *Diagnostic and statistical manual of mental disorders*. (5th ed.). American Psychiatric Publishing.

9. Beck, J.S. (2011). *Cognitive behaviour therapy: Basics and beyond*. (2nd ed.). The Guilford Press.

10. Children and Adults with Attention-Deficit/Hyperactivity Disorder (CHADD). (2003, Feb 8). *Medical management of children and adults with AD/HD—Fact Sheet #3.* http://www.chadd.org/fs/fs3.htm.

11. Doyle, K, A & Terjjesen, M (2005). *Rational-Emotive Behavior Therapy and Attention Deficit Hyperactivity Disorder*. https://www.researchgate.net/publication/227247377_Rational-Emotive_Behavior_Therapy_and_Attention_Deficit_Hyperactivity_Disorder

12. DuPaul, G. J., Reid, R., Anastopoulos, A. D., Lambert, M. C., Watkins, M. W., & Power, T. J.   (2016). Parent and teacher ratings of attention-deficit/hyperactivity disorder symptoms: Factor structure and normative data. *Psychological Assessment. 28*(2) 214–225.

13. Faraone SV, Spencer T, Aleardi M, Pagano C, Biederman, J. (2004). Meta-analysis of the efficacy of methylphenidate for treating adult attention-deficit/hyperactivity disorder. 24 (1), 24-29

14. Flores, G. W. R., & Parra, V. A. B. (2014). *Cognitive behavioral treatment in children with   attention deficit hyperactivity disorder.* file:///C:/Users/Felix/AppData/Local/Temp/23383-Texto%20del%20art%C3%ADculo- 89061-1-10-20150706.pdf

15. Kaufman, J., Birmaher, B., Brent, D., Rao, U., Flynn, C., Moreci, P., Williamson, D. & Ryan,   N. (1997). *Schedule for Affective Disorders and Schizophrenia for School-Age   Children   - Present and Lifetime version (K-SADS-PL, Kiddie-SADS-PL).* http://lib.adai.washington.edu/dbtw-wpd/exec/dbtwpub.dll?AC=QBE_QUERY&QY=find%20%28AccessNo%20ct%20213%29%20and%20%28Status%20ct%20public%29&XC=/dbtw-wpd/exec/dbtwpub.dll&BU=http%3A//lib.adai.washington.edu/instrumentsearch.htm&TN=instruments&RN=0&MR=0&ES=1&CS=0&XP=&RF=Full&DF=Full&RL=1&EL=1&DL=1&NP=3&ID=&MF=WPEngMsg.ini&MQ=&TI=0&DT=&ST=0&IR=14&NR=0&NB=0&SV=0&BG=0&FG=000000&QS=

16. Mick E, Faraone SV, Biederman J, & Spencer T. (2004). The course and outcome of ADHD. *Primary Psychiatry. 11*(7), 42–48.

17. Mick E, Faraone S.V, & Biederman J.(2004). Age-dependent expression of attention-   deficit/hyperactivity   disorder symptoms. *27* (2): 215-224.

18. National Center on Birth Defects and Developmental Disabilities (2021). *What is ADHD?* https://www.cdc.gov/ncbddd/adhd/facts.html

19. Orjales, I. (2002). *Déficit de atención con hiperactividad: Manual para padres y educadores*. Madrid: CEPE.
20. Orjales, I. (2007). El tratamiento cognitivo en niños con trastorno por déficit de atención con hiperactividad (TDAH): revisión y nuevas aportaciones. *Anuario de Psicología Clínica y de la Salud, 2*(3), 19-30.
21. Pettersson R. J Atten, D (2017) *Treatment of child, adolescent and adult ADHD*.   https://adhd-institute.com/disease-management/
22. Purdie, N., Hattie, J. & Carroll, A. (2002). A review of the research on interventions for attention deficit hyperactivity disorder: What works best? *Review of Educational Research, 72*(1), 61-99.
23. Sasaluxnanon, C., & Kaewpornsawan, T. (2005). Risk factor of birth weight below 2,500 grams and attention-deficit hyperactivity disorder in Thai children. *88*(11), 1514-1518.
24. Shillingford, M. A., Lambie, G. W. & Walter, S. M. (2007). An integrative, cognitive- behavioural,systemic approach to working with students diagnosed with attention deficit   hyperactive disorder. *Professional School Counseling. 11*(2) 105-112.
25. Timothy E. Wilens, M. D & Thomas J. Spencer,M.D. 2013). *Understanding Attention-   Deficit/Hyperactivity Disorder From Childhood to   Adulthood*. https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3724232/
26. Steven A. Safren, P. (2021) *Cognitive-Behavioral approaches to ADHD treatment in adulthood*. https://www.psychiatrist.com/wp-content/uploads/2021/02/24240_cognitive-behavioral-approaches-adhd-treatment-adulthood.pdf
27. Weiss, M., Murray, C., Wasdell, M.,Greenfield, B.,Giles, L., & Hechtman L. (2012). *A randomized controlled trial of CBT therapy for adults with ADHD with and without medication*. https://bmcpsychiatry.biomedcentral.com/articles/10.1186/1471-244X-12-30

COVID-19 Pandemic Social Media and Stress

Md. Atiqur Rahman, MSS
Dept. of Mass Communication & Journalism
University of Rajshahi, Bangladesh
Md. Ashraful Islam, M.Sc
Dept. of Information & Communication Engineering
University of Rajshahi, Bangladesh

Abstract

Last few years, SARS-coronavirus 2 is sweeping the globe and millions of people are being infected and died. In this situation, citizens and health-care workers would be put in danger if there is a lack of consciousness, knowledge and preparation during this crisis. At the same time, a vast amount of potentially damaging misinformation is spreading at a faster rate than the virus itself. The most of these false rumours are spread via social media. This paper focuses on the COVID-19 linked huge rumour, stigma and conspiracy theories disseminating on the social media during pandemic in Bangladesh perspective. An internet-based interview and primary data was quantitatively analyzed for survey of this paper. The findings demonstrate that social media plays a crucial role in the diffusion of information about the COVID-19 outbreak in Bangladesh, including bewilderment, anxiety and panic. This study also revealed that Bangladeshi youth society has the higher levels of stress especially among those who followed the news of pandemic in social networks compared to the rest of the population. Another noteworthy finding is that social media was particularly helpful in reducing anxiety and alienation by allowing the general people to stay in touch with friends, family and others via audio-visual group chat. Different aspects of social networking sites use are also described.

Keywords: COVID-19, infodemic, panic, social media

Introduction

Recently world pandemic of COVID-19 has not only created major problems for health systems around the world, but has also sparked the emergence of various rumors, hoaxes and misinformation about the etiology, outcomes, disease prevention and cure. This propagation of misinformation masks safe-healthy practices and promotes negligence that amplifies the transmission of the infection and eventually results in poor physical and mental health outcomes among individual people. COVID-19 has been recognized as one of the most serious dangers to public health by the World Health Organization, and the public's response has been influenced like never before by a worldwide infodemic (or misinfodemic) [Banerjee et al, 2021]. COVID-19 infectious illness initially appeared in late December 2019 in Wuhan, China and has since spread to nearly every country on the planet, became a pandemic. Several websites have released information on COVID-19 and offered varied suggestions to its users and residents in order to escape this virus. Social media has become a source of transmitting information to the public. On COVID-19, articles from online newspapers are linked on social media sites like Facebook, WhatsApp, Twitter, Instragram, and Telegram, among others, letting stories to easily become viral. [Onwe et al, 2020].

The majority of the COVID-19 related material is disseminated through social networking sites, particularly Facebook. Statistics shows that about 361,000,000 videos were posted with the COVID-19 categorization on YouTube in April, 2020 and more than 2.9 billion users on cell phones using social media daily [www.statista.com]. False news propagates on social media more quickly than news from trustworthy outlets, destroying the balance of reliability of the news ecosystem. This sort of dissemination of misinformation can cause mass anxiety and adversely affect the health of individuals. In addition, false information and rumours about COVID-19 obstruct the practice of safe behaviors [hand sanitizing - social distancing] and encourage incorrect activities that increase the spread of the virus and eventually lead to poor results in physical and mental health. During the lockdown, Bangladeshis depended heavily on internet-based social media to keep up with infection-related information, prevention measures, and medication of the Covid-19 epidemic, while healthcare facilities were inadequate in terms of infection frequencies and death tolls [Islam, 2021].

Within weeks of the outbreak of COVID-19 in China, the world was circulating with false rumours and conspiracy theories about COVID-19. This social media spread this to the rest of the planet, traveled faster than the COVID-19 propagated in Bangladesh also. The common public appears to embrace rumors and spreads them on social media platforms, resulting in misinformation going viral and creating chaos [Shahid et al, 2020]. Indeed,

there are numerous fake stories, deliberate misinformation, and unfounded conspiracy theories about COVID-19 in both online and offline. [Gundaz, 2020]. UN Secretary-General Mr. Antonio Guterres launched a plan to fill the internet with evidence and science to combat the "poison" of misinformation that's also endangering more lives. He claimed that a worldwide "misinfo-demic" about the novel coronavirus was circulating "harmful health advice and snake-oil solutions" [www.thestatesman.com]. Dr. Tedros, Director General of the World Health Organization [WHO] called this the battle against "trolls and conspiracy theories" [www.bbc.com].

This "mis-infodemic" regarding the novel coronavirus via social media has led some crucial research study. In the research paper [Islam et al., 2020], [Tasnim et al., 2020; www.tandfonline.com] show that misinformation may have major consequences for individuals and communities if rumours, stigma and conspiracy theories are prioritized above evidence-based policies. In [www.ncbi.nlm.nih.gov] study revealed that social media has led in the spread of anxiety about the COVID-19 outbreak. Many individuals increasingly seek information on online that they considered to be useful, leading to a wide variety of fake news consumption and dissemination, [Khalifa et al., 2021; Apuke, et al., 2020].

Therefore, we want to identify and examine the role of social media platforms in disseminating information about the COVID-19 outbreak especially in Bangladesh along with the following point.

To ascertain if the social media has aided rumour mongering about the pandemic.

Is there any role of social media to change healthy habits like hand washing and social distancing etc. in this pandemic?

What psychological effect did the news of multiple rumours, stigma and conspiracy theories have on consumers of social media networks? Whether the perceived pressure was higher among those who regularly followed the news of COVID-19 in social networks or the people who never followed this news in social media. To determine if social media's reputation has been harmed.

Methodology

The most popular and used social media in Bangladesh is Facebook which have 64.04% of total users [Apuke et al., 2020]. Therefore, the authors decided to study this platform along with Messenger and WhatsApp, which are the next most popular social networking site after facebook. This paper tracked rumours, stigma and conspiracy theories which were circulated via these social apps among the general population since the start of the COVID-19 pandemic. Social media users have been playing a part in all stages of information diffusion since the start of the COVID-19 pandemic, including

COVID-19 incidence and death, therapies, govt. initiatives etc. So, COVID-19 related all the potential rumour, stigma and conspiracy theory were collected between June 01, 2020, and January 5, 2021, then reviewed and analyzed it. The authors gathered even more information, when the first COVID-19 patient was diagnosed in Bangladesh on March 8, 2020, and during the first lockdown. An internet-based open-ended questionnaire was designed for in-depth interviews. Participants were instantly asked a few questions outside of the questionnaire to obtain a thorough picture of the issue. Interviews were performed with 125 social media users who were between 15 to 58 years of age. Students, teachers, businesspeople, homemakers, laborers, politicians and other professions were among the participants. Authors then adopted a descriptive content analysis approach and presented a comparison.

Social Media

People's interactions with one another have evolved as a result of social media. Due to the evaluation of mobile communication, we are badly dependent on it. Recently we communicated with each other through social media. The development of communication includes, WiMAX [Islam et al., 2009; Islam et al, 2012; Awon et al., 2012; Halim et al., 2012; Islam et al, 2014; Tai et al., 2016; Roy et al., 2019], LTE [Islam et al., 2014], enable us to communicate with real feelings. Our previous research [Rahman et al, 2020] shows the impact of the evaluation of mobile communication on human health. Following that, social networking evolved to include the use of a profile to include information about a person and his or her preferences, as well as the integration of email. Latest update of social networking entails posting images, videos and stories as well as communicating with others through applications and messaging. All revolutionary technologies have their pros and cons. Social networking sites are no exception.

Positive effects of social media

Social networking sites are being used not only to connect and stay in touch with friends but also meet new people. Individuals may use these platforms to identify people with common and homogenous interests with which they can communicate and become acquainted. By using resources such as blogging and texting to share ideas and stories, social networking encourages creative expression [socialnetworking.procon.org] and enhances the influence and awareness of world events. Poems, music, pictures, TV shows, hobbies and several other items are shared by users.

Students' technical capabilities grow as a result of their use of social media, as well as their exposure to a variety of viewpoints. It has also aided communication skills and allowed people from all around the world to learn about different cultures. Students also use social media to discuss homework

issues with their friends and to get assistance with projects [Reid, 2009]. It also enhances businesses as well. The Gezi Park Protests, the Arab Spring, the coup attempt on July 15th, and campaigns such as Greenpeace and Change.org are just a few examples of social movements where social media has played a crucial part in planning, organizing, and campaigning. [Aykurt et al, 2017]. The way people communicate in the world has already been drastically transformed by social networking.

Negative effects of social media

In order to correct the negative issues, the sites are constantly progressing and improving. One such scenario is using cell phones to enter social networking websites so that users can surf the internet on the move rather than stuck at a desk. Social media networks are a strong substitute of face-to-face social interaction, which is thought to result in decreased relations with others.

Online social networking is often a huge waste of time and is vulnerable to social alienation that can also lead to loneliness and reduced social skills [Mikami et al., 2010]. Crimes, cyber bullying is being taken place as well.

It has been found that mobile phones release electromagnetic radiation which is ingested by human brain and body. This ingestion disrupts memory and learning sites in the brain and can cause confusion and memory loss [Thomas, 2004]. It is also stated that electromagnetic exposure from cell phones can lead to cancer.

Although social networking sites might waste time, it could impact the environment in a state emergency or health emergency period like COVID-19 pandemic by helping people to connect and stay in contact with important information in this easy and convenient way.

Information–Misinformation in Social-media in Bangladesh During Covid-19 Pandemic

Several social media sites such as Facebook, Messenger, WhatsApp and YouTube have been used to construct a state of fear, apprehension, confusion and insecurity. Before anyone gets a chance to repair it; wrong, unreliable or misleading medical advice may circulate across the world with fake news and the spread of misinformation being the defining issues [www.weforum.org]. We are currently facing a public understanding epidemic with social media powerhouses like Facebook, Messenger, WhatsApp at the forefront.

We found 316 reports relevant to COVID-19 infodemic. Among those 85.76% records were rumor, 4.11% were stigma, 7.29% were hypotheses of conspiracy [conspiracy theory] and 2.85% were unspecified [others]. We

examined two distinct phases of Information-misinformation. As we got, the first phase or wave of Information-misinformation was from March 2020 to May 2020. Second phase was from May to 2020 to January 2021.The first phase of infomedics was wide and strong and the second was relatively limited and weak. Fig. 1 shows the proportion of rumour, stigma and conspiracy theories. Rumours in the blue coloured which are 85.76%, 7.29% are conspiracy theory in orange coloured, stigma in gray coloured of 4.11% and others or unspecified of 2.85% are in yellow coloured.
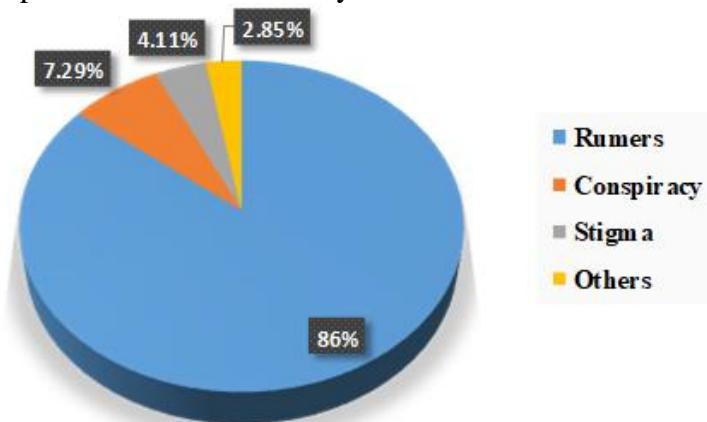
Fig. 1: Proportion of rumours, stigma and conspiracy theory during COVID-19

Rumour

Rumour was characterized as any unverified and compositionally significant arguments, remarks or discourse circulating on online forums about COVID-19. It was always the most widespread and dominant of all the types of information-misinformation we monitored. The number of rumors began to rise in February, 2020 and escalated until the end of the assessment, reaching its peak in 12-18 March, 2020. The majority of the rumors were linked to COVID-19 outbreak, fever, sickness, virus transmission, deaths as well as infection control techniques. Drinking ginger tea, keeping the throat moist, avoiding spicy foods, and the effects of vitamin C, D and zinc tablet supplementation to boost up immune system to reduce infection have also been noted. There were some rumours also we observed about consuming bleach or alcohol for protection and remedies from COVID-19 in addition to diet and vitamins to improve immunity, and a common circulating belief about how to self-diagnose coronavirus infection [Landsverk, 2020].

Fig. 2 shows six separate blue columns indicating the category of text and its proportion on social media during COVID-19, where 26% is about sickness, 19% is about the control of disease and its transmission, 21% is about treatment and prevention of illness, the reason of disease is 13%, violence 2% and miscellaneous is 26%.
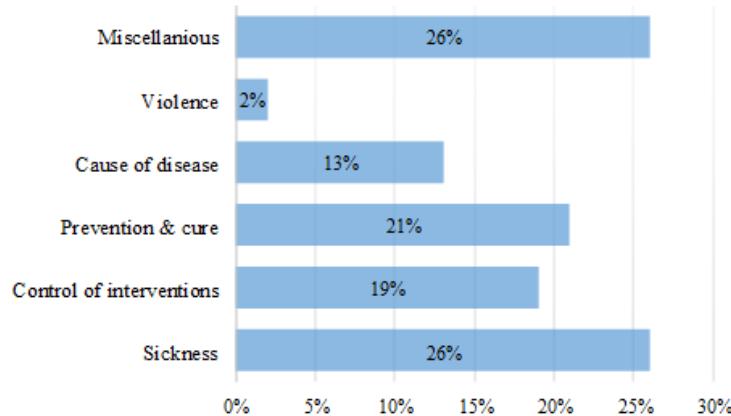
Fig. 2: Category of content of COVID-19 related information flowing in social media

Stigma and discrimination

Stigma has primarily been established as a socially developed phenomenon in which a person is specifically or implicitly marked by exposure, disease, travel background and ethnic origin, resulting in negative attitudes and stigma.

Individuals, including health workers have been threatened or physically assaulted or discriminated against by their landlords and neighbors in Bangladesh. In certain places, locals have closed roads and streets to keep outsiders away. Because of the hostility from the own building's neighbours, a medical healthcare professional was unable to enter his apartment of that building in capital town of Bangladesh. A doctor couple went on holiday to the village house after treatment of the corona patients but were not allowed to stay at home there. The villagers had built a room for them away from home to live there.

The conspiracy theory

Different theories connected to Covid-19 origins and harmful objectives are asserted, argued, and discussed. In Bangladesh, a number of conspiracy theories about the COVID-19 outbreak were floating online. COVID-19 was just a bio-weapon, according to one theory, which was manufactured by foreign intelligence services. Another hypothesis is that the lethal coronavirus was created and spread in China by a number of countries as part of a financial and psychological war targeting China. But at the other end, public believed that the virus was produced in a lab as part of a Chinese bio-warfare project, but it was designed as a weapon by the scientists from China. Concerning the existence of a COVID-19 vaccine or medicine, conspiracy theories have also appeared. According to one early theory, a vaccination for this virus has already been created, but the pandemic is only a pretext for further sales.

Discussion

According to the participants in this report, social media has a significant influence on the dissemination of confusion, fear and panic linked with the COVID-19 epidemic in Bangladesh, with a potential detrimental impact on people's mental health and psychological well-being. To spread fear about the COVID-19 outbreak in Bangladesh, Facebook was still the most used social media platform. We found a co-relation between self-reported use of social media and the spread of COVID-19-related panic.

China, India, the United States, Spain, Brazil and Indonesia are responsible mostly where almost all of these rumors, stigma and conspiracy theories were originated and came in Bangladesh later. In the figure 3, 77.89% of the reports which were incorrect, correct were 13.26%, misguiding reports were 7.14% and 1.71% reports which were not confirmed about their authenticity are shown in blue columns.

It appears to have had more psychological impact, especially on the younger generation, as respondents aged 18 to 35 years were affected. Users are much more likely to get their information from social media than anybody else. People are also unwilling to distinguish between real and fake information on social media, leading to increased panic and speculations about the true nature of the pandemic. So this mental stress was higher among those who followed the news of pandemic in social networks compared to others in the society. This paper found a connection between higher social network participation and the prevalence of mental health issues like depression and anxiety.
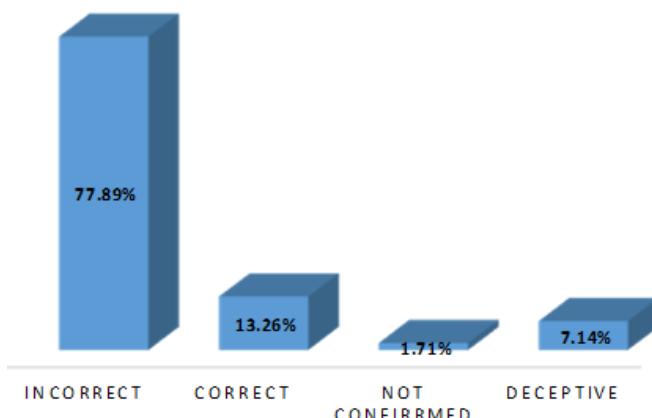
Fig. 3: Accuracy of information disseminated through social media about COVID-19

Finally, if rumours, stigma and conspiracy theories are prioritized above scientific guidelines, speculation may have serious consequences for public health. To create accurate risk awareness messages and strategy, government and concerned institutions must take into account the

phenomenon of COVID-19 induced rumors, stigma and conspiracy theories circulated around Bangladesh. However, if used wisely and prudently, social media serves as a powerful tool for changing people's behavior and to promote the well-being of individual and public health.

Steps Taken by the Authorities to Prevent Confusion Through Misinformation

Since mid-March 2020, at least twelve citizens, such as a doctor, a prominent photographer, opposition leaders and academics have been detained for their remarks on coronavirus. The majority of them under the repressive "Digital Security Act 2018". The Ministry of Information has ordered the formation of a team to monitor social media and a variety of television stations for "rumours" about COVID-19 activities. Two government college professors were reportedly suspended for discussing the virus on social media. According to reports, one researcher was being investigated for publishing a paper that projected the effect of COVID-19.

The Ministry of Education temporarily suspended two government college teachers for uploading "provocative" comments and photos on Facebook on 25th March 2020. The teachers were being suspended for misconduct underneath the Government Servants Rules (Discipline and Appeal, 2018) for participating in practices "against government management, indiscipline, and against the public interest," according to the government order.

On 25th March 2020, the Bangladesh government released a circular designating 15 officials to track each TV station for "rumours" and "propaganda" about COVID-19. The order was revoked the following day and it became in an expanded form to include not only private news stations but also other media, including social media, which the officials would have to control [www.hrw.org].

Recommendation

In the critical moment of Covid-19 Pandemic, the situation became more murky due to social media. The government has taken some steps. But the necessary awareness, caution is required while receiving and sharing or disseminating information. It is important to use each piece of information only after verifying its accuracy. Otherwise, the government alone will not be able to control it completely by using force. And creating awareness is more effective than law enforcement in preventing infodemic. At this point, individuals, organizations and governments need to be more responsible in the long run.

Conclusion

As in other parts of the world, there has been widespread rumor, stigma and conspiracy theory in Bangladesh over the COVID-19 virus and its prevention, and people have embraced it. As a result, rather than raising consciousness about disease control, social media has spread fear, placing a strain as burden on a large portion of society. On the other end, social networking sites have proved to be extremely useful for the general public in keeping in touch audio-visually with friends and family during lockdown, quarantine or loneliness for a prolonged period of time, which has given temporary relief from anxiety, frustration. We now want to know if social media customers have daily concerns and anxieties, or if it has escalated since COVID-19. If it happens specially in pandemic then which reasons were behind these anxiety and it's nature.

References:

1. Banerjee, Debanjan, Meena, k.S. [2021], "COVID-19 as an "Infomedic" in Public Health: Critical Role of the Social Media", *Front. Public Health*,18 March, 2021, doi.org/10.3389/fpubh.2021.610623
2. Onwe, Emmanuel Chike, Chukwu, Joseph, Nwamini, Samuel Chukwuemeka, Nwankwo, Simon Ugochukwu, Elem, Stephen, Ogbaeja, Nelson Iroabuchi, Nwasum,Chinedu Jude, Nwakpu, Ekwutosi Sanita, Ogbodo, Jude Nwakpoke [2020]. "Analysis of Online Newspaers` Framing Patterns of COVID-19 in Nigeria." *European Scientific Journal [ESJ],*Vol.16, No.22, doi:10.19044/esj.2020.Vol.16, No.22, p. 217
3. Islam, Md. Monirul, Islam, Md. Mazharul, Ahmed, Faroque, Rumana, Afrin Sadia [2021], "Creative social media use for Covid-19 prevention in Bangladesh: a structural equation modeling approach", *Social Network Analysis and Mining*, https://doi.org/10.1007/s13278-021-00744-0
4. Shahid, Shehroz, Mangrio, Ramsha Habibullah, Abbas, Munib, Ali, Zeesan, Ahmed, Masroor,"Evaluation of Knowledge and Belief on False Reports and Misinformation from Social Media in COVID-19 Pandemic: A Web Based Cross-Sectional Survey in Karachy, Pakistan". *European Scientific Journal [ESJ],*Vol.16, No.36, p.1-10, doi: 10.19044/esj.2020.v16n36p8
5. Gundaz, Ugur (2020), "Stayhome Hashtag:Sentiment Anlysis on Twitter During the Covid-19 Pandemic,". *European Scientific Journal [ESJ],* Vol.16, No.34, doi:10.19044/esj.2020.v16n34p62
6. Islam, M.S., Sarkar, T., Khan, S.H., A.H.M., Kamal, Hasan, S.M.M., Kabir, A., Yeasmin, D., Islam, M.A., Choudhury, K.I.A., Anwar,

K.S., Chughtai, A.A., & Seale, H. (2020); "COVID-19 Related Infomedic and its Impact on Public Health: A Global Social Media Analysis", *The American Journal of Tropical Medicine and Hygiene,* 103(4), 1-9, doi:10.4269/ajtmh.20-0812.

7. Tasnim, S., Hossain, M.H., and Mazumder (2020), H.; "Impact of Rumors and Misinformation on COVID-19 in Social Media", *J Prev Med Pub Health,* 53,171-174; doi.org/10.3961/jpmph.20.094

8. Khalifa, H., Mujeeb Absy,A.A., Badran, S., Almaamari A.Q.A., & Nagi, M.,(2021), *"COVID-19 Pandemic and Diffusion of Fake News through Social Media in the Arab World".* www.arabmediasociety.com

9. Apuke, O. D., & Omar, B. (2020). "Fake news and COVID-19: modelling the predictors of fake news sharing among social media users." *Telematics and Informatics*, 101475 doi.org/10.1016/j.tele.2020.101475.

10. Islam, M.A., Mondal, R.U., and Hasan, M.Z., (2009). "Performance Evaluation of WiMAX Physical Layer under Adaptive Modulation Techniques and Communication Channels", *International Journal of Computer Science and Information Security, IJCSIS*, Vol. 5, No. 1, pp. 111-114, USA.

11. Islam, M.A., and Islam, A.Z.M.T., (2012). "Performance of WiMAX Physical Layer with Variations in Channel Coding and Digital Modulation Under Realistic Channel Conditions", *International Journal of Information Sciences and Techniques, IJIST,* Vol. 2, pp. 39-47, No. 4.

12. Aown, N.T., Islam, M.A., Rahman, M.Z., and Islam, A.Z.M.T., (2012). "Effect of AWGN & Fading (Rayleigh & Rician) channels on BER performance of a WiMAX communication System", *International Journal of Computer Science and Information Security, IJCSIS,* Vol. 10, No. 8, USA.

13. Halim, M.A., Islam, M.A.,, Islam, T., Homyara, H., and Zaman, M., (2012). "Performance Analysis of Cyclic Redundancy Check(CRC) encoded Fixed WiMAX Wireless Communication System under Implementation of M-ary Quadrature Amplitude Modulation(QAM) Technique", *International Journal of Engineering Research and Applications (IJERA),* Vol. 2, No. 5, pp. 1056-1062.

14. Islam, M.A., and Islam, A. Z. M. T., (2014). "Secure Wireless Text Message Transmission with the Implementation of RSA Cryptographic Algorithm", *International Journal of Computer Networks and Communications Security*, VOL. 2, NO. 5, pp:146–151, United Arab Emirates.

15. Tai, M.P., Islam, M.A., Enam, F., and Rahman, M.A., (2016). "Secure Color Image Transmission Over WIMAX Communication System", *Journal of Multidisciplinary Engineering Science and Technology (JMEST)*, Vol. 3 Issue 6, page 5040-5047, Berlin, Germany.

16. Roy, S.C., Ali, M.M., and Islam, M.A., (2019). "Analysis the Effect of Transmission Cost on TTL and Number of Nodes in Social Aware Routing Protocols", *International Journal of Scientific & Engineering Research,* Vol-10, Issue-9. doi: 10.14299/ijser.2019.09.06

17. Islam, M.A., Das, D., Homyara, H., and Islam, A. Z. M. T., (2014). "BER Performance of CRC Coded LTE System for Various Modulation Schemes and Channel Conditions", *Scientific Research Journal (Scirj),* Volume II, Issue V, p:6-10.

18. Rahman, M.A., and Islam, M.A., (2020). " Comparative Study on the Impact of Mobile Communication System on Social Life", *European Journal of Social Sciences Education and Research,* Vol.7, Issues. 1, pp:137-148. DOI: 10.26417/ejser.v7i1.p137-148

19. Reid, K. (2009). "The rise of social networking sites." *Education Journal*, 119(22). search.ebscohost.com

20. Aykurt, Aylin Yildirim and Sesen, Elif [2017], "Social Media in Social Organization." *European Scientific Journal [ESJ],*V.13, N.20, p:17-22, doi: 10.19044/esj.2017.v13n20p1.

21. Mikami, A. Y., Szwedo, D. E., Allen, J. P., Evans, M. A., & Hare, A. L. (2010). "Adolescent Peer Relationships and Behavior Problems Predict young adults". communication on social networking websites, *Developmental Psychology,* 46(1), pp:46-56.

22. W. Thomas, "*Cell phone health effects: busy signals think twice before you place that call*". http://willthomas.net

23. Landsverk, G., (2020). "Holding Your Breath Can't Help You Self-diagnose the Coronavirus. Here What You Should Do Instead". *Business Insider Australia*. Australia.

24. www.statista.com

25. www.thestatesman.com

26. www.bbc.com/news/world-51429400

27. www.tandfonline.com

28. www.ncbi.nlm.nih.gov

29. www.weforum.org

30. socialnetworking.procon.org

31. www.hrw.org/news

La Gestion des Ressources Humaines, Precision Terminologique et Apercu Historiques
-Une Revue de Litterature-

Hamid Latif, PhD in management sciences
ENCG, Hassan First University Settat, Morocco
Safaa Zakariya, PhD student
FSJES, Hassan First University Settat, Morocco
Fouad Elbiyaali, PhD in Economics
FSJES, Mohamed V University, Rabat, Morocco

Résumé

En consultant les recherches de nombreux spécialistes en sciences de gestion, il a été constaté, au fil des années, une valorisation sans cesse grandissante pour les ressources humaines (RH) en entreprise. Non seulement le rôle et l'importance de ces RH a changé, mais elles sont devenues des actifs stratégiques. Ce qui accorde, encore plus d'importance aux RH et à la GRH. Longtemps regardée comme une activité de support aux autres fonctions de l'entreprise, la GRH représente maintenant un outil stratégique qui permet à toute entreprise de se démarquer de ses concurrents. L'évolution des mentalités, le développement technologique ainsi que les erreurs du passé ont permis à la GRH de devenir un domaine extrêmement important dans les organisations. D'ailleurs, depuis quelques années, les pionniers de la discipline de GRH semblent de plus en plus s'accorder pour affirmer que la GRH constitue désormais un élément essentiel dans l'atteinte des principaux objectifs organisationnels. La GRH a intéressé, depuis quelques années, les débats scientifiques en sciences de gestion. Elle reste une discipline relativement jeune parmi les différentes branches de la gestion. Afin de comprendre davantage les théories et les pratiques actuelles concernant la

GRH, il est intéressant de définir les principaux concepts et de se pencher sur les grandes phases de son histoire. Afin d'apporter une vision objective, claire et synthétique, on s'est appuyé sur sur une revue de la littérature structurée et approfondie et ce en consultant les principaux ouvrages, publications scientifiques, rapports, thèses et magazines spécialisés dans le domaine.

Human Resources Management :
Terminological Precision and Historical Overview
-Literature review-

Hamid Latif, PhD in management sciences
ENCG, Hassan First University Settat, Morocco
Safaa Zakariya, PhD student
FSJES, Hassan First University Settat, Morocco
Fouad Elbiyaali, PhD in Economics
FSJES, Mohamed V University, Rabat, Morocco

Abstract
    By consulting the research of numerous specialists in management sciences, it has been observed, over the years, an ever-increasing value for human resources in companies. Not only has the role and importance of human resources changed, but they have become strategic assets. This gives even more importance to human resources and HRM. Long regarded as a support activity for other business functions, Human Resources Management (HRM) now represents a strategic tool that allows any business to stand out from its competitors. Changing mentalities, technological advancements as well as the mistakes of the past have allowed HRM to become an extremely important area in organizations. Moreover, in recent years, the pioneers of the discipline of HRM seem more and more to agree that HRM is now an essential element in achieving the main organizational objectives. For several years now, HRM has been of interest in scientific debates in management sciences. It remains a relatively young discipline among the different branches of management. In order to better understand the theories and current practices concerning HRM, it is interesting to define the main concepts and to look at the main phases of its history. In order to provide an objective, clear and synthetic vision, we relied on a structured and in-depth literature review by consulting the main

books, scientific publications, reports, theses and magazines specializing in the field.

1.   Introduction

En consultant les recherches de nombreux spécialistes en sciences de gestion, il a été constaté, au fil des années, une valorisation sans cesse grandissante pour les ressources humaines (RH) en entreprise. Non seulement le rôle et l'importance de ces RH a changé, mais elles sont devenues des actifs stratégiques. Ce qui accorde, encore plus d'importance aux RH et à la GRH. Longtemps regardée comme une activité de support aux autres fonctions de l'entreprise, la GRH représente maintenant un outil stratégique qui permet à toute entreprise de se démarquer de ses concurrents. L'évolution des mentalités, le développement technologiques ainsi que les erreurs du passé ont permis à la GRH de devenir un domaine extrêmement important dans les organisations. D'ailleurs, depuis quelques années, les pionniers de la discipline de GRH semblent de plus en plus s'accorder pour affirmer que la GRH constitue désormais un élément essentiel dans l'atteinte des principaux objectifs organisationnels.

La GRH a intéressé, depuis quelques années, les débats scientifiques en sciences de gestion. Elle reste une discipline relativement jeune parmi les différentes branches de la gestion. Afin de comprendre davantage les théories et les pratiques actuelles concernant la GRH, il est intéressant de définir les principaux concepts et de se pencher sur les grandes phases de son histoire. Afin d'apporter une vision objective, claire et synthétique, on s'est appuyé sur sur une revue de la littérature structurée et aprofondie et ce en consultant les principaux ouvrages, publications scientifiques, rapports, thèses et magazines spécialisés dans le domaine.

1.1.   Définitions de la GRH

La GRH est considérée comme un domaine de recherche vaste et souvent mal délimité (Garand, 1999). En effet et pour remédier à de probables et possibles ambiguïtés ou confusions, nous allons accorder, et d'une manière particulière, l'importance à sa définition. La GRH est une fonction de l'entreprise qui a pris ces dernières années une importance considérable en égard aux changements de l'environnement externe. Bien qu'elle semble bien installée parmi les activités essentielles de l'entreprise, sa définition reste une tâche délicate. Dans cette recherche, il n'est pas question de faire une liste ou d'inventorier toutes les définitions de la GRH, mais nous allons répertorier quelques-unes pour nous permettre de la mieux circonscrire. Comme l'indique

Jackson et Schuler (1995), l'expression GRH est considérée comme un « terme ombrelle » utilisé selon différents sens et dans différents contextes. Pour Bournois et Brabet (1993), ce concept a été employé pour la première fois en 1817 par Springer, un économiste américain, pour révéler en termes comptables le coût de l'utilisation des hommes (Benchemam et Galindo 2015). La GRH c'est d'abord de la gestion, c'est-à-dire concevoir, conduire et contrôler un processus de décision (Le Gall, 2011). Selon le dictionnaire Larousse, le mot gestion signifie : action ou manière de gérer, d'administrer, de diriger, d'organiser. Ceci implique que toute entreprise doit déterminer une stratégie de gestion en intégrant un volet Ressource Humaine « RH » pour son développement et ce, quelle que soit sa taille. D'après (Marciano, 1995), le terme « RH » aurait été créé par Peter Ferdinand Drucker (1954) dans son livre intitulé « The practice of management ». Selon cet auteur, il existait trois types de management soit le management d'entreprise, de direction et celui du personnel et du travail. C'est, donc en étudiant le management du personnel qu'est apparue la notion de « RH ». L'association des concepts « Gestion » et « RH » ne va pas de soi et soulève des questions comme : Peut-on parler de « ressources » humaines au même titre que de ressources techniques, financières et matérielles ? Ces ressources peuvent-elles être « gérées » au même titre que l'on gère un portefeuille d'actions ?. Boyer (2006) cité par Ferar (2016) a répondu à cette question en considérant que le concept RH comporte un côté positif et un autre restrictif : « il a, certes, un côté positif : reconnaître que les hommes sont une ressource, c'est admettre qu'ils ont une valeur, un coût ou un prix. Mais c'est en même temps restrictif dans la mesure où on ne saurait mettre sur un même plan l'énergie, les matières premières, les machines et les hommes qui les produisent où les utilisent ». Le côté restrictif d'une GRH n'est plus adapté selon Boyer (2006) aux exigences d'aujourd'hui et de demain. En consultant la littérature spécialisée en GRH, plusieurs auteurs et chercheurs se sont intéressés au sujet afin de tenter de définir de façon claire ce qu'est la GRH. Boivin (1986) cité par Garand (1992), suggère que la GRH est « l'ensemble d'activités mises en œuvre par les entreprises, afin d'acquérir, de maintenir, de former et d'utiliser efficacement les individus exerçant ou susceptibles d'exercer un travail productif ; l'élément capital de cette définition est l'efficacité et la perspective envisagée est celle de l'organisation ». Dans leur dernière recherche, Bélanger et al (1988) ont formulé une définition associant plusieurs activités et pratiques, actuellement considérées dans les études GRH dans une entreprise : « La GRH est l'ensemble des activités d'acquisition, de développement et de conservation des RH, visant à fournir aux organisations de travail une main-d'œuvre productive, stable et satisfaite ».

Acquisition des RH : planification des effectifs, description des fonctions ou des emplois, recrutement, sélection et accueil ;

Développement des RH : apport de connaissances et habiletés additionnelles permettant d'accroître la performance ou d'assumer de nouvelles responsabilités ;

Conservation des RH : rémunération, avantages sociaux, évaluation des emplois, structure salariale, négociation et administration des rapports collectifs du travail, discipline, ….

Marciano (1995), dans le portrait des origines de la GRH qu'il a tracé, a conclu qu'il y a trois grandes familles de définitions de la GRH, et ce selon son évolution (Aït Razouk, 2007) :

La première famille : La GRH est principalement une forme d'évitement des syndicats et une forme subtile de contrôle patronal. Pour ce courant, les travailleurs et l'entreprise ne peuvent avoir aucun intérêt en commun ;

La deuxième famille : La GRH est synonyme de « gestion du personnel », l'existence d'un ensemble de pratiques susceptibles de faire une meilleure utilisation des travailleurs ;

La troisième famille, soutenue et défendue par Drucker (1954) et Bakke (1958), la GRH est une fonction de gestion qui vise notamment à assurer la compréhension, la conservation, le développement, l'utilisation et l'intégration des RH dans leur milieu de travail. Elle positionne les employés comme une ressource organisationnelle qui a une valeur et non comme une dépense.

Une autre définition est celle proposée par Igalens et Roussel (1998). Pour ces auteurs, la GRH est « l'ensemble des activités qui visent à développer l'efficacité collective des personnes qui travaillent pour l'entreprise. L'efficacité étant la mesure dans laquelle les objectifs sont atteints, la GRH aura pour mission de conduire le développement des RH en vue de la réalisation des objectifs de l'entreprise. La GRH définit les stratégies et les moyens en RH, les modes de fonctionnement organisationnels et la logistique de soutien afin de développer les compétences nécessaires pour atteindre les objectifs de l'entreprise ». Dans sa définition Pigeyre (2006) stipule que « la GRH a pour but de fournir à l'entreprise les RH dont elle a besoin pour atteindre en temps voulu les objectifs qu'elle s'est fixé ». La GRH, d'un point de vue gestionnaire, vient pour s'intéresser à la façon et à la manière dont elle peut contribuer à la performance de l'entreprise. Comme le précise Galambaud (1994), dans l'expression GRH, c'est le mot gestion qui est le plus important… Cette notion de gestion renvoie en effet à une rationalisation de pratiques qui concernent les salariés (Pigeyre, 2006). Selon Jackson, Schuler et al. (2002), la GRH constitue « l'ensemble des activités qui visent la gestion des talents et des énergies des individus dans le but de contribuer à la réalisation de la mission, de la vision, de la stratégie et des objectifs organisationnels » (Comeau-Vallée, 2009). De leur côté, St-Onge et al. (2004),

définissent la GRH comme « un ensemble variable de pratiques qui visent à aider l'organisation à résoudre avec efficacité, efficience et équité les problèmes associés à la présence de personnels au sein d'une entreprise ». Pour ces auteurs la GRH constitue une fonction de gestion au même titre que les autres fonctions de l'entreprise. D'après cette définition, pour étudier la GRH il faut pencher sur les pratiques mises en œuvre dans une entreprise. Quant à Martory, Crozet, et Solnik (2016) et Guillot-Soulez (2017), la GRH peut être définie comme « la gestion des hommes au travail dans des organisations ». Une autre définition est celle présentée par Cadin et al. (2012) : « la GRH est l'ensemble des activités qui permettent à une organisation de disposer des RH correspondant à ses besoins en quantité et qualité ». Le Louarn (2008) quant à lui, définit la GRH comme étant un ensemble de décisions qui dressent un contrôle sur les ressources afin d'en dégager des résultats. L'Organisation Internationale du Travail (OIT) a défini, quant à elle, la GRH comme : « Élément du management qui est chargé de donner ses avis d'une façon générale sur toutes les questions touchant au facteur humain dans l'entreprise et en particulier remplir certaines tâches d'ordre administratif relatives à l'emploi, aux conditions de travail et au bien-être du personnel de l'entreprise ». Dans une définition adoptée par le RHEP[1], la GRH se veut « une discipline des sciences sociales consistant à créer et à mobiliser des savoirs variés utiles aux acteurs et nécessaires pour appréhender, comprendre, négocier et tenter de résoudre les problèmes liés à la régulation du travail dans les organisations » (Benchemam & Galindo, 2015; Cadin & Guérin, 2015) . Selon Le Louarn et Wils (2001), cité par Pottiez (2011) « la GRH est une tentative de contrôle de performance individuelle ou collective en vue de contribuer à l'efficacité organisationnelle ». Ils notent que la GRH se concrétise par la mise en place des 3P : politiques, processus et pratiques. Une politique est un énoncé général qui traduit l'intention de l'entreprise. Un processus est un ensemble d'activités reliées entre elles en vue d'atteindre un résultat concret. Une pratique est une manière de faire de l'entreprise. Pour Dietrich et Pigeyre (2011) la GRH est constituée de :

Pratiques de gestion ou les pratiques de GRH, qui sont une manière de faire de l'entreprise (Louarn et Wils 2001) ;

Règles et normes (outils de GRH, règles juridiques, conventions collectives…) ;

Différents acteurs (en interne : la direction, le service RH, les managers, les représentants du personnel et en externe : les pouvoirs publics, les syndicats, les consultants) ;

Politiques de gestion (déterminées par les stratégies d'entreprise en fonction des contextes externe et interne).

---

[1] Groupe de réflexion épistémologique et prospective en GRH

Pour Sekiou (2001), la GRH consiste en des mesures (politiques, procédures, etc.) et des activités (recrutement, etc.) impliquant des RH et visant à une efficacité et une performance.

2. La GRH à travers le temps

Dans notre revue de la littérature, nous avons constaté que les principaux chercheurs et auteurs en GRH sont d'accord et affirment que celle-ci a connu des évolutions très importantes. Elle a passé d'une logique de minimisation de l'impact de la GRH sur la performance, à une logique d'intégration des variables humaines pour améliorer les performances de l'entreprise (Cornet et al. 2015). Selon des auteurs comme Marciano (1995), Langbert et Friedman (2002), Savall et Zardet (2001) et Peretti (2017), l'intérêt accordé aux ressources humaines a considérablement évolué au fil des siècles, de sorte que l'on peut distinguer plusieurs périodes historiques quant à cette évolution.

2.1. La période préindustrielle et industrielle

Les professeurs américains Langbert et Friedman, (2002), dans leur rétrospective de l'histoire de la GRH, retournent jusqu'au 17ème et 18ème siècle dans une première étape qu'ils identifient comme la période préindustrielle. Dans cette période, même s'il existe certaines lois et règles sur le traitement des individus, les serviteurs et l'esclavage sont choses habituelles et les lois existantes sont couramment enfreintes et violées. Il s'agit d'une période où la liberté de l'employeur est illimitée et où les méthodes de production sont manuelles et artisanales. La plupart des produits ont été fabriqués dans les petites usines ou à la maison de l'employeur (à domicile) Hassan Ibrahim Ballott (2002). Les historiens mentionnent des manifestations de pratiques et des modes de gestion des hommes dès l'antiquité, à travers les règles d'organisation implicites ou explicites et les systèmes de sanctions et de récompenses érigés dans toutes les communautés (Bouchez J.P, 1999 ; cité par Benchemam et Galindo 2015). Regam Lynda (2018), ajoute que selon Jean-Pierre Bouchez (1999), ces pratiques et ces modes de la gestion du personnel sont très anciens et ce à travers les différentes civilisations qu'a connu l'humanité. Ces civilisations ont principalement orienté l'effort humain vers des objectifs considérés par elles comme importants dans la construction de leurs communautés. Durant cette période, la fonction RH n'existe pas, c'est le propriétaire qui assumait toutes les responsabilités à savoir, l'embauche, le licenciement et la rémunération...

Dans son ouvrage, Peretti (2017) stipule que la fonction RH n'existe plus à cette période et que les témoignages sont rares. C'est à travers quelques romans, qu'il est possible de découvrir des exemples de pratiques de GRH : Victor Hugo (Les Misérables), la comtesse de Ségur (La Fortune de Gaspard), Hector Malot (Sans famille), Émile Zola (Au Bonheur des dames). Entre

autres, ils ont décrit des pratiques d'embauche, de licenciement, de formation, de promotion, d'œuvres sociales.

Avec la révolution industrielle, émergeant dans la deuxième moitié du 18ème siècle (1750), l'augmentation de la productivité et l'encouragemant de nouveaux standards de la qualité de vie ont été considérés comme les axes d'une nouvelle idéologie économiste. C'est la disparition de l'esclavage et la naissance des pratiques de gestion modernes (Langbert & Friedman, 2002). L'introduction de la machinerie a accentué la distinction entre les employeurs (propriétaires) et les employés et entraîne des changements marqués dans les modèles sociaux et dans les conditions de travail (Jamrog & Overholt, 2004). Cette révolution industrielle a entraîné le passage progressif d'un système de production artisanale et agricole, vers l'activité manufacturière et une production de masse (Wils, 1992). Selon Rouillard, (2004), les relations personnelles et paternalistes qui caractérisent ce modèle de production artisanale font place aux travailleurs salariés perçus par les employeurs comme une marchandise dont le coût doit être minimisé (Pozzebon et al. 2007).

Devant les conditions de travail qui leur sont imposées, les employés de même spécialisation se regroupent et s'organisent contre les abus des employeurs (Jamrog & Overholt, 2004). Ceux-ci, ayant pris conscience des problèmes sociaux générés par l'industrialisation, les employeurs ont décidé d'offrir un soutien à leurs salariés pour régler leurs problèmes personnels. C'est à partir de ce moment que le poste de « secrétaire au bien-être » ou « secrétaire social » a connu son emergence. Son principal rôle était de gérer et contrôler l'ensemble des salariés, tout en décourageant la constitution des syndicats (Marciano, 1995 ; Jean-Pierre Bouchez (1999) cité par Regam Lynda 2018). Il apparait comme le premier service spécialisé en GRH. De son côté Jean Fombonne (2001), constate que la fonction Personnel est souvent exercée par les patrons eux-mêmes et parfois par un mandataire, soit le directeur de l'usine ou secrétaire, si l'effectif est important (Peretti 2017). Cette période, riche en changements et en évolutions, a connu la naissance de quelques écoles et courants de pensés qui ont impacté d'une manière très claire l'évolution de la GRH, en contribuant à tracer ses composantes dans les entreprises.

Malgré la différence de ces courants, l'essentiel du propos était de rechercher la manière de tirer le meilleur parti des ressources humaines de l'organisation.

2.2.   Après la révolution industrielle : les écoles et approches qui ont façonné la GRH

L'évolution de la GRH est fortement attachée aux évolutions de l'environnement économique des organisations. Son développement se fait progressivement du 19ème siècle à nos jours. Tout au long de cette période,

plusieurs courants et approches sont apparus en réponse à des caractéristiques de l'environnement tant interne qu'externe des organisations de travail (Petit, Bélanger, Benabou, Foucher et Bergeron, 1993 ; cité par Bernard 2009 ; (Gagnon & Arcand, 2011; Pigeyre, 2006), influençant ainsi la GRH. Les historiens ont montré que les pratiques de GRH ont précédé la fonction RH. « Le 19ème siècle est celui de la fonction Personnel sans service Personnel, le 20ème siècle est celui de la fonction Personnel avec service du Personnel » (Fombonne, 2001) (Cité par Igalens 2006, Peretti 2017). La GRH a évolué en fonction des idées et théories managériales qui véhiculent une « bonne » manière de gérer le travail (Pigeyre, 2006). On retrouve dans la plupart des manuels de GRH, les cinq approches qui ont façonné la GRH (St-Onge, Audet, Haine et Petit 2004, cité par Bernard (2009); Arcand (2006) :

a) L'école classique ou l'approche scientifique ou techniciste

Au 20ème siècle, avec l'émergence de la société industrielle (marquée par l'exode rurale, la présence d'une main d'œuvre nombreuse, essentiellement ouvrière, non spécialisée et peu performante), le modèle fondé sur la tradition et la coutume cède progressivement la place un modèle rationaliste, soutenu par l'essor des sciences et des techniques (Peretti 1998). Taylor, Fayol et Weber sont les principaux précurseurs et fondateurs de cette école. Leur but est la recherche d'une solution unique et universelle aux problèmes rencontrés par les entreprises dans la gestion de leurs activités et ce afin d'améliorer la productivité. Pour Frederick Winslow Taylor (1856-1915) dans son œuvre « The Principles of Scientific Management » a systématisé sa pensée, aujourd'hui connue sous le nom du taylorisme qui est associée au modèle mécaniste. Il associait les problèmes au facteur humain découlant de méthodes de production inadéquates. À cette époque, le recours aux principes de l'organisation scientifique du travail (OST) devait permettre de trouver une meilleure manière d'obtenir le meilleur rendement possible. La science fournissait les réponses écartant ainsi la contribution des employés. Cette étude donne lieu à la formulation de solutions optimales d'organisation, de parcellisation et de réalisation des tâches (One Best Way). À partir de cette orchestration, une sélection optimale du personnel est opérée selon leurs qualifications ou leurs capacités, pour que chacun trouve sa place dans l'organisation (the right man on the right place). Un système de récompense au rendement est introduit selon les quantités produites (a fair day's pay for a fair's day work) (Moulette et Roques, 2014). Les pratiques de gestion se réalignent et l'approche scientifique du travail de Taylor devient un modèle de référence pour la majorité des organisations (Moulette et Roques 2014 ; Benchemam et Galindo 2015). C'est avec les contributions du Taylor, le développement de la taille des organisations, le développement du droit social et la syndicalisation croissante etc., que les premiers postes traitants

spécifiquement de la GRH se sont créés et que la fonction RH voit le jour (Peretti 2017, 1998 ; Jamrog et Overholt 2004). Et ce à partir du moment aussi où le chef d'entreprise n'est plus en état de gérer l'ensemble du personnel qui lui est alloué (Peretti 2017, 1998). Des auteurs comme Peretti (1998), voient que c'est le poste de secrétaire social qui a évolué pour devenir service Personnel et ce en 1912, la date référence de la naissance de la fonction RH. Son rôle se concentrait principalement sur l'analyse et la classification des postes, le développement, la formation et la sélection des employés (Jacoby, 1985). Fayol quant à lui, s'est principalement intéressé aux problèmes de direction de l'entreprise et a lancé les fondements de la théorie administrative (Cadin & Guérin, 2015). Un fonctionnement optimal de l'entreprise est, selon lui, dicté par 14 principes : Division du travail, autorité, discipline, unité de commandement, unité de direction, clarté de la hiérarchie, stabilité du personnel, initiative, ordre, équité, système de rémunération équitable, centralisation, subordination des intérêts particuliers à l'intérêt général, union du personnel (Moulette & Roques, 2014). Max Weber de son côté, est à l'origine de la définition des « idéaux type ». L'idéal type permettant de mettre en place l'organisation optimale est qualifié de système bureaucratique : la structure hiérarchique et les compétences de chaque emploi sont clairement définies, les rémunérations sont fixes et dépendent des responsabilités et du niveau hiérarchique, la discipline est stricte, la personne n'est pas propriétaire de son poste, des règles écrites anticipent toutes les situations (Moulette et Roques 2014, Cadin et Guérin 2015). Cette école de pensée regroupe des courants de pensée aux préoccupations différentes mais marqués par une même approche de l'organisation, à savoir la recherche de la rationalité. (Rationalité productive : Taylor ; Rationalité administrative : Fayol ; Rationalité structurelle : Weber). L'objectif de cette école est de trouver et de définir des règles pour une gestion optimale de l'entreprise. L'OST et la bureaucratie sont deux notions particulièrement utilisées dans les travaux de cette école (Moulette & Roques, 2014). Selon cette perspective, la fonction RH est limitée au niveau de règles ou des méthodes à mettre au point afin d'atteindre les résultats escomptés (St-onge et al. 2004 ; cite par Bernard (2009). Pour Taylor, il existe une seule et bonne manière de gérer le personnel. Elle doit être mécaniste, parce que : premièrement, les employés sont sélectionnés selon les compétences spécifiées et sont donc interchangeables pour pourvoir des postes précisément décrits ; deuxièmement, le seul pouvoir légitime émane du droit de propriété qui fixe les prérogatives et obligations y afférentes, dans le cadre d'une hiérarchie bien organisée ; troisièmement, le ressort de l'action (la motivation) réside dans un raisonnement calculateur des individus au service de leur seul intérêt personnel (Peretti, 2017). Pour accompagner l'OST, Taylor prescrit un certain nombre de pratiques de GRH : le recrutement, la formation et la rémunération (Benchemam et Galindo,

2015). Pour ce courant de pensée, la dimension humaine s'efface devant l'optimisation de la production considérée comme finalité prioritaire. Avant le taylorisme, l'ouvrier est un homme qui détient un savoir faire sur la base duquel l'employeur le recrutait ; et l'entreprise est considérée comme un groupe d'hommes. Mais avec le taylorisme, ce sont les spécialistes de la direction qui savent et l'entreprise devient une organisation dont le rouage est le poste de travail (Galambaud, 1994). Les travaux de Ford, influencés par les principes de l'OST de Taylor, ont contribué à leur tour à l'évolution de la fonction Personnel. Ils proposent un modèle opérationnel réalisant une production de masse grâce au travail à la chaîne. La disponibilité d'une main d'œuvre qualifiée et en grand nombre est l'une des nécessités de ce modèle. Cependant, dans une phase qui a connu une crise de main d'œuvre, les entreprises ont puisé largement les compagnes, la population féminine et les travailleurs immigrés, qui sont peu qualifiés (Peretti, 1998, 2017). Ce courant a été largement critiqué pour leur recherche utopique d'un modèle idéal et universel, leur vision considérée très mécaniste de l'homme, les liens avec l'environnement sont négligés, l'ignorance des interactions entre les individus et l'organisation, etc. Ce qui a conduit à l'émergence de nouvelles approches fondées sur la sociologie et la psychologie.

b) L'école des relations humaines ou L'approche Psychologique (1927-1932)

L'école des relations humaines est un mouvement intellectuel apparu dans les années 30 et qui s'est préoccupé de l'étude des organisations. Elle a pris naissance avec, d'une part les travaux d'E. Mayo, (principalement ses deux ouvrages : « The Human Problems of an Industrial Civilization », 1933 et « The Social Problems of an Industrial Civilization », 1945 ; qui comportaient les expérimentations menées à Hawthorne dans les ateliers de la Western Electric Company et d'autre part, les travaux de Kurt Lewin (Galambaud, 1994). Cette école a conduit à prendre le contre-pied de l'approche mécaniste de l'école classique (Pesqueux, 2015). La crise de 1929 a remis en cause les fondements et théories de l'école classique rationaliste, qui étaient appliqués à grande échelle (déshumanisation du travail qui a réduit l'homme à l'état de machine, salaire au rendement, cadences infernales…). Considérées comme des théories simples, l'échec de leur application (un absentéisme important et une montée des conflits sociaux durs…) a engendré l'emergence d'un second courant qui est celui des relations humaines (Cadin & Guérin, 2015 ; Peretti, 2013). Ce dernier, met l'accent sur l'homme dans sa réflexion. Il lui rend sa dignité et donne au travail un sens plus humain. Le principe est de considérer les employés comme des valeurs importantes à l'organisation, et qui devraient être gérés par des pratiques de GRH afin de

procurer un avantage stratégique compétitif aux entreprises (Kaufman, 2001 ; cité par Comeau-Vallée (2009).

L'étude des dimensions émotionnelles, affectives et relationnelles des situations de travail sont le fondement des modèles ou des modes de management préconisés par ce courant. Une des causes considérées importantes, par ce courant, des augmentations du rendement était le développement des relations entre chercheurs et ouvriers (individuellement ou en groupe), ce qui entraîne un changement de leur attitude envers leur travail (Peretti, 2013). L'importance du volet psychosociologique, l'analyse des besoins et des facteurs de motivation des salariés, le management démocratique et participatif, considérés comme contributions proncipales des chercheurs de ce courant, ont permis de faire évoluer la place et le rôle des RH dans l'entreprise (Moulette & Roques, 2014 ; Peretti, 1998, 2017).C'est grâce à ce courant, que les RH ont une place importante dans le choix de l'avenir des organisations. Il a souligné l'impact du facteur humain sur la performance (Herzberg, 1957 ; McGregor, 1960 ; Trist, 1963). Ce courant avait appuyé le principe selon lequel l'amélioration des conditions de travail des employés était le justif pour améliorer la production. Leurs travaux, considérés plus humanistes, ont été soutenus au détriment des propos de la gestion scientifique du travail (Aït Razouk, 2007). L'expérience de Mayo « L'effet d'Hawthorne » qui stipule que tout changement de l'environnement de travail, que ce soit amélioration ou d'une dégradation, se traduit par une plus grande efficacité des ouvrières. Deux explications et deux éléments riches de sens pour la GRH sont ainsi soulignés (Benchemam & Galindo, 2015): Le fait que les chercheurs s'intéressent à leur travail leur apporte une motivation pour être plus efficaces : importance des facteurs psychosociologiques ; Il existe des normes informelles de production au sein de chaque groupe, ce qui distingue le rôle des groupes pour la gestion des hommes.

À la fin des années 1950, grâce aux contributions des partisans de ce courant (Likert, MacGregor, Maslaw et Herzberg), la fonction Personnel s'est améliorée dans les organisations. Ils ont développé de nouvelles idées basées sur l'importance de la motivation, santé psychologique de l'ouvrier, la satisfaction des besoins du personnel, les communications, la participation des ouvriers dans la vie de l'organisation, les congés, la retraite, etc. (J. Fombonne, 2001) cité par Peretti (2017). Pendant cette période, la gestion du Personnel devient beaucoup plus qualitative, avec l'arrivée de psychosociologues à la tête des fonctions RH. C'est la grande époque de remise en cause progressive du modèle taylorien et domination des séminaires de motivation. Avec l'importance et souci de l'humain le nom « Direction du Personnel » change pour devenir «Direction des Relations Humaines», mettant l'accent sur l'importance du passage du quantitatif au qualitatif. A partir de ce moment, plusieurs pratiques de GRH furent implantées dans les entreprises afin de

répondre à ces nouveaux besoins de développement et d'accomplissement des employés. Un changement qui a permis au poste de spécialiste du personnel de reprendre du galon par rapport à celui de spécialiste des relations industrielles (Pozzebon et al., 2007).

Malgré les contributions intéressantes et importantes de ce courant de pensée, il a été critiqué pour sa focalisation sur le côté moral au détriment du côté matériel. Cette focalisation a provoqué quelques effets négatifs sur la productivité et le rendement des organisations. Parce que la satisfaction des besoins illimités des employés est une finalité impossible à atteindre. Parfois la satisfaction de quelques besoins est en contradiction avec les buts et finalités de l'organisation. Durant cette période, les chercheurs de ce courant, se sont rattachés et intéressés aux comportements des individus, aux interrelations entre groupes et au phénomène global de l'organisation (Lawrence et Lorsch, 1967). En outre, ce courant a permis l'abandon progressif de méthodes de supervision axées sur l'intimidation et la peur de perdre son emploi par des méthodes plus positives orientées vers l'installation d'un climat de justice et de respect mutuel. (St-onge.S, Audet M., Haines, V., And Petit, A. 2004 ; cite par Bernard, 2009).

c) L'approche institutionnelle, légale et politique :

Identifiée comme approche des relations du travail, elle s'est développée suite au déséquilibre des pouvoirs entre les employeurs et les employés, puis à l'autoritarisme des gestionnaires et à la précarité économique que vivaient les employés. L'instauration par l'État de règles légales et les négociations collectives ont été privilégiées. Selon Peretti (2017), c'est après la première guerre mondiale que l'État commence à intervenir dans la vie économique, à travers la mise en place des lois et règlements organisant les relations au travail. Dont principalement, les lois relatives au congé hebdomadaire (1906), à la négociation collective et les heures du travail (1919), aux assurances sociales (1928, 1930) etc. Les entreprises prennent conscience de la nécessité d'entretenir de bonnes relations et de prévenir ou de gérer des conflits et ce, en réaction à la poussée d'un mouvement de syndicalisation. Les services du « bien-être » se transforment pour devenir « services du Personnel » avec les finalités d'administrer les droits des salariés et de régler les problèmes de rémunération, de sélection, de formation, d'évaluation et de communication avec les syndicats. Le développement et la croissance de la GRH se sont accompagnés par une complexité du droit social et des lois du travail, qui ont connu une accélération très intéressante avec l'adoption des lois sur, la création du comité d'entreprise, la sécurité sociale, les délégués du personnel, le SMIG, etc. Par conséquent, afin de s'adapter avec ces lois et règlements, les entreprises recrutent des juristes dans le poste de directeur du personnel. Peretti (2017), voit que, selon les exigences qu'a

imposé cette période, les responsables du Personnel doivent se professionnaliser dans les différents domaines, comme : la formation, la rémunération, la qualification, la négociation collective, etc. C'est entre 1945 et 1965 que la création des associations pour le partage des informations et des expériences sur les questions de personnel a affirmé la fonction Personnel (Peretti, 2017). A ce moment, la GRH formait un éventail d'activités juxtaposées, sans référence à une vision d'ensemble. Selon ce courant de recherche, la GRH est considérée comme une activité isolée sans prise en compte d'une vision d'ensemble (St-Onge.S et al , 2004); cité par Bernard (2009).

d) L'approche systémique

Cette approche considère l'organisation comme un système ouvert, c'est-à-dire un ensemble d'éléments articulés en fonction d'un objectif commun et en relations dynamiques les uns avec les autres et avec l'environnement. Elle nécessite une étude et analyse des éléments composants l'environnement qui ont un impact sur la GRH, ainsi que sur les objectifs de l'organisation. En effet, la GRH est considérée comme un sous-système de l'entreprise. Elle est dans l'obligation de poursuivre des objectifs en adéquation avec ceux du système global (St-Onge Sylvie, Michel Audet, Victor Haines, André Petit-Releve, 2004); cité par Bernard 2009).

e) L'approche stratégique

Avec une évolution très intéressante de la réglementation (Enrichissement du code du travail), des mutations technologiques, un environnement incertain et invisible, une concurrence internationale, etc., les organisations doivent s'adapter à ces changements, ce qui a modifié profondément les enjeux de la GRH (Peretti, 2017). Selon ce dernier « C'est dans les années 1980, que la fonction Personnel se transforme en fonction RH. Le changement d'appellation est un changement de perspective et de pratiques. La conception traditionnelle du Personnel perçu comme une source de coût qu'il faut minimiser laisse place à la conception d'un Personnel considéré comme une source dont il faut optimiser l'utilisation ». Le service du personnel, géré par un « directeur du personnel », a progressivement laissé la place dans les entreprises, à partir des années 1980, à un « service ressources humaines », dirigé par un « directeur des ressources humaines » (DRH). Ce changement d'une « fonction Personnel » à une « fonction RH » trouve essentiellement sa source dans la crise économique, qui pousse les entreprises à revoir l'organisation peu productive du travail pour s'adapter à une économie ouverte et de plus en plus internationale (Guillot-Soulez, 2017b). De leur côté, Aït Razouk et Bayad (2010), stipulent que traditionnellement, la fonction RH s'est occupée de la gestion essentiellement administrative des RH. Ça

principale mission et vision est de contrôler les RH pour minimiser leurs coûts (Huselid, Jackson et Schuler, 1997, Storey, 2001). Les partisans de la Gestion Stratégique des Ressources Humaines (GSRH) ne sont pas d'accord avec cette vision de la GRH (Becker et Huselid, 2006 ; Beer et al., 1984 ; Guérin et Wils, 2006). Pour eux, la ressource humaine est une ressource dans laquelle il faut investir en mobilisant un ensemble de pratiques de GRH afin d'améliorer la performance des entreprises (Beer et al., 1984 ; Pfeffer, 1998 ; Wright et McMahan, 1992). Dans le cadre de l'analyse du rôle stratégique de la GRH, la revue Human Resource Management a consacré un numéro spécial en 1997 pour déterminer les principaux défis pour la GRH dans le 21ème siècle. L'idée défendue et soutenue par l'ensemble des auteurs est que la GRH est en train de connaître une transformation allant du sens administratif vers le rôle stratégique (Peretti, 2017). De plus en plus de recherches empiriques viennent conforter la conviction selon laquelle la GRH est une source précieuse d'avantage compétitif durable sur le marché. D'ailleurs, c'est grâce à ces recherches que la GSRH se constitue et se renforce actuellement. L'examen de la littérature spécialisée en GRH montre une augmentation des recherches dans cette direction : -comprendre et surtout mesurer le rôle stratégique de la GRH. Selon Marciano (1995) et Schmidt et al. (2004), c'est aux années 80 qu'a été introduit le terme de « gestion stratégique des ressources humaines » (GSRH), pour le distinguer de celui de GRH traditionnelle ou gestion du personnel. Comme le soulignent bon nombre d'auteurs et chercheurs, le rôle stratégique de la GRH n'est pas le simple fait du hasard. Il est le résultat d'un mouvement de changements environnementaux (politiques, technologiques, sociologiques et économiques), qui ont un impact sur l'importance croissante donnée aux divers acteurs sociaux qui composent les organisations (Arcand et al, 2004a). Cette approche est caractérisée par l'intégration d'un ensemble d'activités choisies en fonction de l'obtention de résultats. Il s'agit là d'un processus de formulation et de mise en œuvre des moyens appropriés en vue d'atteindre les objectifs d'une organisation et de réaliser sa mission, dans un contexte marqué par une concurrence acharnée. Pour la GRH, cette approche renvoie en général à une préoccupation touchant l'harmonisation des pratiques de GRH dans les organisations qui sont gérées dans une approche stratégique (Peretti, 2017). L'objectif global de l'organisation est réalisé par un ensemble des activités incluant les RH (Petit et al. 1993 ; St-Onge et al (2004); cité par Bernard (2009); Arcand (2006). Aux années 2000, Selon Peretti (2017), la GRH s'affirme comme « partenaire d'affaires » à l'entreprise, en particulier dans une conjoncture devenue plus difficile. Lawler III et Boudreau (2009) confirment à travers leur étude que devenir un « partenaire stratégique » est un impératif ayant émergé lors des dix dernières années et que celui-ci constitue à présent un passage obligé pour toute fonction RH visant la performance. Son rôle est d'anticiper et de conseiller les dirigeants et les

managers sur les solutions RH en réponse aux enjeux du business (Peretti 2017). La priorité est alors donnée au business en ajustant les ressources et compétences aux besoins de l'entreprise. Cependant, dans le contexte de la crise qu'ont connu les années 2000, la fonction RH, comme partenaire d'affaires, a montré ses limites. Ce qui a permis, par conséquent, la revalorisation d'une fonction RH plus proche des salariés « RH de proximité », considérée comme une orientation centrée sur les personnes et le développement de leurs talents (Peretti 2017). Aux années 2010 et vu l'importance du capital humain dans la compétitivité des entreprises, la mission de la fonction RH s'est développée, et devient à la fois un partenaire d'affaires et un partenaire des hommes.

Aujourd'hui, la grande partie des managers imposent l´approche stratégique en ce qui concerne la GRH et soulignent l'exigence de considérer les employés comme une ressource stratégique et comme un moyen pour faire face à la concurrence (Lawler III & Boudreau, 2009; Peretti, 2017).

2.3.   La GRH au Maroc, Bref apercu Historique

Depuis une dizaine d'années, le Maroc vit au rythme de grandes mutations et profonds changements d'ordre politique, économique, social…etc. Ces mutations ont été accompagnées par une prise de connaissance progressive de la GRH et de son rôle. Au Maroc, comme presque pour tous les pays du Maghreb, la GRH ne peut être décrite sans se référer aux différents événements historiques vécus par ce pays : la décolonisation, marocanisation, privatisation, ouverture et mondialisation, etc. (Baayoud & Zouanat, 2006 ; Dufour & Golli, 2006 ; Matmati, 2005).

L'implantation des entreprises multinationales ainsi que l'œuvre normative de l'État, surtout dans le domaine du droit du travail, ont leur impact sur la GRH (Dufour & Golli, 2006). L'histoire de la fonction RH au Maroc est récente, elle est apparue avec la colonisation et l'introduction du capitalisme au début du siècle dernier. Aujourd'hui, elle a atteint un degré égal aux autres fonctions centrales de l'organisation (Dufour & Golli, 2006 ; Essaid Bellal, 2014).

 Afin de bien comprendre la GRH actuelle, il est nécessaire de faire un bref aperçu sur son évolution. Ci-dessous les principales périodes, les plus citées, marquant l'évolution de la GRH au Maroc :

a) **La période coloniale** : l'émergence de la GRH au Maroc et plus globalement au Maghreb, date du début du siècle dernier, avec la colonisation (Dufour et Golli 2006 ; Matmati 2005 ; Baayoud et Zouanat 2006). D'après Dufour et Golli (2006), le Maroc, comme c'est le cas pour les autres pays du Maghreb (Tunisie, Algérie), était à l'époque soumis à une discrimination en matière de législation du travail, par ce qu'il était soumis à un droit d'exception « code du travail

d'outre-mer » qui confirmait une certaine discrimination face au travail entre la métropole et les colonies. Baayoud et Zouanat (2006) quant à eux, évoquent quelques éléments et points ayant un impact sur l'évolution de la GRH, principalement l'opposition catégorique du patronat français à la mise en place d'une législation du travail. Ces auteurs précisent, que pendant les situations et périodes de forte demande, le chef d'entreprise faisait recours au caporal, comme institution intérimaire. Le caporal assure le recrutement et le contrôle de proximité, comme missions principales. Durant cette première phase, la GRH se caractérisait par trois aspects (Baayoud et Zouanat, 2006) :

- La flexibilité de la main-d'œuvre,
- L'opposition systématique du patronat français à la mise en place d'une législation du travail,
- Un mode de gestion du personnel différent selon qu'on a affaire à la population ouvrière autochtone ou européenne. « On pouvait dire que le milieu du travail était décomposé en trois catégories de personnes. Il y avait, à la base, des ouvriers marocains, il y avait des cadres et des dirigeants qui étaient composés exclusivement de Français ».

Pendant cette pérdiode, où les autorités françaises ont interdit toute création des syndicats marocains, les syndidats français des travailleurs mettaient la pression sur les autorités coloniales pour reconnaître un certains droits aux travailleurs autochtones (Baayoud & Zouanat, 2006). En résumé, cette période est marquée par des conditions d'exploitation totale de la main d'œuvre (Discrimination, Absence de protection sociale, etc.) et l'absence d'une fonction dédiée à la GRH.

b) **De l'indépendance aux années 90** : Au lendemain de l'indépendance, le droit syndical a été reconnu par la constitution marocaine ainsi que la législation du travail (Dufour et Golli 2006). Cependant, dans la réalité, l'action syndicale est appréciée, de différentes manières, selon les contextes dans lesquels elle se pratique et s'éxerce. Dans les entreprises qui ont été nationalisées ou marocanisées et dans les établissements publics constitués après l'indépendance, elle est largement tolérée et intégrée. Mais elle est rejetée et combattue au sein des autres structures. Les pratiques de GRH ressemblent, pendant cette phase, à celles qui dominaient pendant la phase coloniale, dont la pratique du contournement des contraintes légales qui est restée une donnée structurelle du mode de fonctionnement et de gestion de ces entreprises (Baayoud & Zouanat, 2006).

Aux années 1950, les entreprises multinationales qui existent déjà continuent leur activité sans modification. Pour la grande partie des

PME cédées aux nationaux, la transmission et la passation s'est faite sans préparation à la prise de responsabilités ni transfert des savoirs ni formation. C'est pour cette raison que la majorité de ces entreprises cédées ont un management archaïque et rudimentaire. Les rapports concernant le volet social étaient, par conséquent, marqués par une GRH obéissante à la hiérarchie avec une organisation totalement taylorienne ou anachronique et particulièrement par une absence de dialogue et de développement des compétences des salariés (Essaid Bellal 2014). De leur côté Baayoud et Zouanat (2006), estiment que l'action syndicale qui s'est développée d'une manière progressive au fil des années 60, a contribué à la structuration des pratiques de GRH. Ils ont constaté, dans cette période, une différence et une dualité dans les pratiques de GRH utilisées, et ce selon que l'entreprise est structurée et à l'abri des aléas du marché et de la concurrence ou que l'entreprise ne l'est pas. Dans le premier groupe (entreprises structurées ou entreprises providences), la GRH se caractérise par:

La formalisation du système d'administration du personnel, considéré et vu comme très contraignant pour les entreprises concernées. Le développement des services sociaux pour compléter ceux fournis par l'État dans le cadre d'une mutualisation globale : couverture médicale, retraites, vacances et loisirs, différents types d'aides…

Le maintien de « bon rapports avec les partenaires sociaux », en développant une culture de la négociation et du dialogue social. Pour le deuxième groupe, composé principalement des PME et de certains grands groupes familiaux (entreprises patrimoniales), la GRH n'a pas vraiment changé de celle qui prévalait durant la phase coloniale. La création de l'association d'appui aux entreprises, regroupant les professionnels du domaine RH "AGEF[21]" en 1971, dont l'objectif est le partage des expériences, la diffusion des bonnes pratiques locales ou internationales, et la construction de liens avec des associations similaires dans le monde, a constitué un facteur de progrès important et intéressant pour la GRH au Maroc (Matmati, 2005). Cette association a contribué à donner de la visibilité à la GRH et aux différentes parties prenantes dans le processus de GRH au sein des entreprises. En résumé cette période est marquée par une domination du secteur public (marocanisation) et l'émergence du secteur privé ainsi que la création de l'AGEF.

c) **<u>Fin des années 90 au début de ce millénaire</u>** : Au cours des années 1990, le Maroc a connu de grands changements tels que la libéralisation et l'internationalisation de l'économie (Zone de libre-

---

[21]Association Nationale des gestionnaires et formateurs des ressources humaines « site web officiel : http://www.agef.org.ma/)

échange avec l'Union Européenne, Privatisation, Pression de la concurrence …). Tous ces changements ont ouvert de nouvelles perspectives à l'évolution de la GRH. Le rôle de celle-ci n'est pas spécialement pour exécuter les ordres et instructions venant d'en haut ; mais elle doit être aussi anticipative, réactive et experte dans la résolution des problèmes humains dans l'entreprise (Baayoud & Zouanat, 2006). Durant cette période, le Maroc a été engagé dans un véritable mouvement de refondation sociale pour encourager les entreprises à reconsidérer et repenser leurs pratiques de GRH et les syndicats à adopter une attitude plus participative et moins conflictuelle (Dufour & Golli, 2006). Avec la volonté du Maroc de mieux s'intégrer à l'économie modiale et au respect des droits de l'Homme, cette dynamique a donné plus d'imporatnce et de légitimité à la fonction RH. C'est dans cette période que cette fonction a commencé son véritable développement (Essaid Bellal, 2014). Les résultats des enquêtes réalisées par Essaid Bellal (Cabinet DIORH) sur la fonction RH, font ressortir que les entreprises marocaines adoptent des grappes de pratiques proches de celles des entreprises européennes (Frimousse & Peretti, 2005). D'après (Matmati, 2005), les missions et pratiques de la GRH ont connu une évolution rapide grâce d'une part, aux profonds changements et mutations qu'a connu le royaume ces dernières décennies, et d'autre part, par les contributions des universités, des écoles de gestion, des cabinets de conseils et d'audit et des associations professionnelles. Ce développement des pratiques de GRH, est considéré comme une évolution naturelle basée sur une GRH «importée» et imposée par le contexte économique international. Un contexte, avec la vitesse de son évolution, ne laisse aucune chance pour l'entreprise qui n'instaure pas dans son organisation, une GRH bâtie sur la performance. En résumé cette période est marquée par l'accélération de l'internationalisation de l'économie marocaine, la prise de conscience de la valeur du capital humain et par conséquent le développement de la fonction RH. À partir des années 2000, la GRH a connu un considérable développement et notamment dans les grandes entreprises (El Adraoui, 2015; Louart & Scouarnec, 2005). Selon les résultats publiés d'une enquête réalisée par le cabinet Diorh en 2004, les responsables RH sont de plus en plus qualifiés, 66,3% ont une formation universitaire et 56% ont une formation initiale en RH. En ce qui concerne les pratiques de GRH, certaines entreprises nationales tentent de s'aligner aux pratiques des multinationales qui, en général, sont importées des maisons mères principalement sises en Europe. Avec la croissance, particulièrement avec l'accroissement du nombre d'employés, la fonction RH se formalise peu à peu et elle devient

progressivement une réelle GRH effectuée par un spécialiste. De plus, par cette montée du formalisme, la fonction RH s'insère graduellement dans une vision stratégique. Au Maroc, selon les résultats d'une enquête réalisée en 2012 par le cabinet DIORH, les pratiques de GRH ont connu un développement important et on commence à sentir une prise en compte des RH comme variable clé dans la stratégie de l'entreprise, et non plus comme un facteur générateur de coût.

Conclusion

Pour conclure et à la lecture des différentes définitions, nous pouvons remarquer qu'il n'existe pas de consensus formel sur une définition unique et précise. C'est-à-dire qu'une définition universelle en ce qui concerne la GRH, n'existe pas. Antérieurement, l'époque où la RH était considérée comme une annexe comptable et comme une variable de production que l'on ajustait au gré des besoins, la fonction RH était un simple service du personnel, principalement en charge de la paie et des embauches, souvent rattaché aux affaires administratives et financières. A partir des années 1930, la GRH va progressivement acquérir ses lettres de noblesses, avec notamment les premiers travaux destinés à évaluer l'impact des relations humaines sur la productivité des RH. L'intégration de la dimension sociale et humaine dans l'entreprise et la prise de conscience de ses effets, datent en réalité du XX° siècle seulement et plus particulièrement à compter des années 1960. Historiquement, elle est la conséquence de nombreuses revendications, de mouvements sociaux, d'une législation du travail qui va progressivement prendre en compte la santé et la sécurité des salariés, etc. Certes on ne peut exclure une part de gestion budgétaire notamment par la maîtrise du coût des emplois, de la formation, du turnover, mais la fonction RH ne peut pas limiter son champ d'intervention et d'investigations à ces seules notions comptables. Si ces dernières décennies ont permis de repositionner la RH dans l'entreprise et lui offrir la place qu'elle n'avait pas, elle est encore trop timorée et considérée par certaines organisations comme un mal nécessaire, non comme un levier de performance. Elle reste toujours le parent pauvre avec des managers qui privilégient davantage le commerce, la production, la finance. Rare sont les entreprises, qui intègrent les RH comme un levier stratégique à part entière. La littérature en sciences de gestion reconnaît la place et l'importance du capital humain dans l'acquisition d'un avantage concurrentiel durable et dans la création de valeur. C'est par le biais de la GSRH que les organisations peuvent réellement créer un puissant outil mis à leur disposition.

References:

1. Aït Razouk, A. (2007). *Gestion stratégique des ressources humaines : recherche théorique et empirique sur la durabilité de la relation entre stratégie RH et performance* (PhD Thesis). Nancy 2.

2. Aït Razouk, A., & Bayad, M. (2010). *Pratiques mobilisatrices des ressources humaines et innovation des PME : existe-t-il un lien*? Colloque GRH, 1 Er Avril 2010, Montpellier, FRANCE.

3. Arcand, G. (2006). *Étude du rôle de la culture nationale dans la relation entre les pratiques de GRH et de la performance organisationnelle : le cas des banques de vingt-deux pays d'Amérique du Nord, d'Europe et d'Asie* (PhD Thesis). Metz.

4. Arcand, M. (2001). *L'effet des pratiques de gestion des ressources humaines sur l'efficacité des caisses populaires Desjardins du Québec* (PhD Thesis). Metz.

5. Arcand, M., Arcand, G., Bayad, M., & Fabi, B. (2004a). *Gestion stratégique des ressources humaines et performance de la firme: une validation de l'approche de la contingence*. Revue Internationale Des Relations de Travail, 2(2), 14–25.

6. Arcand, M., Bayad, M., & Fabi, B. (2002). *L'effet des pratiques de gestion des ressources humaines sur l'efficacité organisationnelle des coopératives financières canadiennes.* Annals of Public and Cooperative Economics, 73(2), 215–240.

7. Audet, M., Bélanger, L., Long, R. J., & Galambaud, B. (1994). *La gestion des ressources humaines: du modèle traditionnel au modèle renouvelé*. Relations Industrielles/Industrial Relations, 49(1), 168–187.

8. Baayoud, M., & Zouanat, M. (2006). *La GRH au Maroc : histoire et perspectives de reconfiguration. Ressources Humaines en Euroméditerranée*, 2, 122–131.

9. Barney, J. B., & Wright, P. M. (1998). *On becoming a strategic partner: The role of human resources in gaining competitive advantage*. Human Resource Management (1986-1998), 37(1), 31.

10. Becker, B. E., & Huselid, M. A. (2006). *Strategic human resources management: where do we go from here?* Journal of Management, 32(6), 898–925.

11. Benchemam, F., & Galindo, G. (2015). *Mémentos LMD-Gestion des ressources humaines*. Gualino éditeur.

12. Bernard, M. (2009). *L'effet des pratiques de ressources humaines sur la performance sociale des employés dans un contexte de culture nationale* (PhD Thesis). Atelier national de reproduction des thèses.

13. Bouamama, M. (2015). *Nouveaux défis du système de mesure de la performance: cas des tableaux de bord* (PhD Thesis). Université de Bordeaux.

14. Boyer, L., & Equilbey, N. (2003). *GRH: nouvelles pratiques*. Eyrolles, Paris.

15. Cadin, L., & Guérin, F. (2015). *La gestion des ressources humaines* (4e éd). Dunod.

16. Chênevert, D., Filiatrault, È.-M., Lepine, I., & Morin, D. (2008). *Les rôles joués par les services de ressources humaines et la performance organisationnelle: y-a-t'il un lien*?

17. Comeau-Vallée, M. (2009). *La formalisation des pratiques de gestion des ressources humaines dans les entreprises d'économie sociale: une menace aux valeurs du secteur?*

18. Des Horts, C.-H. B. (2004). *La fonction RH, une fonction stratégique : discours ou réalité?*

19. Dietrich, A., & Pigeyre, F. (2011). *La gestion des ressources humaines*. La découverte Paris.

20. Dufour, L., & Golli, A. (2006). Vers une convergence « contextualisée » des pratiques RH dans l'espace Euroméditerranéen. Pratiques d'audit social et de RSE dans la diversité de leurs environnements, 127–142. Dakar, Sénégal: IAS.

21. Dupont, C. (2013). *Du discours stratégique à la construction de la fonction RH par les praticiens*. XXII Conférence Internationale de Management Stratégique.

22. El Adraoui, H. (2015). *Effets de la GRH sur la performance: validation du modèle configurationnel auprès d'un échantillon de 92 entreprises au Maroc*. Question (s) de Management, (3), 43–56.

23. Essaid Bellal. (2014). *L'évolution De La Fonction RH Au Maroc. Ressources humaines et responsabilités sociétales*: Mélanges en l'honneur du Professeur Jean-Marie Peretti. EMS Editions.

24. Ferar, D. (2016). *Construire des pratiques de management des ressources humaines durable au Maroc* (L'Harmattan). Retrieved from http://uh1.scholarvox.com/catalog/search/searchterm/Ferar,%20Driss ?searchtype=author

25. Frimousse, S., & Peretti, J.-M. (2005). *Apprentissage stratégique des pratiques de GRH, internationalisation des firmes et espace euro-maghrébin*. Management & Avenir, (3), 45–61.

26. Gagnon, O., & Arcand, G. (2012). *L'augmentation de la performance organisationnelle par l'application de pratiques de GRH alignées à la stratégie d'affaires*. AGRH.

27. Galambaud, B. (1994). *Une nouvelle configuration humaine de l'entreprise: le social désemparé*. Paris: ESF.

28. Garand, D. J. (1992). *Les pratiques de gestion des ressources humaines (GRH) en petites et moyennes entreprises (PME): une synthèse de la documentation empirique (*PhD Thesis). Université du Québec à Trois-Rivières.

29. Grisé, J. (1997). *Les ressources humaines en tant que source d'avantage concurrentiel durable*. Québec: Faculté des sciences de l'administration de l'Université Laval, Direction de la recherche.

30. Guillot-Soulez, C. (2017a). *Gestion des ressources humaines* : 440 mots clés définis et expliqués Ed. 3.

31. Guillot-Soulez, C. (2017b). *La gestion des ressources humaines*. Gualino.

32. hassan Ibrahim Ballot, ب. ح. إ. (2002). إدارة الموارد البشرية من منظور إستراتيجي (1st ed., Vol. 1). دار النهضة العربية.

33. Iacono, G. (2008). *Gestion des Ressources Humaines : Cinq défis pour l'avenir* Ed. 2. Retrieved from https://international.scholarvox.com/catalog/book/10216410

34. Igalens, J. (2006). *La GRH: principes, pratiques et critiques*. Management et Gestion des Ressources Humaines: Stratégies, Acteurs et Pratiques, 25.

35. Jamrog, J. J., & Overholt, M. H. (2004). *Building a strategic HR function: Continuing the evolution*. Human Resource Planning, 27(1).

36. Langbert, M., & Friedman, H. (2002). *Continuous improvement in the history of human resource management. Management Decision*, 40(8), 782–787.

37. Le Gall, J.-M. (2011). *La gestion des ressources humaines:«Que sais-je?»* n° 2646. Presses universitaires de France.

38. Le Louarn, J. Y., & Gosselin, A. (2000). *GRH et profits: y a-t-il un lien?* Effectif, Avril-Mai, 18–23.

39. Le Louarn, J.-Y. (2008). *Les tableaux de bord ressources humaines: le pilotage de la fonction RH*. Wolters Kluwer France.

40. Le Louarn, J.-Y., & Wils, T. (2001). *L'évaluation de la gestion des ressources humaines*. Liaisons.

41. Lethielleux, L. (2018). *L'essentiel de la Gestion des ressources humaines* Ed. 12. Retrieved from https://international.scholarvox.com/catalog/book/docid/88861606?searchterm=Gestion%20des%20ressources%20humaines

42. Louart, P., & Scouarnec, A. (2005). *Penser la GRH en Algérie, au Maroc et en Tunisie: de l'état des lieux aux perspectives de recherches et d'actions*. Perspectives Sur La GRH Au Maghreb: Algérie-Maroc-Tunisie. Coordonné Par Zahir Yanat et Aline Scouarnec, Vuibert.

43. Marciano, V. M. (1995). *The origins and development of human resource management.* Academy of Management Proceedings, 1995, 223–227. Academy of Management Briarcliff Manor, NY 10510.

44. Matmati, M. (2005). *La gestion des ressources humaines au Maghreb*. YANAT Z., SCOUARNEC A.(Coor.)(2005), Perspectives Sur La GRH Au Maghreb: Algérie-Maroc-Tunisie, Chapitre, 16.

45. Moulette, P., & Roques, O. (2014). *Maxi Fiches de Gestion des ressources humaines* (2e édition). Dunod.

46. Nicolas, E. (2014). *Gestion des ressources humaines*. Retrieved from https://international.scholarvox.com/catalog/book/docid/88831256?se archterm=Gestion%20des%20ressources%20humaines

47. Peretti, J.-M. (1998). *Ressources humaines et gestion du personnel*. Vuibert.

48. Peretti, J.-M. (2013). *Ressources humaines* (Ed 14). Retrieved from http://www.scholarvox.com/reader/docid/88816327/page/1

49. Peretti, J.-M. (2017). *Ressources humaines* (Ed 16). Retrieved from http://uh1.scholarvox.com/catalog/book/docid/88848956?searchterm =ressources%20humaines%2016e%20%C3%A9dition

50. Peretti, J.-M. (2018). *Gestion des ressources humaines*. Vuibert.

51. Pigeyre, F. (2006). *Les modèles d'analyse de la GRH. Management et Gestion Des Ressources Humaines: Stratégies*, *Acteurs et Pratiques*, 7.

52. Pozzebon, S., Coiquaud, U., Gosselin, A., & Chênevert, D. (2007). *La gestion des ressources humaines : d'hier à demain. Gestion*, Vol. 32(3), 99–109. Retrieved from https://www.cairn.info/revue-gestion-2007-3-page-99.htm

53. Regam Lynda, ل. ر. (2018). دور إدارة الموارد البشرية في تسيير التغيير في المؤسسات الإقتصادية الكبرى في ولاية سطيف (PhD Thesis).

54. Schmidt, G., Guéry, L., Mercier, E., & Mottay, D. (2004). *La fonction Ressources Humaines, levier de création de valeur? Du volontarisme des discours au scepticisme des acteurs*. Congrès AGRH, 591–610.

55. Schuler, R. S., & Tarique, I. (2007). *International human resource management: a North American perspective, a thematic update and suggestions for future research*. The International Journal of Human Resource Management, 18(5), 717–744.

56. Sekiou, L. (2001). *Gestion des ressources humaines. De Boeck Supérieur*.

57. Simen, Serge Francis. (2017). *Pratiques de GRH dans les très petites entreprises sénégalaises : pertinence d'une gestion qui concilie tradition et modernité*. XXVIe Conférence Internationale de Management Stratégique.

58. Stewart, G. L., & Brown, K. G. (2019). *Human Resource Management.* John Wiley & Sons.

59. St-Onge, S., Audet, M., Haines, V., & Petit, A. (2004*). Faire de la GRH une valeur ajoutée*. Gaëtan Morin Editeur, 659–687.

60. Thamain, J. L. (2009*). Anticiper en GRH, prévision et prospective, un diagnostic des pratiques et des représentations*. Management & Avenir, (5), 272–289.

61. Tremblay, M., Chênevert, D., Simard, G., Lapalme, M.-È., & Doucet, O. (2005). *Agir sur les leviers organisationnels pour mobiliser le personnel: le rôle de la vision, du leadership, des pratiques de GRH et de l'organisation du travail. Gestion*, 30(2), 69–78.

62. Trépé, A., Aubert, P., Bermond, F., Carrère, J.-M., & Delanoue, M. (2010). *L'évaluation de la performance de la fonction RH: De la théorie à la pratique des DG. Mémoire d'expertise en vue de l'obtention d'un MBA en management des ressources humaines*, Université de Paris Dauphine.

63. Trudel, J. M. (2011). *Des pratiques de grh favorisant la contribution des employés aux besoins de flexibilité des organisations*. Revue International Sur Le Travail et La Société, 9(20), 24–45.

64. Ulrich, D. (1996). *Human Resource Champions: The Next Agenda for Adding Value and Delivering Results*. Harvard Business Press.

65. Wils, T. (1992). *La gestion des ressources humaines: du modèle traditionnel au modèle renouvelé*. Montréal: Presses de l'Université de Montréal.

66. Wright, P. M., & McMahan, G. C. (2011). *Exploring human capital: putting 'human' back into strategic human resource management*. Human Resource Management Journal, 21(2), 93–104.

Sales Territory Design and Salesforce Performance in the Detergent Manufacturing Companies: The Actual Kenyan Context

Benson Muchoki Mwangi
Francis N. Kibera
Mary Kinoti
Magutu P. Obara
University of Nairobi, Kenya

Abstract

This paper focuses on determining the influence of sales territory design on salesforce performance in the detergent manufacturing companies in Kenya. Detergents play a critical role in our everyday lives by ensuring hygiene at our personal level, in our homes, in schools, institutions, and hospitals. Detergents have gained a lot of prominence since the onset of the Corona Virus (COVID-19) disease in 2019, as it has been proved that they play an important role in curtailing the transmission of the COVID-19 disease. The Salesforce plays an important role in organizations as they are the ones who in most cases interact with customers, provide information about their organization and products, provide prices, demonstrate how products are used, train customers, provide after sales service, and resolve any issues that may arise. The study was anchored on Expectancy Theory, Resource Based Theory, Equity Theory, and Agency Theory. The study adopted positivism philosophy and used a descriptive cross sectional design. The unit of analysis was the sales people in the detergent manufacturing companies in Kenya who are members of Kenya Association of Manufacturers as per list obtained from KAM in December 2018. The study used primary data which was collected by administering semi-structured questionnaires. The data was analyzed using

a combination of both descriptive and inferential statics to describe the manifestations of the variables in the data collected, simple regression model was used to test the significance of the influence of sales territory design (independent variable) on the salesforce performance (dependent variable). Fischer distribution test (F-test) was used to test the significance of the independent variable and the overall model. The p-value for the F-statistic was used to determine the robustness of the model. This was done at 95% confidence level ($p<0.05$). The study found a strong relationship between sales territory design and salesforce performance. This depicts that sales territory design is critical in determining salesforce performance in detergent manufacturing companies in Kenya.

Keywords: Sales territory design, Sales force performance, Detergent manufacturing companies, Kenya

1.   Introduction

The salesforce is a grouping of individuals either working for the marketing of products and services manufactured by a firm or for products that are procured by the firm for the purpose of selling (Panda & Sahadev, 2019). Salesforce performance (SFP) is an evaluation of the behavior of the salesforce at work place, since behavior contributes to the achievement of the organization's objectives (Groza et al., 2016). Sales territory design is the process of matching salespeople to the customers and prospects to ensure efficient and effective utilization of company resources (Fatima, 2018). It can be product or geographical area-based or organized along other work responsibilities. Detergents play a critical role in our everyday lives by ensuring our personal hygiene, hygiene in our homes, schools, institutions, and hospitals. Detergents have gained a lot of prominence since the onset of the Corona Virus (COVID -19), as it has been proved that they play a critical role in curtailing the transmission of the COVID -19 viruses (Gupta & Lipner, 2020).

Salesforce performance has continued to be recognized by scholars and practitioners in market research as an extremely important cornerstone of modern marketing thought as it directly influences the firm sales effectiveness, revenue growth, and overall superior performance (Fatima & Azam, 2017). The salesforce plays critical roles in organizations as they are the ones who in most cases interact with customers, provide information about their organization and products, provide prices, demonstrate how products are used, train customers, provide after sales service, and resolve any issues that may arise. Any organization that intends to be competitive and to outperform its competitors must have a salesforce that has superior performance (Schmelz, 2017). An effective salesforce is an indispensable asset as salespeople play a

fundamental role in marketing strategy implementation (Kumar et al., 2014). Crosno and Brown (2015) indicate that sales performance has been one of the commonly used variables to gauge the effectiveness of the salesforce. According to Carton and Hofer (2010), salesforce performance can be gauged through single or multiple dimension measures. However, a good measure of salesforce performance should be broad-based to cover several dimensions of performance outcomes. Owino (2015) postulates that non-financial performance metrics assesses customer satisfaction, value delivered to customers, customer retention, and market share. In addition, Miao and Evans (2013) postulates that financial performance metrics includes sales units, revenue, and profitability. However, this study conceptualizes salesforce performance as illustrated by Anderson and Oliver (1987) using outcome based and behavior based performances. Outcome based performance was measured using quantitative metrics while behavior based performance was measured using qualitative metrics.

Sales territory design (STD) has been recognized by sales practitioners as a factor driving sales performance (Fatima, 2018; Kwiatek, 2011; Liu Tzeng, Lee & Lin, 2016). Kwiatek (2011) posits that firms need to segment or partition their customers into clusters or territories in order to efficiently handle marketing and distribution decisions over different periods and customer bases. The underlying argument is that a well-designed sales territory makes it easier for a firm to match the workload and sales opportunities in a territory to the salesperson assigned to cover that territory, and grow revenue in a competitive business environment (Gordon et al., 2012).

Sales territories are mostly designed based on political boundaries such as states, provinces or counties. In some cases, several states, provinces or counties may be combined to form one sales territory. This design in turn affects the sales potential of the resulting sales territories as the different states, provinces or counties have different populations and economic capabilities. Sales territories in high income areas are likely to generate more sales as compared to sales territories in low income areas. A sales manager normally considers factors such as the market potential, geographical size of the territory, number of accounts in the territory, time required to move from one account to another, competition intensity, and impact of electronic commerce (e-commerce) when designing sales territories. These factors are critical in determining the efficiency and effectiveness of the salesforce performance. Companies strive to balance their territories because this can increase the sales and reduce the costs.

Coudounaris (2011) posits that effective sales territory design is important in enabling salespeople to perform well, which is reflected in the effectiveness of the organization. He further posits that a territory which is

well designed will give more returns as opposed to poorly designed territories, since selling efforts that are optimal are as a result of best marketing decisions. Thus, this has a significant positive impact on salespersons' attitudes and eventually performance. Zoltners, Sinha and Lorimer (2011) conceptualize sales territory design using dimensions such as customer coverage, market potential, the number of accounts in territory, travel cost/time, and reward systems. Grant et al. (2001) contend that sales territory design is a major determinant of a salesperson's opportunity to perform well and also to improve their ability to earn incentive pay where incentives are linked directly to territory-level individual performance. Sales territory design is the independent variable in the current study.

The detergent manufacturing sector in Kenya occupies a central role both in terms of providing employment and as a key component of the manufacturing sector which in 2018 contributed 10% of the Kenyan gross domestic product. The sector employs about 3000 employees directly and creates about 5000 jobs indirectly (KAM, 2019). It is an important sector in helping the government to achieve the Big Four Agendas of food security, affordable housing, manufacturing, and affordable healthcare to all citizens and in achieving the vision 2030 goals. Through local manufacturing of detergents, the sector helps the government to achieve one of the big four agenda namely manufacturing. The sector is a key driver in helping the government to achieve the universal health care for all agenda by improving both personal hygiene and quality of manufactured foods, which in turn ensures less wastage in food processing which is in line with the government's food security agenda. Moreover, the import duty taxes levied on the detergent raw materials and value added taxes on the detergents is part of the money the government utilizes to implement the affordable houses agenda. Furthermore, detergents are important components in the fight against diseases, especially the new COVID-19 disease through the washing of hands and facilities. Detergents are key components in achieving cleanliness and hygiene in our homes, hospitals, offices, institutions, and food factories. Many of the detergent manufacturing companies use in-house salesforce to sell the detergents, and superior service is important to ensure the firm is competitive and to cultivate a lasting clientele relationship (Wangari, 2012). One of the critical issues that sales managers in the detergent producing firms in Kenya face is how to improve the performance of their salesforce. This critical yet unsettled issue is particularly pertinent during the current economic decline with rising sales calls costs, decreasing customer interest in taking investment purchasing decisions and heightened competition.

2.   Materials

The study is anchored on Expectancy Theory (Vroom, 1964), Resource Based View (Penrose, 1959; Wernerfelt, 1984; Barney, 1991; Andersen, 2012), Equity Theory (Adams, 1963), and Agency Theory (Jensen & Meckling, 1976; Eisenhardt, 1989). The effect of STD on salesforce performance is underpinned on the equity theory, and performance of the salesforce is underpinned on the expectancy and agency theories. Equity theory (EQT) is a cognitive theory concerned with how individuals perceive inputs and outputs in organizations (Cron, 1983). It was developed in the 1960s by Stacy J. Adams. Although early research on equity theory concentrated on perception of pay inequality and its relationship to performance (Campbell & Prichard, 1976), recent studies have extended application of equity theory to variety of employee/organization relationships (Telly, French & Scott, 1971). These studies have found strong support for the equity theory propositions, and this suggests that the theory is an appropriate framework which managers can use to evaluate reactions of their salesforce to territory design and changes.

According to Adams (1963), employees seek to maintain equity between the inputs that they bring to a job and the outcomes that they receive from it against the perceived inputs and outcomes of others. Inputs are the contributions that an employee brings to the organization and may be in form of age, education, effort, hard work, experience, and skill. Outcomes refer to the results that are being evaluated and may be in form of salary, rewards, punishments, recognition, praise, achievement, reputation, and satisfaction (Goodman, 1974). The structure of equity in the organization is based on the ratio of inputs to outputs. Individuals review their inputs and outcomes versus that of others. In situations of inequality, they experience cognitive dissonance than individuals in equitable situations. The greater the perceived inequality an individual experiences, the greater is the strength of the behavioral tendency towards reducing inequality (Campbell & Pritchard, 1976).

Expectancy theory (Vroom, 1964) is an ideal motivational theory for reviewing the performance of the salesforce. From a sales management perspective, expectancy theory views motivation as the desire and willingness of the salesforce to expend effort on a given task (Fu, 2015). Sales motivation has three components: one, the choice to initiate effort toward a certain task, two, choice of level of effort to expend, and three, choice to persist in the expenditure of that level of effort (Johnson & Marshall, 2013). Expectancy theory posits that behavior and performance are based on conscious choices, and that the motivation of the salesforce to expand effort is based on their expectation of success. The salesforce will tend to perform tasks when greater value is attached to the reward and the probability of performing the task well. To improve sales performance, the management needs to make sure that the

salesforce expand effort on the right tasks, work with an adequate level of effort, and do not give up easily.

Resource-based view (Penrose, 1959; Wernerfelt, 1984; Barney, 1991; Andersen, 2012) argues that the performance and competitive advantages of a firm revolves on combination of distinct skills, assets, and capabilities through utilization of resources and core competencies. The theory asserts that resources which are treasured, scarce, unique, and non-replaceable give the firm good performance and a competitive advantage. It assumes that resources are more valuable when they are serving customers, are scarce, durable, not easily imitated, and contribute to profit.

The agency theory (AT) (Jensen & Meckling, 1976; Eisenhardt, 1989) views an organization as being made up of principals and agents. In this study, the organization is the principal and the salesforce is the agent. Often, conflicts arise in the agency relationship because the principal and the agent have different goals and risk preferences, and they do not always share information. Goal incongruence leads them to prefer different courses of action during their agency relationship. The goal of both the principal and the agent is maximum utility as each party acts in his or her own best interest. Utility for the principal is high sales and profits, whereas utility for the agent is high compensation at least effort. Agency theory addresses the relationship problem of how the organization can control the sales forces' activities to enhance efficiency and make the goals of the principal and agent congruent.

According to Anderson and Oliver (1987), sales organizations have two main approaches through which they can monitor and control the behavior of their salesforce namely; outcome based and behavior based. In outcome-based control systems, salespeople are left alone to achieve results in their own way using their own strategies. Salespeople are held accountable for their results and not for how they achieve the results. Under such a system, a salesperson is responsible for his or her performance but is free to select the method of achievement. In this control system, the salesforce is measured on parameters such as overall sales achieved, accounts gained, profitability, and expenses against set targets. In behavior-based control system, managers know what they want salespeople to do. Hence, they monitor their work in order to ensure that the salesforce behaves accordingly. Salespeople in this system are evaluated not on the basis of their sales achievement but on the number of factors that may result in performance (Anderson & Oliver, 1987). These factors include their technical knowledge, product demos, time management, teamwork, and sales presentations.

3.   Statement of the Problem

Despite the view that sales territory design may play a critical role in salesforce performance, it has received limited attention in research studies of

factors that influence the performance of the salesforce. Churchill et al. (1985), in a study on the effect of effort, territory situation and rater on the performance of salesforce performance, observed that out of 315 cases only 44 (14%) considered the effect of sales territory design. Furthermore, even though some studies have been carried out on the relationship between sales territory design and salesforce performance, inconsistent findings have been observed. Some authors argue a direct relationship (Fatima, 2018; Adusei, Tenkorang & Tweneboah, 2016; Ríos & López, 2013), some argues no direct relationship (Vazzana, 2017; Olivares, Garcia, Loranca, Rosas & Flores, 2015), while others opines a moderate relationship (Kwiatek, 2011; Zoltners et al., 2011; Verbeke et al., 2011). It is of utmost importance for marketers to find out the influence sales territory design has on salesforce performance, and also to resolve the debate on whether the influence is direct or not. This therefore prompted the current study to determine the influence of sales territory design on salesforce performance in the detergent manufacturing companies in the Kenyan context.

Previous studies on the influence of STD on salesforce performance have yielded mixed results. For instance, according to Fatima (2018), satisfaction of salesperson with sales territory design positively influences salesforce performance which in turn has a positive impact on sales organization effectiveness. In the same vein, Zoltners et al. (2009) argue that poorly designed sales territories lead to poor sales as the salesforce spend too much time traveling from one account to another. Furthermore, salesforce in territories with too few accounts will spend time on nonproductive activities and in the long run may feel demotivated due to low sales and commissions and might end up exiting the business leading to lost sales. Grant et al. (2001) found that satisfaction with sales territory design had favorable outcome on salesforce motivation, job satisfaction, and sales performance. In addition, Rajagopal (2010) argue that sales territory design does not directly influence salesforce performance as it is based on factors often beyond the control of the salespeople such as the size of the salesforce, buying power of the accounts, geographical dispersion of accounts, time required to service each account, and competitive intensity. From the reviewed literature, it is evidenced that most studies argue that sales territory design influences sales force performance positively. Thus, the study empirically examined the influence of STD on sales force performance in the context of a developing economy such as Kenya.

4.   Methods

The current study adopted positivism philosophy and descriptive cross sectional design. The unit of analysis was the sales people in the detergent manufacturing companies in Kenya who are members of Kenya Association

of Manufacturers (KAM) as per list obtained from KAM in December 2018. This study further used primary data which was collected by administering semi-structured questionnaires to the salespeople. Data was collected from 232 salespeople chosen using systematic random sampling from the pool of salespeople in each detergent manufacturing company in the list. The data collected was analyzed using the Statistical Package for Social Science (SPSS) software. A combination of both descriptive and inferential statics was used to describe the manifestations of the variables in the data collected. Both simple and multiple linear regression analysis were used to determine the extent to which the variables are related. Multiple regression models were used to test the significance of the influence of the independent variable on the dependent variable. Fischer distribution test (F-test) was used to test the significance of the independent variable and the overall model. The p-value for the F-statistic was used to determine the robustness of the model. This was done at 95% confidence level ($p < 0.05$).

5.   Results

The objective was to determine the effect of sales territory design on salesforce performance. A simple regression analysis was utilized where sales territory design was regressed against salesforce performance. This process aimed at testing the objective of the study which was to determine the relationship between sales territory design as the predictor variable and salesforce performance as the outcome variable for detergent manufacturing companies in Kenya. The hypothesis formulated was that:

H_{01}: There is no significant relationship between sales territory design and salesforce performance of detergent manufacturing companies in Kenya.

5.1.   Descriptive Statistics for Market Potential Manifestations

The respondents were required to indicate the extent to which they thought market potential component of sales territory design influenced salesforce performance in the detergent manufacturing companies in Kenya. To measure market potential manifestations, a set of five items was used. The variables were measured using a Likert scale ranging from 1.0 -5.0, where the mean of 1.0-1.8 (very small extent), 1.8 – 2.6 (small extent), 2.6 – 3.4 (moderate extent), 3.4 – 4.2 (large extent), and 4.2 – 5.0 (very large extent). The generated results are presented in Table 1.

Table 1. Descriptive Statistics for Market Potential

One-Sample Statistics	N	Mean	Std. Deviation	Coefficient of Variation
The customers have high regard for the quality of the firm's products delivered within each market segment	232	2.6078	.94733	0.363268
The firm dominates the potential markets with large volumes of its products compared to the competitors	232	2.8707	.80615	0.28082
The firm's product portfolio commands the highest market share in all the potential markets	232	3.0259	.94398	0.311967
The firm's products have a strong brand image than products from the competitors	232	2.8319	.87891	0.310361
The firm's products are regarded as affordable by the customers compared to products from competing firms	232	2.8017	.96895	0.345844
The firm's products are preferred by customers more than products from competitors	231	3.0346	.97294	0.320616
The firm's products are available in all large distribution channels more than products from the competitors	232	2.8103	.92968	0.330812
Average mean score		**2.8547**	**0.921134**	**0.323384**

The results above show an average mean score of 2.85, standard deviation of 0.921, and coefficient of variation at 32%. This is moderate mean depicting an average market potential. The coefficient of variation (32%) implies that sales people in detergent manufacturing companies consider market potential as a measure of sales territory design, as this is a good contributing factor towards their performance.

5.2. Descriptive Statistics for Geographical Size of the Territory

Based on the geographical size of the territory being a construct of sales territory design, respondents were required to indicate the extent to

which they thought it manifests among the detergent manufacturing companies in Kenya. To measure its manifestations, a set of five items was used. The variables were measured using a Likert scale of 1.0 -5.0, where the mean of 1.0-1.8 (very small extent), 1.8 – 2.6 (small extent), 2.6 – 3.4 (moderate extent), 3.4 – 4.2 (large extent), and 4.2 – 5.0 (very large extent). The generated results are presented in Table 2.

Table 2. Descriptive Statistics for Geographical Size of the Territory

One-Sample Statistics	N	Mean	Std. Deviation	Coefficient of Variation
The firm's sales territories are too large compared to territories of competing firms	232	3.3448	.90313	0.27001
The location of the customers in the sales territories is too dispersed making it difficult to visit all the accounts	232	3.3664	1.00185	0.297603
Customers at the extreme opposite sides of the sales territory are not reachable within one day	231	2.8398	.87743	0.308976
The size of the firm's sales territories should be reduced in size to guarantee better customer coverage	231	3.3203	.77542	0.233539
The size of the firm's sales territories is reasonable and ensures that all customers are serviced effectively	229	3.4236	.89813	0.262335
The size of the firm's sales territories is too small compared to competing firms leading to over servicing of the customers	232	2.6379	.93417	0.354134
The size of the firm's sales territories should be increased to increase on resources utilization	232	2.6595	1.00669	0.378526
The firm designs the size of its territories based on numbers of potential clients in the target territory	230	2.8304	1.05397	0.372375

The firm's sales territories are geographically-based to ease access to customers	231	2.5065	.99070	0.395252
Average mean score		**2.992133**	**0.937943**	**0.319194**

The results shows that geographical size of the territory on average manifests among the detergent manufacturing companies in Kenya at 2.99, standard deviation of 0.94, and coefficient of variation of 32%. This is a moderate mean depicting that geographical size of the territory is moderate as far as salesforce performance is concerned.

5.3. Descriptive Statistics for Number of Accounts in the Territory

The descriptive analysis of the number of accounts in the territory was analyzed. Respondents were required to indicate the extent to which they thought it manifests among the detergent manufacturing companies in Kenya. To measure its manifestations, a set of five items was used. The variables were measured using a Likert scale of 1.0 -5.0 where the mean of 1.0-1.8 (very small extent), 1.8 – 2.6 (small extent), 2.6 – 3.4 (moderate extent), 3.4 – 4.2 (large extent) and 4.2 – 5.0 (very large extent). The generated results are presented in Table 3.

Table 3. Descriptive Statistics for Number of Accounts in the Territory

One-Sample Statistics				
	N	**Mean**	**Std. Deviation**	**Coefficient of Variation**
The firm designs optimum number of accounts in a sales territory so as to optimize coverage by the salesforce	232	2.5517	1.02645	0.402261
The number of accounts in the sales territory are based on the sales potential of the clients	231	2.6061	1.01114	0.38799
The number of accounts in the sales territory are designed based on the geographical terrain of the territory	232	2.6207	.99918	0.381265
The number of accounts in the sales territory are based on sales of the current customers	232	2.5905	.93071	0.359278
The number of accounts in the sales territory is	232	2.6293	1.09331	0.415818

based on how customers are accessible by road				
There are too many accounts in the firm's sales territories making it difficult to reach all customers	232	3.1293	.90721	0.289908
There are adequate number of big accounts in the firm's sales territories to generate good sales	232	2.9310	.80285	0.273917
There is too much work load in the firm's sales territories making it difficult to adequately serve all customers	231	3.4286	.93848	0.273721
The accounts in the firm's sales territories are evenly distributed to balance the salesforce work load	232	3.5948	.92562	0.257489
Most of the accounts in the firm's sales territories require frequent visits to maximize on sales	232	3.6853	.83233	0.225851
There are accounts in the firm's sales territories that have not been visited due to too many accounts in the sales territories	232	3.6681	.91036	0.248183
Average mean score		3.039582	0.943422	0.319607

The average mean score of the analysis of the number of accounts in the territory is 3.04, standard deviation of 0.94, and coefficient of variation of 32%. The average mean score is neutral, which implies that number of accounts in the territory is manifested moderately as far as performance of sales people is concerned. The value of CV (32%) is good depicting uniform variation on the manifestation of number of accounts in the territory among the detergent manufacturing companies in Kenya.

5.4. Descriptive Statistics for Travel Time

Travel time was analyzed to determine how it manifests among the detergent manufacturing companies in Kenya. Respondents were required to indicate the extent using a Likert scale of 1.0 -5.0, where the mean ranges from 1.0-1.8 (very small extent), 1.8 – 2.6 (small extent), 2.6 – 3.4 (moderate extent), 3.4 – 4.2 (large extent), and 4.2 – 5.0 (very large extent). The generated results are presented in Table 4.

Table 4. Descriptive Statistics for Travel Time

One-Sample Statistics	N	Mean	Std. Deviation	Coefficient of Variation
The travel time from one customer to another in the firm's sales territories is reasonable to enable servicing of all the customers	232	3.1983	.85503	0.267339
It is possible to reach all the customers in the firm's sales territories within the stipulated time	232	3.2026	.78260	0.244364
The firm encourages booking of appointments with customers to reduce travel time inconveniences	231	3.1861	.91603	0.287508
The firm's sales territories are designed based on geographical distances to manage travel times	232	3.9612	.84937	0.214422
There is adequate time to meet all the customers in the firm's sales territories so as to maximize on the sales	232	3.7759	.94054	0.24909
The layout of the firm's sales territories ensure sales people spend more time meeting customers than on travelling	231	3.9134	.86041	0.219863
There is not enough time to meet all the customers within the firm's sales territories and this leads to low sales	232	3.2328	.79346	0.24544
Average mean score		3.495757	0.856777	0.246861

The average mean score of travel time as shown in Table 4 is 3.49, standard deviation of 0.86, and coefficient of variation of 25%. This implies that respondents agreed that travel time is very critical in influencing salesforce performance in the detergent manufacturing companies in Kenya.

5.1.5. Descriptive Statistics for Competition Intensity

The descriptive statistics for competition intensity was analyzed to determine how it manifests among the detergent manufacturing companies in Kenya. Respondents were required to indicate the extent using a Likert scale of 1.0 -5.0, where the mean ranges from 1.0-1.8 (very small extent), 1.8 – 2.6 (small extent), 2.6 – 3.4 (moderate extent), 3.4 – 4.2 (large extent), and 4.2 – 5.0 (very large extent). The generated results are presented in Table 5.

Table 5. Descriptive Statistics for Competition Intensity

One-Sample Statistics	N	Mean	Std. Deviation	Coefficient of Variation
There is too much competition in the firm's sales territories making it difficult to generate adequate sales	232	3.3578	.72466	0.215814
The firm has gained some customers from competition this year	232	3.3319	.70078	0.210324
The firm has lost some customers to competition this year due to too much competition	232	3.2716	.82675	0.252705 s
The firm's sales have been on a decline over the last five years due to too much competition	232	2.9957	.78678	0.262636
New competitors come to the firm's sales territories every year making it difficult to meet our sales targets	232	3.3491	1.01230	0.30226
Some competitors exit from the firm's sales territories every year due to too much competition.	232	3.0431	1.05594	0.346995
The firm's sales have being on an increase over the last 5 years year	232	3.2284	1.26370	0.391432
Average mean score		3.225371	0.91013	0.283167

The results of the descriptive statistics of the competition intensity showed that it manifested moderately at a mean score of 3.22, standard deviation of 0.910, and coefficient of variation of 28%. It is further depicted that a CV of 28% is good, implying that competition intensity is key in determining salesforce performance among the detergent manufacturing companies in Kenya.

5.1.6. Summary Statistics for Sales Territory Design

The sales territory design variables were measured after the reduction of results into composite scores. Table 6 displays a summary of descriptive statistics results for sales territory design sub-components.

Table 6. Summary Descriptive Statistics for Sales Territory Design

No.	Sales Territory Design (Composite Scores)	N	Mean Score	Std. Deviation	CV (%)
i)	Market Potential	232	2.85	0.92	32
ii)	Geographical size of the territory	232	2.99	0.94	32
iii)	Number of accounts in the territory	232	3.04	0.94	32
iv)	Travel Time	232	3.49	0.86	25
v)	Competition Intensity	232	3.22	0.91	28
Overall		**232**	**3.118**	**0.914**	**30**

The results in Table 6 show that the mean score of the sub-variables of the sales territory design was 3.118, with a standard deviation of 0.914, and a coefficient of variation (CV) of 30%. This means that sales territory design is well manifested in the detergent manufacturing companies in Kenya as also indicated by a CV of 30%, implying that it is a strong contributor to salesforce performance. The sub-variable with highest manifestation is travel time with mean score of 3.49, followed by competition intensity with a mean of 3.22, number of accounts in the territory with a mean score of 3.04, geographical size of the territory with a mean score of 2.99, and finally market potential with a mean score of 2.85. The market potential, geographical size of the territory, and number of accounts in the territory had the highest coefficient of variation (32%) respectively, slightly higher than the other sub-variables, but it is still a good contributor to salesforce performance. The travel time had the lowest coefficient of variation (25%) compared to other variables, meaning that it was viewed as being manifested highly in the detergent manufacturing companies in Kenya. Thus, this contributes highly to the salesforce performance.

The simple regression equation for the relationship is represented by the following equation:

$$SFP_1 = a + \beta_1 STD_1 + \varepsilon_1$$

Where:

SFP_1 = Composite index of salesforce performance.

   a = constant (intercept)

   β = regression coefficient

STD_1 = Composite index of sales territory design

  ε_1 = error term

The derived statistical results from a simple regression analysis are presented in Table 7.

Table 7. Regression Results for the Effect of Sales Territory Design on Salesforce Performance

Model Summary[b]										
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics					Durbin-Watson
					R Square Change	F Change	df1	df2	Sig. F Change	
1	.792[a]	.627	.625	.38810	.627	386.400	1	230	.000	1.860
a. Predictors: Constant, Sales Territory Design										
b. Dependent Variable: Salesforce Performance										

ANOVA[a]						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	58.201	1	58.201	386.400	.000[b]
	Residual	34.643	230	.151		
	Total	92.844	231			
a. Dependent Variable: Salesforce Performance						
b. Predictors: Constant, Sales Territory Design						

Coefficients[a]								
Model		Unstandardized Coefficients		Standardized Coefficients			Collinearity Statistics	
		B	Std. Error	Beta	t	Sig.	Tolerance	VIF
1	(Constant)	.342	.149		2.287	.023		
	Sales Territory Design	.927	.047	.792	19.657	.000	1.000	1.000
a. Dependent Variable: Salesforce Performance								

The study found a strong positive relationship between sales territory design and Salesforce performance (R= .792). Coefficient of determination (R^2 =.627) indicates that sales territory design explain 62.7 % of variation in salesforce performance. The overall model was statistically significant (F=386.4, p<0.05). The significant relationship is further manifested by the t-value in the coefficient table (β=.927, t=19.657, p<0.05). Therefore, this depicts that sales territory design is key in determining salesforce performance in detergent manufacturing companies in Kenya. Thus, the hypothesis that there is no significant relationship between sales territory design and salesforce performance was rejected and an alternative hypothesis was supported.

Conclusions, Implications, and Recommendations
The study determined the effect of sales territory design on salesforce performance. The study found a strong relationship between sales territory design and salesforce performance, depicting that sales territory design has a major influence in determining salesforce performance in detergent manufacturing companies in Kenya. Thus, the hypothesis that there is no

significant influence of sales territory design on salesforce performance is rejected. The findings of the study showed that sales territory design is an important ingredient that contributes to salesforce performance. These findings reinforce the RBV Theory (Penrose, 1959; Wernerfelt, 1984; Barney, 1991; Andersen, 2012) that contends that resources in an organization are important factors in influencing a firm's competitiveness. Firms should strive to design territories that are efficient and effective that leads to superior performance for their salesforces. Sales managers should design sales territories that the salesforce is able to cover adequately within assigned time, and ensure that the salesforce spend less time travelling and more time with their customers and deliver maximum sales from the sales territories. From a global perspective where detergents are being used to fight COVID-19 pandemic, policy makers should focus on how to optimize on sales territory designs which includes exploiting digital channels as new sales territories to circumvent challenges provided by COVID-19 restrictions on the traditional sales territory designs. The study has shown that sales territory design has a significant impact on the salesforce performance of detergent manufacturing companies in Kenya. Sales managers must take cognizance of the fact that one of their main duties is segmenting their customers into groups or regions in order to efficiently drive marketing and distribution decisions over separate spans and customer bases. This is aimed to deliver products and services that satisfy both current and potential customers. Thus, suitable and effectively implemented sales territory designs are necessary to effectively guide the placement of existing resources in pursuit of desired company goals.

Furthermore, as the detergent manufacturing industry increasingly advances its profile in the national economic arena, there is an apparent need to make sure that maximum attention is given to its long-term market growth and structure. There is need for the development and implementation of a long-term vision and strategy for the detergent manufacturing industry in the country. Thus, sales practitioners, scholars, and other relevant stakeholders should focus on designing innovative and efficient sales territories to drive the detergent products to the target market and to further improve sales performance and profit margins for the industry.

Limitations of the Study

This study like any other undertaking in the enterprise of human research had some limitations, and every effort and precaution was undertaken to deal with them and ensure that they did not significantly affect the findings of the study. First, this research was limited to an emerging economy with notably few detergent manufacturing facilities often using old technology and with a relatively low market development. This would therefore imply that caution should be taken into account when attempting to generalize the

findings to more developed markets in the region and other parts of the world which record many detergent manufacturing facilities with sophisticated and modern technology. Secondly, the study presumed existence of a linear relationship between sales territory design and salesforce performance. There is a possibility of the study variables having a different form of relationship like a curvilinear relationship that the current study did not explore. It is worth noting that besides the analytical techniques adopted in this research, there are possibly other methodologies that can be deployed in descriptive studies not applied in this study. It is acknowledged that this does not in any case water down the findings of the study. The adoption of such other statistical procedures and operationalization of variables could have led to enhanced utility in the understanding of the underlying mechanisms behind sales territory design. The other methodological limitation lies in the heart of data and data collection which is an extremely expensive process especially in the absence of data bases. In this study, questionnaires were developed and were completed by the respondents covering huge geographical territories. Although this study had faced such listed limitations as earlier stated, every effort was made to ensure that these limitations did not significantly affect the findings of the study.

References:

1. Adams, J. S. (1963). Toward an understanding of inequity. *Journal of Abnormal and Social Psychology,* 67, 422-436
2. Adusei, C., Tenkorang, C. & Tweneboah, I. (2016). Sales Territory Management and Distributor Performance in the Telecommunications Industry in Ghana. *Expert Journal of Msarketing*, *4*(2).
3. Andersen, J. (2012). A resource-based taxonomy of manufacturing MSMEs. International Journal of Entrepreneurial Behavior & Research, 18(1), 98-122.
4. Anderson, E. & Oliver, R. L. (1987). Perspectives on behavior-based versus outcome-based salesforce control systems. *Journal of Marketing*, *51*(4), 76-88.
5. Barney, J. (1991). Firm resources and sustained competitive advantage. *Journal of Management*, 17(1), 99-120.
6. Berthon, P. R., Pitt, L. F., Plangger, K. & Shapiro, D. (2012). Marketing meets Web 2.0, social media, and creative consumers: Implications for international marketing strategy. *Business Horizons*, *55*(3), 261-271.
7. Campbell, J. P. & Pritchard, R. D. (1976). Motivation theory in industrial and organizational psychology. *Handbook of industrial and organizational psychology*, *63*, 130.

8. Carton, Robert, B. & Charles, W. Hofer. "Organizational financial performance: Identifying and testing multiple dimensions." *Academy of Entrepreneurship Journal* 16, no. 2 (2010): 1.

9. Churchill Jr, G. A., Ford, N. M., Hartley, S. W. & Walker Jr, O. C. (1985). The determinants of salesperson performance: A meta-analysis. *Journal of Marketing Research*, *22*(2), 103-118.

10. Coudounaris, D. N. (2011). Influences of managerial drivers on export sales units' performance of small and medium-size enterprises. *Journal of Global Marketing,* 24, 324–344

11. Cron, W. L. (1983). *Predicting Salesforce Reactions to New Territory Design According to Equity Theory Propositions.* Historical Working papers.

12. Crosno, J. L. & Brown, J. R. (2015). A meta-analytic review of the effects of organizational control in marketing exchange relationships. *Journal of the Academy of Marketing Science*, *43*(3), 297-314.

13. Eisenhardt, K. M. (1989). Control: Organizational and economic approaches. *Management Science,* 31(2), 134-149.

14. Fatima, Z. (2018). Impact of Sales Territory Design and Salesforce Performance on Sales Organization Effectiveness: A Review of Studies. *Amity Global Business Review*, 12.

15. Fatima, Z. & Azam, M. K. (2017). Relationships between salesforce control systems and salesforce performance: A review of studies. *The Marketing Review*, *17*(4), 451-468.

16. Fu, F. Q. (2015). Motivate to improve salesforce performance: The sales training perspective. *Performance Improvement*, *54*(4), 31-35.

17. Goodman, P. S. (1974). An examination of referents used in the evaluation of pay. *Organizational Behavior and Human Performance,* 12(2), 170-195.

18. Gordon, G. L., Shepherd, C. D., Lambert, B., Ridnour, R. E. & Weilbaker, D. C. (2012). The training of sales managers: current practices. *Journal of Business & Industrial Marketing,* 27(8), 659-672.

19. Grant, K., Cravens, D. W., Low, G. S. & Moncrief, W. C. (2001). The role of satisfaction with territory design on the motivation, attitudes, and work outcomes of salespeople. *Journal of the Academy of Marketing Science*, *29*(2), 165-178.

20. Groza, M. D., Locander, D. A. & Howlett, C. H. (2016). Linking thinking styles to sales performance: The importance of creativity and subjective knowledge. *Journal of Business Research*, *69*(10), 4185-4193.

21. Gupta, M. K. & Lipner, S. R. (2020). Hand hygiene in preventing COVID-19 transmission. J Am Acad Dermatol, 82, 1215-1216.

22. Johnson, M. W. & Marshall, G. W. (2013). Sales force management: Leadership, innovation, technology. Routledge.

23. Owino, Joseph O. & Francis Kibera (2015). "The influence of organizational culture and market orientation on performance of microfinance institutions in Kenya."

24. Kenya Association of Manufacturers Report (2018). *Manufacturing in Kenya under the 'Big 4 Agenda'.* A Sector Deep-dive Report.

25. Kumar, V., Jones, E., Venkatesan, R., Sarang Sunder, & Robert Leone, P. (2014). Measuring and Managing a Salesperson's Future Value to the Firm. *Journal of Marketing Research,* 51, 591-608.

26. Kütz, M. (2016). I*ntroduction to E-Commerce: Combining Business and Information Technology*. Bookboon

27. Kwiatek, P. (2011). Sales force organization and territory design. *Sales Management: A multinational Perspective*, 205.

28. Liu, C. H., Tzeng, G. H., Lee, M. H. & Lin, H. C. (2016). *Improving Sales Performance of Cruise Product in the Travel Agency.* Travel and Tourism Research Association: Advancing Tourism Research Globally 53.

29. Meckling, W. H. & Jensen, M. C. (1976). Theory of the firm: Managerial behavior, agency costs and ownership structure. *Journal of Financial Economics*, *3*(4), 305-360.

30. Miao, C. F. & Evans, K. R. (2013). The interactive effects of sales control systems on salesperson performance: a job demands–resources perspective. *Journal of the Academy of Marketing Science*, *41*(1), 73-90.

31. Owino, A. O. (2015). *The effect of funding on the financial performance of commercial banks in Kenya* (Doctoral dissertation, University of Nairobi).

32. Olivares, E., Garcia, S., Loranca, Rosas, J. & Flores, J. (2015). *Sales force deployment and territory partitioning with multiple objectives.*

33. Panda, T. K. & Sahadev, S. (2019). *Sales and distribution management.* Oxford: Oxford University Press.

34. Penrose, E. (1959). *The theory of the growth of the firm.* New York: John Wiley& Sons.

35. Peteraf, M. A. (1993). The cornerstones of competitive advantage: a resource-based view. *Strategic Management Journal,* 14(3), 179-191.

36. Olivares, E., Garcia, S., Loranca, Rosas, J. & Flores, J. (2015). Sales force deployment and territory partitioning with multiple objectives.

37. Rajagopal, A. (2010). Measuring performance of sale force: analysis of administrative and behavioural parameters. *International Journal of Economics and Business Research*, *2*(5), 399-413.

38. Ríos, R. Z. & López, J. F. (2013). Commercial territory design planning with realignment and disjoint assignment requirements. *Omega*, *41*(3), 525-535.
39. Schmelz, D. R. (2017). Personal Selling and Sales Management Abstracts. *Journal of Personal Selling & Sales Management*, *37*(2), 170-184.
40. Telly, C. S., French, W. L. & Scott, W. G. (1971). The relationship of inequity to turnover among hourly workers. *Administrative Science Quarterly,* 164-172.
41. Vazzana, M. (2017). *Relationships Between Sales Management Control, Salesperson Role, and Salesperson Performance* (Doctoral dissertation, Walden University).
42. Verbeke, W., Dietz, B. & Verwaal, E. (2011). Drivers of sales performance: a contemporary meta-analysis. Have salespeople become knowledge brokers? *Journal of the Academy of Marketing Science, 39*(3), 407-428.
43. Vroom, V. H. (1964). *Work and motivation.* New York: Wiley.
44. Wangari, D. G. (2012). Corporate Brand Image and Business Customer Purchase Decision Making of Detergents in Ecolab East Africa Limited. *Unpublished MBA Project, University of Nairobi. Journal of the Academy of Marketing Science*, *39*(3), 407-428.
45. Wernerfelt, B. (1984). A resource-based view of the firm. *Strategic Management Journal*, *5*(2), 171-180.
46. Zoltners, A. A., Sinha, P. & Lorimer, S. E. (2009). *Building a winning sales force: Powerful strategies for driving high performance*. AMACOM Division American Management Association.
47. Zoltners, A. A., Sinha, P. & Lorimer, S. E. (2011). Sizing the sales force and designing sales territories for results. In *the Oxford handbook of strategic sales and sales management*.

Proposition d'un Cadre Conceptuel d'analyse de la Responsabilité Sociétale des Universités (RSU) : Cas du Maroc

Alami Hasnaa
Professeure Habilitée à l'École Nationale de Commerce et de Gestion
Université Chouaïb Doukkali, El Jadida. Laboratoire d'Études en Sciences
Économiques et de Management (LERSEM)
Alami Asmaa
Professeure Habilitée à la Faculté des Sciences Juridiques, Économiques et
Sociales Université Hassan II, Casablanca. Laboratoire des Études
Juridiques, Civiles et Fikh Moaamalat

Résumé

Comme dans la plupart des pays Américains, Nord-Américains et Européens, les Universités marocaines ne doivent pas se limiter à leurs fonctions principales d'enseignement et de recherches. Elles sont appelées à remplir de nouvelles missions et assumer de nouvelles responsabilités conformes aux directives et aux principes du développement durable. À l'image de la responsabilité sociale des entreprises, l'objectif de la présente recherche est de construire un cadre conceptuel de la responsabilité sociale des Universités marocaines. Deux modèles théoriques ont constitué l'ossature du cadre d'analyse : la théorie des parties prenantes et le modèle de Carroll. Le travail est basé sur une approche descriptive, il cherche à croiser les missions d'enseignement et de recherche des Universités marocaines avec les deux modèles théoriques. La coaction de ces deux approches permet d'appréhender finement les quatre responsabilités que les Universités doivent prendre en compte : responsabilité économique, responsabilité académique,

responsabilité légale et responsabilité discrétionnaire, afin qu'elles remplissent pleinement leurs missions de formation-recherche.

Mots clés: Responsabilité sociale des entreprises, Responsabilité sociale des universités, Parties prenantes, Pyramide de Carroll

Proposal of a Conceptual Framework for Analyse of Social Responsibility of Universities (RSU): The Case of Morocco

Alami Hasnaa
Professeure Habilitée à l'École Nationale de Commerce et de Gestion Université Chouaïb Doukkali, El Jadida. Laboratoire d'Études en Sciences Économiques et de Management (LERSEM)
Alami Asmaa
Professeure Habilitée à la Faculté des Sciences Juridiques, Économiques et Sociales Université Hassan II, Casablanca. Laboratoire des Études Juridiques, Civiles et Fikh Moaamalat

Abstract
        As in most American, North American and European countries, Moroccan universities should not limit themselves to their main teaching and research functions. They are called upon to fulfill new missions and assume new responsibilities in accordance with the directives and principles of sustainable development. Like corporate social responsibility, the objective of this research is to build a conceptual framework for the social responsibility of Moroccan universities. Two theoretical models formed the backbone of the analytical framework: stakeholder theory and Carroll's model. The work is based on a descriptive approach, it seeks to combine the teaching and research missions of Moroccan universities with the two theoretical models. The coaction of these two approaches provides a detailed understanding of the four responsibilities that universities must account for: economic responsibility, academic responsibility, legal responsibility and discretionary responsibility, so that they fully fulfill their training-research missions.

Keywords: Social responsibility of universities, Corporate social responsibility, Stakeholders, Pyramid of Carroll

Introduction
    Si la responsabilité sociale des entreprises (RSE) est un principe qui peut être appliqué à toutes les organisations, qu'elles soient privées ou publiques, il n'en demeure pas moins cependant que son importance est accrue lorsqu'il

s'agit d'entités qui ont une mission de service public. C'est le cas des Universités, qui en plus de leurs activités principales d'enseignement et de recherche, doivent répondre aussi à des enjeux sociétaux et participer à un développement durable. Ce questionnement sur la Responsabilité Sociale des Universités (RSU) n'est pas une question de mode, mais une préoccupation portée par la déclaration de Lisbonne qui invite les Universités à relever les défis du progrès économique et de la stabilité sociale.

L'Europe souhaite à présent que ses Universités jouent un rôle encore plus important en permettant à la société civile de relever les défis du XXIème siècle. Face aux impacts des changements climatiques, aux défis énergétiques, à l'allongement de l'espérance de vie, à la rapidité des progrès technologiques, à l'interdépendance liée à la mondialisation et à l'accroissement des inégalités économiques tant en Europe qu'entre l'Europe et les autres continents, l'étude, la recherche fondamentale et les innovations technologiques et sociales sont nécessaires pour résoudre les problèmes émergents et pour garantir aux différents peuples le progrès économique et la stabilité sociale[1].

Au Maroc, la RSU, loin d'être un luxe, est aujourd'hui une nécessité. Les Universités marocaines ne doivent plus fonctionner dans l'ignorance totale des attentes de la société. Elles sont appelées à redéfinir leurs fonctionnements en se référant au modèle de la performance sociale de Carroll afin de remplir pleinement leurs missions de formation-recherche, répondre aux attentes de leurs parties prenantes et drainer les réformes que le Maroc a déjà dessinées dans le cadre du courant de Nouveau Management Public (New Public Management)[2] vers les résultats escomptés. D'où les questions suivantes : Qu'est-ce qu'on entend par responsabilité sociale des Universités ? Et comment appréhender ses dimensions ?

Le présent travail est basé sur une approche descriptive. Il cherche dans la première partie à délimiter les contours de la RSE et de la RSU. Dans la deuxième partie, il croise les missions traditionnelles des Universités (enseignement et recherche) avec deux modèles théoriques : la théorie des parties prenantes et le modèle de Carroll. La coaction de ces deux approches permet d'appréhender finement les quatre responsabilités dont les entreprises doivent rendre compte : responsabilité économique, responsabilité légale, responsabilité éthique et responsabilité discrétionnaire.

---

[1] La déclaration de Lisbonne, Les universités européennes après 2010: la diversité dans la poursuite d'un objectif commun page 8.

[2] Le Nouveau Management Public est défini par Hood (1991, P.P 3-4) comme « l'ensemble des doctrines administratives sensiblement similaires qui a dominé le programme de réforme bureaucratique dans beaucoup de pays depuis la fin des années 70 ». Autrement parler, c'est la transposition remodelée des techniques de gestion du secteur privé au secteur public.

La responsabilité sociale des entreprises (RSE) : contours et dimensions

Avant de s'intéresser à la RSU, on revient d'abord sur la définition et les contours de la notion de RSE.

La RSE : une vision ancestrale de la performance sociale des entreprises (PSE)

L'idée de la responsabilité sociale qui remonte au début du XXème siècle a donné naissance à un management dédié à l'étude des relations entre l'entreprise et son environnement. La notion de la RSE vient s'ajouter à de nombreux autres concepts qui renvoient presque à la même notion (éthique, développement durable, entreprise citoyenne). Son succès auprès des dirigeants des entreprises traduit la volonté de mieux concilier l'économique, le social et l'environnemental en vue de rechercher de nouvelles alternatives face aux constats alarmants de détérioration de la planète et de disparité grandissante au niveau de la répartition des richesses.

La RSE n'est pas simplement un concept théorique ou une simple notion à la mode, mais un changement idéologique intégrant de nombreux défis managériaux.

Sur le plan académique, c'est Bowen (1953) qui a ouvert le débat sur la RSE. Selon lui, elle se veut être une réponse aux thèses défendues par plusieurs auteurs sur le pouvoir disproportionné dont jouissent les entreprises et leurs dirigeants dans nos sociétés modernes.

Bowen (1953) propose de définir la RSE de la façon suivante :

> Le terme de Responsabilités Sociales des hommes d'affaires sera utilisé fréquemment. Il renvoie aux obligations des hommes d'affaires de suivre les politiques, de prendre les décisions, ou de suivre les orientations qui sont désirables en termes d'objectifs et de valeurs pour notre société. Cette définition n'implique pas que les hommes d'affaires, en tant que membres de la société, ne disposant pas d'un droit à critiquer les valeurs acceptées au sein de la société et pouvant contribuer à leur amélioration. En effet, au vu de leur large pouvoir et influence, il peut sembler indispensable qu'ils prennent part à ce débat. Cependant, il est fait à travers la présente étude, l'hypothèse qu'en tant que subordonnés à la société, ils ne doivent pas mépriser les valeurs socialement acceptées ou placer leurs propres valeurs au-dessus de celles de la société. Des synonymes de la responsabilité sociale sont : la responsabilité publique, les obligations sociales ou la morale d'entreprise. Le terme doctrine de la responsabilité sociale renvoie à l'idée, désormais largement exprimée, selon laquelle la prise en compte volontaire d'une responsabilité sociale de

l'homme d'affaires est, ou pourrait être un moyen opérationnel pour résoudre des problèmes économiques et atteindre plus globalement les objectifs économiques que nous poursuivons[3].

Pour institutionnaliser la RSE, Bowen (1953) fait émerger trois types de règles :

- Une règle cognitive : pour qu'elle devienne une force structurante de l'action des managers, il est nécessaire qu'ils considèrent comme naturelle l'idée de la responsabilité sociale.
- Une règle normative : il s'agit du rôle des établissements de formation à la gestion et les associations de dirigeants qui doivent être le vecteur de diffusion de cette nouvelle représentation de l'entreprise et la responsabilisation des futurs managers.
- Une règle coercitive : c'est la pression exercée par la loi, l'environnement de l'organisation ou le public.

Bowen (1953) a le mérite de montrer que la RSE est un défi qui renvoie à de nouvelles formes collectives d'actions, impliquant des transformations à plusieurs niveaux (savoirs, lois, pratiques, discours, mentalités…). Plusieurs autres auteurs vont dans le même sens que Bowen (1953) et participent à l'enrichissement de la littérature sur la RSE. Parmi eux, Davis (1960) stipule que la RSE renvoie à la prise en considération par l'entreprise, de problèmes qui vont au-delà de ses obligations économiques, techniques et légales étroites ainsi qu'aux réponses que l'entreprise donne à ces problèmes. Ce qui signifie qu'une entreprise n'est pas socialement responsable si elle se conforme au minimum requis par la loi. Quant à McGuire (1963), il précise encore que l'idée de la responsabilité sociale suppose que l'entreprise n'a pas seulement des obligations légales ou économiques, mais qu'elle a aussi des responsabilités qui vont au-delà de ses obligations envers la société.

Sur la base de ces définitions, la RSE ne veut pas dire que le social l'emporte sur l'économique, mais elle appelle à une cohérence et une coexistence entre les deux.

Les apports de Bowen (1953), combinés à ceux de Davis (1960) et de McGuire (1963), même s'ils représentent le début d'une vision structurée et formalisée de la RSE, restent des débats philosophiques stériles et non pragmatiques. C'est pourquoi certains auteurs comme ci-dessous ont développé une approche pratique et stratégique de la RSE en proposant le concept de la réceptivité sociale puis les modèle de la performance sociale.

---

[3] Bowen (1953). Social Responsibilities of the Businessman. Harper, New York, p. 6.

De la RSE à la réceptivité sociétale (RS)

La montée en puissance des mouvements d'activistes durant la période 1965-1979 a suscité un grand débat sur la manière de conduire les entreprises. L'enjeu pour les entreprises est de trouver une approche pragmatique pour répondre aux exigences de la société. Dans ce contexte, est né le concept de réceptivité sociale des entreprises pour pallier l'insuffisance de la RSE. La réceptivité renvoie à la capacité de réponse aux pressions sociétales (Frederick, 1978). Elle s'interroge sur les aspects pratiques délaissés par la RSE et s'attaque au management des relations entre l'entreprise et la société. La réceptivité est fondée sur les problèmes d'opérationnalisation de la RSE qui se base sur trois idées clés difficiles à appréhender : la conscience des managers, leur renonciation à la quête de profit et leur discrétion. Si la responsabilité est le nom, la réceptivité serait le verbe, si la responsabilité se penche sur des discours philosophiques, la réceptivité s'échappe aux discours philosophiques en faveur d'une approche managériale (Frederick 1978).

Cette réceptivité sociale a permis de relancer le débat autour de la RSE en l'orientant vers une approche managériale qui privilégie le processus de réponse. Ces débats ont permis l'émergence de deux concepts intégrateurs de la RSE : la performance sociale et les parties prenantes.

De la réceptivité à la performance sociale (PS)

Le courant de la performance sociale identifie la manière d'être responsable en s'intéressant principalement aux questions suivantes : Comment être responsable et quels types de problèmes sociaux une entreprise doit-elle prendre en compte dans ses décisions stratégiques (Bird *et al*., 2007; Maignan & Ralston, 2002; Maignan *et al*., 2005).

Plusieurs modèles peuvent être convoqués pour définir le concept de performance sociale (Gond & Mullenbach, 2006). Certains modèles expliquent son contenu, d'autres expliquent les processus de sa mise en œuvre et d'autres encore sa diffusion aux différents niveaux organisationnels et institutionnels des relations de l'entreprise avec ses parties prenantes et la société. Toutefois, dans le cadre de cette recherche, on se réfère au modèle de Carroll (1979) pour les raisons suivantes :

- Il est le plus utilisé pour appréhender la RSE (Jamali, 2008 ; Pinkston & Carroll, 1996 ; Schwartz & Carroll, 2003) ;
- Il est considéré comme étant simple dans la compréhension de la RSE (Pinkston & Carroll, 1996) ;
- Il est testé et validé empiriquement à plusieurs reprises (Aupperle *et al*., 1985 ; Pinkston & Carroll, 1996) ;

- Il est proche de la vision de Milton Friedman[4] qui considère que seules les responsabilités économiques sont du ressort des entreprises et que c'est aux gouvernements de traiter les aspects sociaux ;
- Il récapitule les différentes responsabilités qu'une entreprise est susceptible d'avoir comme obligation envers la société dans laquelle elle évolue (Carroll, 1979).

Théorie d'une organisation socialement responsable

Pour Carroll (1979), une organisation socialement responsable devrait s'efforcer de faire du profit, obéir à la loi, être éthique et être une bonne entreprise citoyenne (figure 1).

La responsabilité économique reflète la croyance que les entreprises ont une obligation d'être productives et profitables ainsi que de rencontrer les besoins des consommateurs. La deuxième responsabilité qui est de nature légale, indique que la responsabilité économique est abordée dans les limites du droit écrit. La troisième responsabilité est éthique ; elle reflète les codes, normes et valeurs non écrits implicitement dérivés de la société. La responsabilité éthique va au-delà des simples cadres juridiques et peut être à la fois entreprise avec rigueur et énoncée de manière nébuleuse et ambiguë. La responsabilité discrétionnaire est de nature volontaire ou philanthropique et en tant que telle, difficile à déterminer et à évaluer. Plus l'entreprise sera socialement responsable, plus elle se retrouvera en haut dans la pyramide.

La pyramide de Carroll (1979) est présentée dans la figure 1 évoquant la responsabilité sociale des entreprises dont voici le contenu :

---

[4] Milton Friedman, dans son article « The Social Responsibility of Business is to Increase its Profits » (The New York Times Magazine, Septembre 13, 1970) a soutenu l'idée selon laquelle la responsabilité principale des entreprises et des managers est d'augmenter le retour sur investissement des actionnaires et que les aspects « sociaux » ne sont pas à prendre en considération par les entreprises.
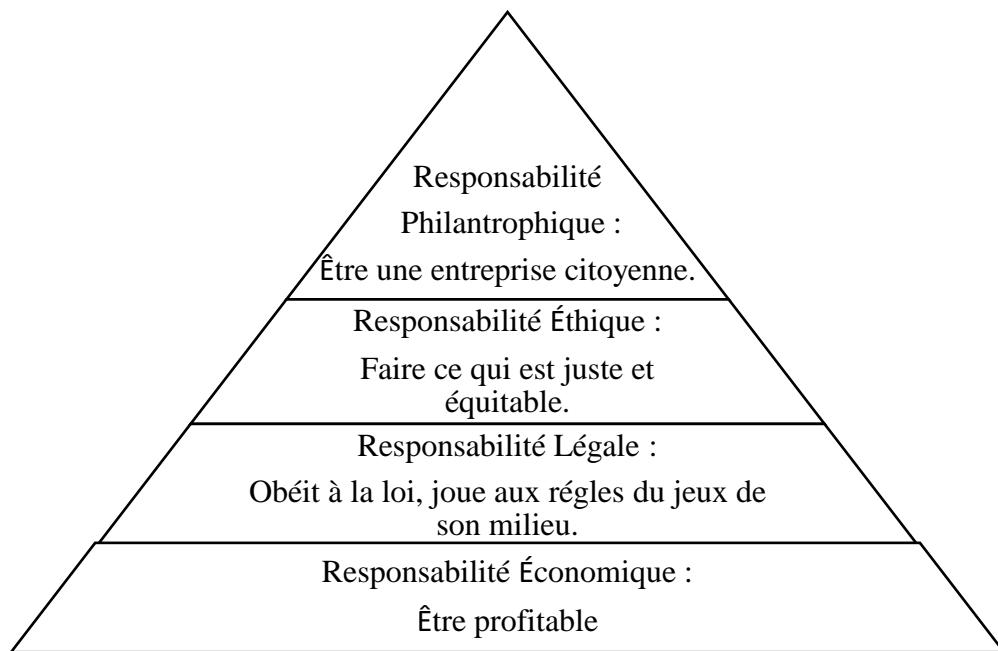
Figure 1. La RSE selon la pyramide de Carroll (1979).
Source : Carroll (1979).

La pyramide suggère qu'il y a une hiérarchie dans les niveaux de responsabilité : au sommet il y a les responsabilités discrétionnaires qui seraient les plus importantes, au bas de la pyramide, les responsabilités économiques représentant le niveau le moins avancé en matière de responsabilité sociale. La distinction de Carroll (1979), entre responsabilité éthique et philanthropique repose sur les attentes supposées de la société : les activités éthiques seraient celles attendues par la société et les activités philanthropiques seraient celles désirées par la société.

D'une performance sociale à une responsabilité envers les parties prenantes de l'entreprise

Largement utilisée dans les travaux sur le développement durable, la théorie des parties prenantes est la plus actuelle et la plus appropriée pour modéliser la RSE car elle présente le cadre théorique pour reconnaître des responsabilités de l'entreprise envers ses parties prenantes (Mullenbach, 2007).

La responsabilité envers les acteurs répond à la question « Envers qui les entreprises sont-elles responsables?». Elle s'intéresse à l'identification des groupes qui méritent ou sont en droit d'exiger l'attention des gestionnaires et ceux qui ne le sont pas (Mitchell *et al*., 1997).

Le terme "parties prenantes" ou *Stakeholder* ou ayants droit, ou dépositaires apparaît pour la première fois en 1963 au sein d'un mémorandum du Stanford Research Institute comme une personne ou un groupe des personnes sans le soutien desquelles l'entreprise cesserait d'exister (Mullenbach, 2003). Selon cette définition, l'entreprise doit ajuster ses objectifs de manière à donner à chacun (dirigeants, employés, actionnaires, fournisseurs, distributeurs) une part équitable de satisfactions (Ansoff, 1968).

La définition la plus reconnue et la plus utilisée est celle de Freeman (1984) qui définit les parties prenantes comme tout groupe et individu qui peut affecter ou être affecté par la réalisation des objectifs de l'entreprise. Freeman (1984) distingue les acteurs internes et les acteurs externes à l'entreprise. Selon lui, les internes sont majoritairement les propriétaires de la firme, les travailleurs, les consommateurs et les fournisseurs. Par les acteurs externes, il note les gouvernements, les concurrents, les défenseurs des consommateurs, les défenseurs de l'environnement, les groupes d'intérêts et les médias. Clarkson (1995) donne une autre typologie des parties prenantes ; il distingue les parties prenantes primaires et secondaires en fonction de leur importance et de leur degré de priorité pour l'entreprise. Les parties prenantes primaires ont une relation contractuelle et formelle avec l'entreprise. Elles sont importantes pour le fonctionnement et la survie de l'entreprise. Il s'agit, selon Clarkson (1995), des propriétaires, des employés, des clients et des fournisseurs. Les parties prenantes secondaires, à l'opposé, si elles peuvent certes influencer l'entreprise et sa performance ou être affectées par ses activités, ne sont pas essentielles à sa survie ; il s'agit des médias, des consommateurs, des groupes de pression, des gouvernements, des concurrents, du public et de la société.

La prise en compte de ces acteurs et la capacité de la firme à répondre à leurs demandes est essentielle pour assurer sa réussite (Hillman & Keim, 2001). La responsabilité de l'entreprise consiste à intégrer leurs besoins dans ses valeurs organisationnelles et à atteindre des objectifs économiques et non économiques indispensables à son succès (Loussaïef *et al*., 2014).

En se conformant à la classification de Clarkson (1995), les Universités elles-mêmes peuvent être définies comme un ensemble de parties prenantes primaire et secondaire.

- Les parties prenantes primaires contribuent à la pérennité, le succès et à la performance des Universités. Cependant, ne pas obtenir le soutien de ces parties prenantes peut contribuer à l'échec des Universités et au manque de leur attractivité pour les futurs étudiants, enseignants-chercheurs et autres personnels, à la grève et à la diminution de ses ressources financières de fonctionnement et d'investissement…

- Les parties prenantes secondaires incluent les médias mais également les collectivités locales, les entreprises, les associations qui peuvent être internes ou externes à l'Université.

Cette classification de parties prenantes rejoint celle de Leroux & Pupion (2012) qui identifient des parties prenantes primaires et secondaires des Universités comme ci-après :

- Les parties prenantes primaires participent activement à la production du savoir et à la gestion administrative des établissements universitaires (enseignants, personnels non-enseignants, étudiants en formation initiale ou continue, équipe présidentielle, État, mais aussi les différents conseils ou agences).
- Les parties prenantes secondaires, avec qui les Universités ne sont pas liées par un contrat central (collectivités locales, entreprises).

Selon Leroux & Pupion (2012), c'est l'équipe présidentielle qui constitue le groupe central. Elle doit prendre en charge les relations avec les autres parties prenantes et assurer aussi la gestion de celles-ci.

En se référant à la représentation de Freeman (1984), à la classification de Clarkson (1995) et à la proposition de Leroux & Pupion (2012), les parties prenantes des Universités peuvent être présentées comme illustré dans la figure 2:
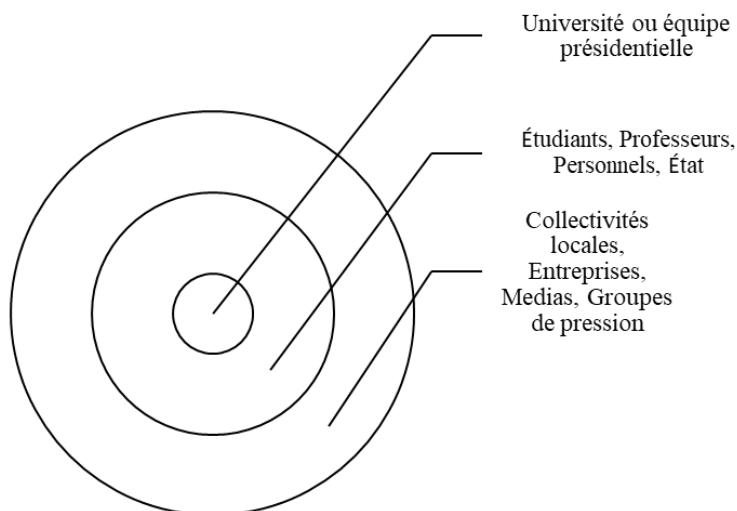

Figure 2. Les groupes des parties prenantes des Universités.
Source : Élaboration par les auteures (2021).

Côme (2013) affirme que les Universités sont désormais un ensemble des parties prenantes et que les dirigeants des Universités doivent pleinement

exercer leurs responsabilités et répondre aux attentes de leurs parties prenantes.

Au Maroc, cette ouverture sur les parties prenantes n'est pas seulement souhaitable, mais rendue obligatoire en vertu de la loi 01-00 portant l'organisation de l'enseignement supérieur qui fait des universités des établissements ouverts sur leur environnement économique et social par le biais d'ancrage partenarial. Les Universités marocaines ont pour missions de faire bénéficier à la société, des résultats de leurs recherches, de leurs savoir-faire et de leurs ressources ; de pourvoir l'ensemble des secteurs en cadres qualifiés, compétents et aptes à participer au développement économique.

Dans ce cadre, pour des Universités marocaines désireuses d'aller vers une performance sociale et sociétale, doivent prendre en compte les attentes de leurs parties prenantes et les considérer comme des leviers de performance.

Les Universités marocaines face au défi de la responsabilité sociale (RS) : vers une performance sociétale

Au Maroc, le roi Mohammed VI affirme dans son discours en 2005 lors de la troisième édition des « Intégrales de l'Investissement » que la responsabilité sociale des investisseurs a pour pendant et pour condition, la responsabilité sociale des entreprises. À cet égard, nous suivons avec intérêt et satisfaction l'action des entreprises marocaines qui se sont volontairement engagées dans cette voie, a-t-il conclu. La Confédération Générale des Entreprises Marocaines (CGEM) a également adopté sa charte de la responsabilité sociale des entreprises au cours de cette période. Cette charte RSE répond aux 09 objectifs principaux conformes à la norme ISO 26 000 et aux normes internationales les plus importantes ci-après:

- respecter les droits humains ;
- améliorer en continu les conditions d'emploi et de travail ainsi que les relations professionnelles ;
- protéger l'environnement ;
- prévenir la corruption ;
- respecter les règles de la saine concurrence ;
- renforcer la transparence du gouvernement d'entreprise ;
- respecter les intérêts des clients et des consommateurs ;
- promouvoir la responsabilité sociale des fournisseurs et sous-traitants ; et puis
- développer l'engagement sociétal.

Grâce à cette charte, la CGEM contribuera à la performance et à la compétitivité des entreprises marocaines en intégrant les défis de la RSE : un développement économique inclusif et durable. Dans ce cadre, la

responsabilité sociale appliquée aux Universités marocaines ne doit pas être envisagée comme un simple facteur de production de « capital humain » ; au contraire, elle doit contribuer « au développement humain durable ».

La RSU est un nouveau sujet qui interpelle les Universités pour renforcer leur attractivité et améliorer leur marque employeur. La RSU est une variante de la responsabilité sociale des organisations concernant un établissement public chargé de réaliser plusieurs objectifs : l'égalité, la neutralité, l'adaptabilité, l'inclusion et la continuité, sans oublier ses missions principales d'enseignement et de recherche. Selon Bourgeois (1892)[5], dans les villes où seront les Universités de demain, vous trouverez ce sentiment très net qu'il y a là quelque chose de grand, quelque chose de profitable au pays, car ce qui se fait dans ces Universités, ce n'est pas seulement de la science professionnelle et spéciale, mais aussi la préparation de ces idées générales qui doivent être communes au peuple tout entier.

L'intérêt croissant pour la question de la RSU date des années 1990, et ceci à travers plusieurs déclarations :
- La déclaration de Dar es Salaam[6] en Tanzanie sur les libertés académiques et la responsabilité sociétale des institutions et des universitaires affirme que toutes les institutions d'enseignement supérieur doivent œuvrer à la pleine réalisation des droits économiques, sociaux, culturels, civils et politiques des personnes et s'efforcer de prévenir l'utilisation pernicieuse des sciences et de la technologie au préjudice de ces droits. De même, les institutions d'enseignement supérieur doivent s'élever contre toute forme de répression politique et toutes violations des droits de l'Homme au sein de notre société, et que tous les membres de la communauté académique doivent exercer leurs droits en toute responsabilité sans préjudice des droits des autres et des besoins de la société.
- La déclaration de Kampala[7] stipule que les membres de la communauté intellectuelle doivent encourager et contribuer aux actions positives pour corriger les inégalités anciennes et contemporaines fondées sur le sexe, la nationalité et/ou autre handicap social. Ils doivent aussi s'acquitter de leurs rôles et de leurs fonctions avec compétence, intégrité et au mieux de leurs capacités, et exercer

---

[5] Discours prononcés à la séance générale du Congrès le samedi 11 juin 1892, Paris, Imprimerie nationale, p. 25-32.

[6] http://www.codersia.org. Liberté académique en Afrique.
[7] http://www.codesria.org/ Déclaration de Kampala sur la liberté intellectuelle et la responsabilité sociale.

leurs fonctions conformément aux normes morales et scientifiques les plus strictes.

- La déclaration de Talloires[8] sur les rôles civiques et les responsabilités sociales de l'enseignement supérieur précise que les établissements d'enseignement supérieur existent pour servir et renforcer la société dont ils font partie. Grâce à l'apprentissage, aux valeurs et à l'engagement du corps professoral, du personnel et des étudiants, nos institutions créent un capital social, préparant les étudiants à contribuer positivement aux communautés locales, nationales et mondiales. Les Universités ont la responsabilité de favoriser chez les professeurs, le personnel et les étudiants un sens de la responsabilité sociale et un engagement envers le bien social qui sont essentiels au succès d'une société démocratique et juste.

- La déclaration des Nations Unies[9] pour l'éducation au service du développement durable (2005-2014) vise à intégrer les valeurs, les activités et les principes indissociablement liés au développement durable à toutes les formes d'éducation et d'apprentissage et de favoriser un changement dans les attitudes, les comportements et les valeurs propre à assurer un avenir plus viable sur le plan social, environnemental et économique.

- La déclaration de l'UNESCO[10] en 2005 note que l'enseignement supérieur doit renforcer ses fonctions de service à la société par des activités visant à éliminer la pauvreté, l'intolérance, la violence, l'analphabétisme, la faim, la dégradation de l'environnement et la maladie, et à développer la paix par une approche interdisciplinaire et transdisciplinaire.

- Le lancement d'un observatoire sur la responsabilité sociale des Universités (ORSU)[11] le 16 mars 2012 par l'association de la fondation étudiante pour la ville (AFEV) et l'UNICEF dont les objectifs sont : favoriser l'engagement solidaire des étudiants et de le reconnaître, promouvoir l'engagement des Universités au sein des territoires en tant

---

[8] La Déclaration de Talloires sur les rôles civiques et les responsabilités sociales de l'Enseignement supérieur.

[9] http://www.unesdoc.unesco.org/ Décennie des Nations Unies pour l'éducation en vue du développement durable (2005-2014).

[10] https://fr.unesco.org/themes/education-au-developpement-durable/comprendre-edd/decennie-des-Nations-Unies.

[11] Le 16 mars 2012, lors des rencontres Universités Entreprises, l'Association de la Fondation Etudiante pour la ville (AFEV) et l'UNICEF ont lancé un Observatoire sur la Responsabilité Sociale des Universités (RSU). Lors de cette rencontre les établissements qui appliquent déjà ce concept ont été mis en avant. C'est, par exemple, le cas de la ville de Nanterre et de son Université.

que ressource éducative et étendre l'engagement des Universités dans le développement durable des territoires.
- La Conférence Mondiale sur l'Enseignement Supérieur[12] (CMES) affirme que les États, les établissements d'enseignement supérieur et leurs partenaires sont invités à se doter de directions claires pour soutenir le développement durable, la démocratie et le renforcement des perspectives humanistes.

Au Maroc, le Conseil Supérieur de l'Éducation, de la Formation et de la Recherche Scientifique[13] (CSEFRS) a élaboré la vision stratégique qui s'étend sur une durée de 15 ans allant de l'année 2015 jusqu'à l'année 2030. Cette vision concerne le système éducatif dans sa globalité et a pour finalité d'asseoir une école nouvelle portée sur trois grands piliers : l'équité et l'égalité des chances, la qualité pour tous et puis la promotion de l'individu et de la société. Les objectifs de cette vision sont :
- le passage de la logique de la transmission linéaire du savoir et de la mémorisation à une logique de l'apprentissage, du développement du sens de la critique, de la construction du projet personnel, de l'acquisition des langues, des connaissances et des compétences, des valeurs et des technologies numériques ;
- l'amélioration continue du rendement interne et externe de l'école ; et
- la création des conditions favorables pour que l'école puisse remplir les missions de socialisation, d'éducation aux valeurs nationales et universelles, d'enseignement et d'apprentissage, de formation et d'encadrement, de recherche et d'innovation, de qualification à l'intégration socioculturelle et à l'insertion économique et enfin d'adéquation continue des programmes et des formations avec les besoins des nouveaux métiers et des métiers de l'avenir et d'une manière générale, avec les exigences du développement durable du pays.

La RSU est donc une responsabilité multi-dimensions qui doit répondre à une demande sociétale multi-acteurs. On peut noter que de nouveaux rôles s'ajoutent à la mission traditionnelle des Universités et qui s'organisent autour de plusieurs responsabilités qui seront détaillées dans le paragraphe suivant. Cependant la particularité et la spécificité de l'enseignement supérieur obligent d'être attentif dans l'utilisation du modèle de Carroll (1979). L'objectif est de ne pas transposer aveuglément cette

---

[12] La Conférence Mondiale sur l'enseignement supérieur : Réinventer le rôle et la place de l'enseignement supérieur pour un avenir durable, 7-9 octobre 2021.
[13] https://www.csefrs.ma. Le conseil supérieur de l'éducation, de la formation et de la recherche.

pyramide de responsabilité sociale dans le monde universitaire, surtout qu'elle est issue du monde de l'entreprise. Une utilisation attentive est fortement demandée.

Vers des Universités marocaines responsables, entrepreneuriales et sociétales

L'analyse des résultats du positionnement du Maroc sur le plan international en 2020[14], met en évidence encore une fois, la nécessité pour le Maroc de :

- renforcer son capital immatériel pour en faire un levier de son positionnement international. Entre 2005 et 2014, le classement international du pays a affiché une baisse significative, due entre autres à la qualité insuffisante du capital humain. Les multiples réformes menées par le Maroc pour développer son capital humain n'ont pas produit des résultats à la hauteur des exigences de développement du Royaume ;
- améliorer le rendement des dépenses d'éducation qui reste insuffisant au regard du taux élevé de déperdition scolaire et de la dégradation de la qualité du système éducatif ;
- réduire le taux élevé du chômage des personnes disposant d'un niveau d'instruction supérieur. Ce qui traduit l'adéquation insuffisante entre la formation et les exigences du marché du travail ;
- améliorer les liens qui restent faibles entre les entreprises, les Universités et les centres de recherche, ce qui affecte les capacités du Maroc en matière de développement de la recherche scientifique et de l'innovation ; et
- améliorer l'indice de l'économie de la connaissance qui a enregistré une perte de 10 places entre 2000 et 2012 sous l'effet des contreperformances enregistrées dans le domaine de l'enseignement supérieur scientifique et technique.

D'après ce constat, on peut voir que les axes sur lesquels les Universités marocaines doivent se pencher et les responsabilités à mener seront :

Une responsabilité académique/économique car en plus des missions traditionnelles d'enseignement et de recherches, une « troisième mission » des Universités apparaît : le développement socio-économique à travers des échanges de savoirs et la mise en œuvre de partenariats externes (Vorley & Nelles, 2008).

---

[14] Institut Royal des Études Stratégiques, 8ème édition 2020.

Au Maroc, la loi 01-00[15] dote les Universités de la personnalité morale, leur accorde une grande autonomie (financière, administrative, pédagogique, culturelle et scientifique) et les transforme potentiellement d'une administration publique en une entreprise publique responsable, comptable des deniers publics avec des objectifs et des obligations de résultats. Ainsi, le périmètre des activités des Universités s'élargit au-delà de leurs missions premières (formation, recherche, production et diffusion du savoir).

L'objectif est le développement d'Universités adaptatives et innovantes capables de participer à la performance économique du pays. La responsabilité académique/économique est une réorientation de la mission traditionnelle des Universités vers :

- une formation professionnalisante qui forme son public aux outils, méthodes et techniques utiles pour agir. Les voies de développement de la professionnalisation sont la formation sur le tas, la formation par alternance, l'analyse de pratiques professionnelles, l'accompagnement et l'enseignement magistral ou la formation magistrale ;
- une formation qui forme à l'intelligence émotionnelle comme source de succès à long terme des entreprises. C'est pourquoi, le paradigme actuel de formation qui est orienté exclusivement vers le développement des capacités intellectuelles devrait élargir, au dire de Bar-On & Parker (2011), la sphère des efforts pour y inclure l'aide systématique des jeunes, afin de développer leurs aptitudes, leurs valeurs et leurs compétences interpersonnelles propres. Donc, avec l'introduction dans l'enseignement universitaire, de certaines matières qui contribuent à l'éducation sociale et émotionnelle, on permettrait aux étudiants un changement positif de leur comportement, mais aussi on va les aider à élaborer un plan d'actions basé sur le développement de compétences émotionnelles ;
- un enseignement supérieur basé sur la formation des compétences intellectuelles qui développent la capacité des étudiants à gérer de nouvelles connaissances et à trouver de nouvelles solutions aux problèmes rencontrés pour assurer la compétitivité des personnes et des entreprises dans l'économie contemporaine. L'enseignement supérieur doit permettre aux individus une autonomie personnelle, une meilleure mobilité sociale, un revenu élevé et une plus grande confiance en soi ;
- une recherche pertinente à vocation économique et sociale : les Universités sont des producteurs importants de nouveautés résultant à la fois de la recherche et de l'activité innovatrice qu'elles développent.

---

[15] Dahir n° 1-00-199 du 15 safar 1421 (19 mai 2000) portant promulgation de la loi n° 01-00 portant organisation de l'enseignement supérieur.

La mission de formation reste importante mais doit se plier aux exigences de la recherche et d'innovations.

Une responsabilité légale : On ne peut pas nier que le respect de la loi renforce le cadre réglementaire et permet la bonne gouvernance de la RSE. En plus, la conformité à la loi est un devoir fondamental pour les Universités et une partie essentielle de leur responsabilité sociale. La RSU impose bien entendu le respect des lois en vigueur, comme facteur préalable à l'intégration de ce concept dans le fonctionnement et le management des Universités et la non-conformité réglementaire peut mettre en cause la pérennité de l'université.

De même, selon les experts de l'UNESCO[16], l'absence de régulation ou une régulation insuffisante des services de l'enseignement supérieur par les pouvoirs publics peut engendrer des coûts plus élevés pour la communauté publique pour une qualité et une pertinence moindres et, par conséquent, accroître les inégalités économiques, sociales et culturelles entre les individus et compromettre ainsi l'accès équitable des citoyens aux biens publics que sont l'éducation et la formation. La loi 01-00 portant organisation de l'enseignement public au Maroc, stipule dans son article 3 que les Universités marocaines doivent assurer plusieurs missions comme le renforcement de l'identité islamique et nationale, la formation initiale et la formation continue, la recherche scientifique et technologique. Elles sont aussi tenues à dispenser les enseignements et les formations initiales et à préparer et délivrer les diplômes y afférents. Cette loi a institué un nouveau mode de gouvernance qui s'inscrit dans le cadre général recommandé par les institutions internationales (OCDE, ISESCO et la Banque Mondiale). Elle précise aussi que l'enseignement supérieur relève de la responsabilité de l'État qui en assure la planification, l'organisation, le développement, la régulation et l'orientation selon les besoins économiques, sociaux et culturels de la nation qui en définit la politique nationale avec le concours de la communauté scientifique, du monde du travail et de l'économie ainsi que des collectivités locales et particulièrement des régions. Les Universités dans l'exercice de leurs missions et responsabilités sont tenues de la réalisation des objectifs de l'État stratège.

Même si la loi est importante, elle ne peut à elle seule régler les problèmes de fond, d'où l'importance de la déontologie et le changement des attitudes.

Une responsabilité éthique : D'après l'article 19 de la déclaration de Dar-es-Salaam[17], tous les membres de la communauté académique ont la

---

[16]http://www.leaders.com.tn/article/quelles-geostrategies-pour-l-enseignement-superieur-en Tunisie? id=9257.

[17] http://www.codersia.org. Liberté académique en Afrique.

responsabilité de remplir leurs fonctions et leurs rôles académiques avec compétence, intégrité et au mieux de leurs capacités. Ils doivent remplir leurs fonctions académiques conformément aux normes éthiques et scientifiques les plus élevées. La loyauté des pratiques, l'éthique et la transparence constituent le socle de la bonne gouvernance sans laquelle la responsabilité sociale échoue. Ces valeurs sont partie intégrante des standards internationaux auxquels le Maroc s'est engagé, notamment la déclaration sur la probité, l'intégrité et la transparence dans la conduite des affaires et de la finance internationale[18]. Il est également signataire de la déclaration de l'OCDE sur l'investissement international et les entreprises multinationales[19]. Dans ce cadre, en plus des responsabilités économique et légale, les Universités aujourd'hui sont interpellées par une responsabilité éthique dans leurs pratiques cognitives, formatives et managériales.

Mais comment se construit donc la responsabilité éthique en milieu universitaire ? S'agit-il de former que des étudiants porteurs de savoirs ou former des hommes ? De transmettre de l'information ou de transmettre des valeurs pour une responsabilité sociale ? De faire de la recherche ou de faire une recherche responsable ? Parler de l'éthique en milieu universitaire c'est inscrire les Universités dans une perspective collective d'élaboration de valeurs et de normes. L'éthique permet d'encadrer, de codifier et de préciser la mission des Universités pour bien servir le bien commun et l'intérêt de ses acteurs internes (la communauté universitaires) et externe (la société).

- L'éthique dans la recherche : La responsabilité éthique dans la recherche fait référence à la notion de morale et comment le chercheur va l'intégrer dans son activité. La morale doit gouverner le travail du chercheur. Elle est le noyau dur qui désigne clairement au chercheur ce qui est permis et défendu et ce qui n'est pas permis. De ce fait, la recherche doit obéir à une morale dans sa conception, son processus, son orientation et sa pratique. Le chercheur éthique c'est celui qui s'intéresse non seulement au produit de la recherche, mais aussi celui qui porte une attention sociétale à la façon de faire la recherche, à ses contenus, à ses déterminants et aux conséquences de ses recherches. Au sens éthique la recherche devrait être sociale, inclusive, juste, significative et durable.

- Un enseignement éthique : Aujourd'hui les milieux universitaires ne peuvent pas rester indifférents face aux changements que connaît notre société ni ignorer les débats autour des notions comme la RSE,

---

[18] OCDE, Déclaration sur la probité, l'intégrité et la transparence dans la conduite des affaires et de la finance internationales, OECD/LEGAL/0383.

[19] http://www.oecd.org/fr. Déclaration de l'OCDE sur l'investissement international et les entreprises multinationales : Promouvoir la responsabilité des gouvernements et des entreprises.

l'éthique, le développement durable, la valeur partagée… Ils sont dans l'obligation de suivre ces changements et de s'interroger sur la qualité de leurs formations et leurs pratiques pédagogiques. Pour Bah (2007), la responsabilité sociale de l'enseignement a le sens d'un devoir à accomplir pour guérir la société actuelle et promouvoir celle de demain. Il s'agit de former non seulement, des individus doués du savoir-faire, mais aussi des individus nantis du savoir-vivre pouvant être au service du développement durable, de la société et du pays. Tout cela suppose que l'enseignant-chercheur doit bien accomplir ses tâches principales (enseignement, création du savoir et formation des compétences par la recherche) avec conscience, compétence et engagement, en ayant une bonne conduite et des bonnes pratiques puis être une référence en termes de moralité, d'intégrité et d'objectivité et faire preuve d'équité, de justice et d'impartialité dans l'évaluation des performances des étudiants.

Une responsabilité philanthropique : C'est tendre le bras vers quelqu'un, c'est aussi le fait de donner volontairement pour le bien public. Aujourd'hui, on assiste à une codification de ce bien public qui recoupe peu ou prou les 17 Objectifs de Développement Durable (ODD) de l'ONU. Les besoins sont donc clairement identifiés, ce qui n'était pas le cas auparavant.

Les Universités marocaines doivent intégrer ces principes dans leurs gestions en proposant des services d'aide ou de soutien aux populations démunies et modestes par des cours d'alphabétisation, l'animation d'activités sportives, ludiques et culturelles pour les enfants et les jeunes qui sont en précarité. Comme le note Boyer (1990), il est du devoir des universités d'assurer leurs missions d'enseignement, de recherche et de service aussi bien dans leur campus qu'auprès des communautés locales.

Une analyse selon la pyramide de Carroll (1979) révèle que la RSU est l'engagement volontaire des Universités à intégrer les préoccupations sociales, professionnelles et éthiques dans leurs différentes fonctions principales (enseignement, recherche, management et facteurs environnementaux) découlant des externalités de leurs activités, lesquelles doivent tenir compte des exigences sociales de leurs parties prenantes (Larrán & Andrades, 2017). Être socialement responsable pour les Universités marocaines c'est :
- se focaliser sur le cœur du métier qui est l'enseignement et la recherche ;
- participer au développement économique de la nation tout en intégrant dans leurs activités et leurs relations avec les parties prenantes les préoccupations du développement durable ;
- intégrer les principes de la bonne gouvernance ;

- respecter la loi qui encadre l'enseignement supérieur ; et
- participer à des activités philanthropiques.

Conclusion

La responsabilité sociale des Universités a, depuis quelques années, attiré l'attention aussi bien des chercheurs que des décideurs. Un des principaux problèmes est celui de connaître les mécanismes à mettre en place pour promouvoir cette RSU et répondre aux attentes des parties prenantes. Dans ce contexte, l'article a proposé un cadre conceptuel pour la RSU. La présente recherche a révélé que la RSU est un construit multidimensionnel et oscille autour de plusieurs dimensions : responsabilité académique, responsabilité éthique, responsabilité légale et responsabilité discrétionnaire. Les Universités marocaines, si elles veulent être des Universités de développement durable ne pourront pas s'empêcher de mener une profonde introspection sur elles mêmes et de procéder à une mise à niveau de leurs modes de fonctionnement et de gestion. Ce qu'il faudrait aussi ajouter au terme de ce travail, c'est l'insuffisance des moyens financiers des Universités marocaines pour concrétiser ce changement vers la durabilité. Le développement des ressources, autres que la subvention de l'État et le recours aux emprunts extérieurs prévus par la loi 01-00, donneraient aux Universités marocaines l'assise financière qui leur manque pour développer leurs pratiques sociétales.

Plusieurs études futures pourraient compléter cette recherche. Une modélisation par équation structurelle permettra de tester le modèle de Carroll en tentant de confirmer la relation entre RSU et performance Universitaire.

References:

1. Ansoff H. (1968). *Stratégies et développement de l'entreprise*, Paris, Ed. Hommes et techniques, 35 p.
2. Aupperle K. E., Carroll A. B. & Hatfield J. D. (1985). An empirical examination of the relationship between corporate social responsibility and profitability. *Academy of Management Journal*, 28(2), pp. 446-463.
3. Bah H. (2007). La responsabilité de l'enseignement dans une Afrique en crise. *Éthiopiques: Revue Socialiste de Culture Négro-Africaine*, (79), pp.199-219.
4. Bar-On R. & Parker J.D.A. (2011). *The Handbook of Emotional Intelligence*. Romanian edition. Bucureşti: Curtea Veche, pp. 363-388.
5. Bird R., Hall A D., Momentè F. & Reggiani F. (2007). Quelles activités de responsabilité sociale d'entreprise sont valorisées par le marché ? *Journal d'Ethique des Affaires*, *76* (2), pp. 189-206.

6. Bourgeois L. (1892). Discours de M. Léon Bourgeois, in *Congrès des sociétés savantes*, Discours prononcés à la séance générale du Congrès le samedi 11 juin 1892, Paris, Imprimerie nationale, pp. 25-32.
7. Boyer E.L. (1990). *Scholarship reconsidered: Priorities of the professoriate*. Washington, DC: Carnegie Foundation for the Advancement of Teaching, 147 p.
8. Bowen H. (1953). *Social Responsibilities of the Businessman*, New York: Harper and Brothers. 150 p.
9. Carroll A. B. (1979). A three-dimensional conceptual model of corporate social performance. *Academy of Management*, (4), pp. 497-505.
10. Clarkson M. B. (1995). A stakeholder framework for analysing and evaluating corporate social performance. *Academy of Management Review*, 20 (1), pp. 92-117.
11. Côme T. (2013). La gouvernance des universités. *Gestion et Management Public*, 2(3). pp.1-5.
12. Davis K. (1960). Can business afford to ignore social responsibilities? *California Management Review,* 2, pp. 70-76.
13. Frederick W. C. (1978). From CSR1 to CSR2: The maturing of business-and-society thought. *Business and Society*, 33(2), pp. 150-165.
14. Freeman E.R. (1984). *Strategic management*: *A stakeholder approach*. Boston: Pitman, p.46.
15. Friedman M. (1970). The social responsibility of business is to increase its profits. *The New York Times Magazine*, pp.32-33.
16. Gond J. P. & Mullenbach-Servayre A. (2006). Les fondements théoriques de la responsabilité sociétale de l'entreprise. *La Revue des Sciences de Gestion: Direction et Gestion*, (205), pp. 93-116.
17. Hillman A. J. & Keim G. D. (2001). Shareholder value, stakeholder management, and social issues: what's the bottom line?. *Strategic management journal*, *22*(2), pp. 125-139.
18. Jamali D. (2008). A Stakeholder approach to corporate social responsibility: A fresh perspective into theory and practice. *Journal of Business Ethics*, 82 (1), pp. 213-231.
19. Larrán Jorge M. & Andrades Peña F. J. (2017). Analysing the literature on university social responsibility: A review of selected higher education journals. *Higher Education Quarterly*, *71*(4), pp. 302-319.
20. Leroux E. & Pupion P. C. (2012). Bilan social et personnel à l'épreuve de la nouvelle gouvernance des universités. *Management Avenir*, (5), pp. 252-271.
21. Loussaïef L., Cacho-Elizondo S., Pettersen I. B. & Tobiassen A. E. (2014). Do CSR actions in retailing really matter for young

consumers? A study in France and Norway. *Journal of Retailing and Consumer Services*, *21*(1), pp. 9-17.

22. Maignan I. & Ralston D. A. (2002). Corporate social responsibility in Europe and the US: Insights from businesses' self-presentations. *Journal of International Business Studies*, *33*(3), pp. 497-514.

23. Maignan I., Ferrell O. C. & Ferrell L. (2005). A stakeholder model for implementing social responsibility in marketing. *European journal of marketing*, 39 (9/0), pp. 956-980.

24. McGuire J. W. (1963). *Business and Society*. McGraw-Hill. *New York, NY*, 144 p.

25. Mitchell R. K., Agle B. R. & Wood D. J. (1997). Toward a theory of stakeholder identification and salience: Defining the principle of who and what really counts. *Academy of management review*, *22*(4), pp. 853-886.

26. Mullenbach A. (2003). Pourquoi les entreprises s'engagent-elles dans la voie de la responsabilité sociale? Un essai d'approche néo-institutionnelle. *Actes de la 5e université de printemps de l'audit social*, IAE de Corse, 22-23 et 24 mai, pp. 265-271.

27. Mullenbach A. (2007). L'apport de la théorie des parties prenantes à la modélisation de la responsabilité sociétale des entreprises. *Revue des sciences de gestion*, 223, pp. 109-120.

28. Pinkston T. S. & Carroll A. B. (1996). A retrospective examination of CSR orientations: have they changed?. *Journal of Business Ethics*, *15*(2), pp. 199-206.

29. Schwartz M. S. & Carroll A. B. (2003). Corporate social responsibility: A three-domain approach. *Business ethics quarterly*, *13*(4), pp. 503-530.

30. Vorley T. & Nelles J. (2008). (Re) conceptualiser l'université: le développement institutionnel dans le cadre et au-delà de la «Troisième mission». Politiques et gestion de l'enseignement supérieur, (3), pp. 145-165.

Resilience and Academic Self-Concept as Explanatory Variables of Achievement Motivation Among College Students

Angelina Abaidoo
Department of Education,
Bia Lamplighter College of Education, Ghana
Isaac Amoako
Department of Education,
Atebubu College of Education, Ghana
Inuusah Mahama
Department of Counseling Psychology,
University of Education, Winneba, Ghana
Opoku Boahen Edward
Department of Education,
Atebubu College of Education, Ghana

Abstract
        People with high achievement motives will act in ways that will help them to outperform others, meet or surpass some standards of excellence, or do something unique. Several variables have been suggested in the literature to significantly contribute to students' achievement motivation. As the principal aim, the study sought to investigate whether or not resilience and academic self-concept significantly contribute to students' achievement motivation. A cross-sectional research design was employed to sample 327 first year college students from five College of Education institutions in Ghana using proportionate stratified sampling procedure. Three instruments (i.e., resilience scale, academic self-concept scale and achievement motivation scale) were adapted and used for the study. Findings of the study showed that

students' sampled were resilient and had high academic self-concept. The results further showed that resilience and academic self-concept variables were significant predictors of achievement motivation. The study recommends that academic counseling within Colleges of Education in Ghana should be made a priority in order to address issues of self-doubt and that of learned helplessness, particularly to maintain or improve individual resilience and achievement motivation. Other implications are discussed.

Keywords: Motivation, Resilience, Self-Concept, Performance, Colleges of Education, Ghana

Introduction

Achievement motivation is a pattern of planning of actions and feelings connected with striving to attain some internalized standard of excellence (Chetri, 2014). Achievement motivation is the attitude to achieve rather than the achievements themselves. It can be considered as extended person- intrinsic motivation because its reward is delayed (Chetri, 2014). Achievement motivation arises from an interaction within the person. Achievement motivation as an intrinsic component can be viewed from the perspective of a person striving to accomplish something difficult, and/or to overcome obstacles in order to attain appreciable standards of life pursuit (Lang & Fries, 2006). Achievement behavior was deemed significant by social cognitive theories of motivation when examining thoughts, beliefs, and emotions (Linnenbrink & Pintrich, 2002). Students with high achievement motives will act in ways that will help them to outperform others, meet or surpass some standard of excellence, or do something unique (Awan, Noureen & Naz, 2011). To some extent, all students are influenced by a need to achieve; however, those students, who hold a high desire of success, often work hard to achieve (Zenzen, 2002). According to Maehr (2008), achievement motivation is largely a social psychological phenomenon, and it often occurs within groups where interpersonal interactions can undermine or facilitate engagement in the tasks to be done. Wigfield and Gladstone (2019) indicated that achievement motivation works in tandem with a constellation of factors such as motivational beliefs, task values, goals, and achievement motives. Literature indicates that achievement motivation is a significant determinant of academic performance because it invigorates and guides the behaviours of learners (Plante, O'Keefe & Théorêt, 2013; Wigfield & Gladstone, 2019; Snyder & Wormington, 2020). Undoubtedly, among tertiary students, achievement motivation is obviously seen as an important variable that facilitates learning and sustains students' interest in the academic environment. On the basis of the foregoing enumerated relevance of

achievement motivation, it is therefore seen as a criterion variable in this study.

Academic self-concept is a composite view of oneself across various sets of specific academic domains, abilities, and perceptions (Trautwein et al., 2006). This is based on self-knowledge and evaluation of values formed through experiences with the interpretation of one's academic environment (Eccles, 2005; Bong & Skaalvik, 2003). Academic self-concept has been noted to vary as students move through academic levels in which their academic self-concepts tend to rise in the direction of their academic achievement (Liu & Wang, 2005; Jacob et al., 2002), while other studies found out that it tends to become weaker (Marsh et al., 2002). Generally, it has been highlighted that academic self-concept influences students' desire to achieve academically (Awad, 2007; Marsh, 2006; Cokley, 2000). However, various researchers concur with the changes in academic self-concept among students, but only a few studies have tackled changes in the instruments used in measuring academic self-concept across various groups of students (Matovu, 2012). Academic self-concept construct has particularly been cited as having influence on student achievement motivation and other relevant school outcome measures (Awan, Noureen & Naz, 2011). In effect, academic self-concept may be seen as an important variable that explains the sustainability of students' desire to perform and excel in academic tasks at all levels. Academic self-concept has been chosen as a variable in this study in order to understand whether it contributes to the explanation of achievement motivation of students.

Resilience has been likened to a set of attributes that help people succeed and cope effectively in the face of adversity (Cyrulnik, 2009). With the growing research in positive psychology, resilience has gained momentum and recognition as a framework for examining the differences between students who flourish within the academic environment and those who struggle to cope (Seligman et al., 2009; Stallman, 2011). Resilience consists of protective processes such as resources, competencies, and skills that dwell within the individual, family, or community (Loh, Schutte & Thorsteinsson, 2014). When people are subjected to great risk situations, these protective factors become very meaningful (Zautra, Hall & Murray, 2010). For example, a resilient individual is more likely to demonstrate increased flexibility and tolerance to new experiences and readily perform self-regulatory behaviours designed to overcome difficulties (Loh et al., 2014). Consequently, resilience appears to serve an important role in the normal adaptive functioning process by facilitating individuals' ability to adjust to alarming challenges and achieve objectives for academic tasks (i.e. achievement motivation). Resilience has been found to predict successful adjustment and motivation to succeed in the face of an increasingly stressful college environment (Hartley, 2011; Leary &

DeRosier, 2012). Resilience was added as a variable in this study to further understand its relationship with college students' achievement motivation.

In Ghana, anecdotal information from some college tutors which incidentally aligned with some empirical information in developed jurisdictions suggest that transitioning to college by students simultaneously encounter a variety of challenges including changes in their environment, new and increased academic pressures, diminished access to previous social support networks, a need to create new peer relationships, and increased personal responsibilities (Galatzer-Levy et al., 2012; Vaez & LaFlamme, 2008). Encountering these numerous challenges as first-year college students may find themselves prone to experiencing greater anxiety, stress, and psychological distress (Bayram & Bilgel, 2008), which may threaten their achievement motivation. Studies in developed jurisdictions have found that resilience contributes to students' adjustment and their sense of achievement (Hartley, 2011; Leary & DeRosier, 2012). Could this be the case for a Ghanaian first-year college of education student? Again, elsewhere, several studies have discovered that academic self-concept accounted for a significant proportion of differences in achievement motivation and academic centered attitudes among college students (Cokley, 2000; Cokley, Komarraju, King, Cunningham & Muhammad, 2003; DeFreitas & Rinn, 2013; Isiksal, 2010; Martin & Marsh, 2006). One may want to know whether the same issues relating to academic self-concept can be said of a college of education student situated in Ghana.

The above questions are not readily answerable, and this is because over the years, studies conducted by Ghanaian scholars have not focused attention on the subject of resilience and academic self-concept influence on achievement motivation, instead the attention has been on other educational related issues which create a knowledge gap within the resilience literature. For purposes of emphasis, some of the empirical studies conducted in Ghana related to resilience include; educational resilience and academic achievement of immigrant students where the study found that personal, positive, environmental, and risk factors contributed to their educational resilience and academic achievement (Kumi-Yeboah, 2016). Students' perspectives on resilience, risk and academic achievement, where the study discovered that social support systems in the form of collective family/kinship values, future orientation and individual characteristic of "not giving up", emerged as protective factors that tend to support academic resilience (Abukari, 2018). For Ibrahim (2018), he was interested in investigating resilience among students' mothers in Ghana where it turnout that factors such as financial difficulty, stigmatization, and lack of social support among others hindered the resilience building process. Moreover, stress management and resilience among junior and senior nursing students in Ghana has also been explored

where it was found that students were somehow resilient. As part of the findings of the same study, emotional and spiritual support along with getting more involved in physical school activities were noted to be the main strategies used by students to deal with stress (Sossah & Asiedu, 2015). Furthermore, Dramanu and Balarabe (2013) researched into relationship between academic self-concept and academic performance where the study revealed a significant positive relationship between academic self-concept and academic performance of students. Finally, Laryea, Saani and Dawson-Brew (2014) also explored the influence of self-concept on students' performance where, at the end of the study, it was found that students' self-concept was perceived positive by students. However, this self-concept does not directly predict students' academic performance. Clearly, as shown by the foregoing studies, knowledge regarding resilience and academic self-concept as explanatory variables of achievement motivation appears to be missing in the resilience literature, and effort towards empirically investigating the same is the motivation behind the conduct of this current study.

Need Achievement and Self-Worth Motivation Theory
From need achievement and self-worth motivation perspectives, students can be broadly characterized in terms of their motive to avoid failure and approach success (Atkinson, 1957; McClelland, 1987). Based on a need achievement model of motivation, students can be characterized in terms of three typologies: the success-oriented student, the failure-avoidant student, and the failure-accepting student.
Success-oriented students tend to be optimistic, adopt a proactive and positive orientation to their studies, and are not debilitated by setback but rather respond to it with optimism and energy (Martin et al., 2001). These students, it can be argued, are highly motivated in a positive and proactive manner and respond most adaptively to setback if it should occur (Martin et al., 2001).
Failure-avoidant students tend to be anxious (Alpert & Haber, 1960) and motivated by a fear of failure, live in self-doubt, and are uncertain about their ability to avoid failure or achieve success (Covington & Omelich, 1991). While these students can often work hard and achieve well, they tend to be adversely affected by setback as it tends to confirm their doubts about their ability and their uncertain control (Covington & Omelich, 1991; Martin et al., 2001). In essence, they lack academic resilience. Often in response to this fear of failure, failure-avoidant students may even actively sabotage their chances of success (e.g., procrastinate, leave study until the last minute, or not study at all), so that they have an excuse if they do not do so well.
Failure-accepting students (sometimes referred to as learned helpless) have given up to the point of not even trying to avoid failure. These students

are generally disengaged from their studies and display a helpless pattern of motivation (Abramson, Seligman & Teasdale, 1978). In many cases, failure-accepting students also actively sabotage their chances of success through not trying at all (Martin et al., 2001). These students lack both motivation and academic resilience.

From need achievement and self-worth motivation perspectives, critical factors such as resilience and positive view of oneself to succeed (academic self-concept) help in sustaining one's motivation to excel in academic tasks. For the success-oriented student, there is a claim of high self-belief (i.e., academic self-concept) and control (i.e., likened to resilience). However, for the failure-oriented student, there is an evidence of self-disbelief and intense anxiety that inhibit the individual to take self-initiatives toward succeeding academically. In summary, the underlying theory for this empirical work is that students who are resilient and have positive academic self-concept are more likely to excel academically since their motivation to do so would be higher.

Research Objectives
The study sought to explore:
- Students' resilience level.
- Academic self-concept level.
- Effect of resilience on achievement motivation.
- Effect of academic self-concept on achievement motivation.

Research Questions
The following research questions guided the study:
1. What is the resilience level of first year college students?
2. What is the academic self-concept level of first year college students?

Hypotheses
The following hypotheses were posed to guide the study.
1. H_0: Students' resilience will not significantly affect their achievement motivation.
   H_1: Students' resilience will significantly affect their achievement motivation.
2. H_0: Students' academic self-concept will not significantly affect their achievement motivation.
   H_1: Students' academic self-concept will significantly affect their achievement motivation.
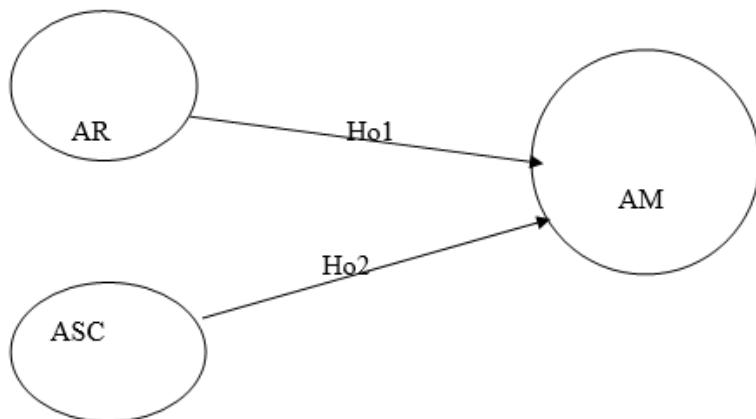
Methods
Design
  The study principally sought to explore the contribution of resilience and academic self-concept to college students. In line with the above intention, descriptive cross-sectional survey design was adopted for the investigation. The quest to measure the relevant variables among respondents to gain knowledge about the state of affairs regarding students' achievement motivation drivers made the choice of the selected design ideal. Furthermore, the design has the advantage of permitting a wide scale survey of relevant audience to provide information that relates to the variables under investigation.

Participants
  First year College of Education students were targeted for the study. They (i.e., first year students) became the prime focus for this study because they are new on college campuses, and they are working harder to strike a balance between academic pressures and adjustment issues. Hence, resilience and self-concept will be relevant to their overall desire to succeed academically. Using a multi-stage sampling approach, five colleges were randomly selected from among the forty-eight 48 Colleges of Education in Ghana, that is, a single college was taken to represent each of the five zones (namely; Ashanti-Brong Ahafo, Eastern-Greater Accra, Central-West, Volta and Northern). At the second stage, a sample of 327 first-year students were selected using proportionate-stratified sampling technique from 2,205 population of first-year students within the Colleges of Education. The proportionate stratified procedure was used because of the difference in numerical strength of first-year students for the various colleges that were selected. In this case, the stratification variable was colleges. Three hundred

and twenty-seven (327) students chosen was a representative of the population of 2,205, using Krejcie and Morgan (1970) sample estimation.

Measures

Three instruments were used in the survey. First of all, the 10-items unidimensional 4-points Likert resilience scale developed by Campbell-Sills and Stein (2007) was adapted and used. All the 10 items have good loadings ranging from .39 to .74. Again, the resilience scale has an internal consistency index of .85 which was measured using Cronbach Alpha. An academic self-concept scale (ASC) developed by Liu and Wang (2005) was also adapted and used. The 7-points Likert ASC- Scale has two hypothetical dimensions, that is, academic confidence dimension which has 10 items measuring students' confidence in academic work. This sub-dimension has Cronbach Alpha reliability index of .85. The second dimension was academic effort dimension which also has 10 items as well. The Cronbach Alpha index was .86. The overall internal consistency index for the ASC-Scale was .89. The third instrument used in this study was a 4-point Likert 10-item Achievement Motivation Scale (Lang & Fries, 2006) which also has two dimensions. The first dimension of AMS measures students' hope for success (HS). There are five items on this sub-dimension and with a Cronbach Alpha of .86. The second sub-dimension of AMS also measures fear for failure. Hence, the dimension is also called fear for failure (FF) dimension. This sub-dimension also has a Cronbach alpha index of .92. The instruments were pilot-tested using 50 college students to fine-tune the items (Amedahe, 2002).

Data Collection Plan

The study went through ethical clearance protocols prior to the administration of the instruments. First of all, authorities of the various colleges were consulted and permissions were sought appropriately. Researchers briefed participants about the aim of the study and sought for their permission to take part through signing of research participation form. Participants were assured of confidentiality and anonymity throughout the process, and they were also given the permission to opt out of the study whenever they so desire. In all, 327 questionnaires were given out to participants to respond to, and all the questionnaires were received after the twenty-one days of data collection exercise. This represented 100% return rate of the entire survey.

Data Analysis

After the data processing which involved coding, entry and cleaning, data on research questions one and two were analyzed using descriptive statistics, specifically, mean and standard deviation. However, hypotheses one

and two were tested using multiple linear regression analysis. Summary of the analysis are shown in Table 1 and 2.

Results
  The data was analyzed by means of both descriptive and inferential statistics. The data were cleaned and relevant assumptions underpinning a particular statistical procedure were checked. The results were presented based on the research questions and the hypotheses.

Research Question One: What is the academic resilience level of first year college students?
The research question sought to investigate the resilience level of respondents which was measured on a continuum. For easy interpretation of the data, mean scores below the standard means (Refer to Table 1) show 'lower level', and mean scores above the standard means show 'high level'. Nonetheless, means scores of the exact standard means show 'moderate level'.
Results from Table 1 shows that respondents (i.e., first-year college students) had high academic resilience level. This is so because the mean scores (M = 3.0, SD = .90) for respondents' academic resilience was above the standard mean score of 2.5. The standard deviation score for resilience also shows that respondent's responses were homogeneous.

Table 1. *Levels of Respondents Resilience and Self-Concept*

Scale	Scale Mean of Means	Standard Deviation	Scale Range	Standard Mean Scores	α
Academic Resilience	3.0	.90	1 – 4	2.5	.85
Academic Self-Concept	2.8	.97	1 – 4	2.5	.89

Research Question Two: What is the academic self-concept level of first year college students?
The aim of this research question was to examine students' self-concept level even as they continue to engage their new academic environment. As in the case of resilience, academic self-concept variable in this study was measured as a continuous variable with academic self-concept scale.
From Table 1, the mean scores (M = 2.8, SD = .97) of academic self-concept which is higher than the standard mean score (2.5) is an indication that respondents had high level of 'academic self-concept'. Implications are discussed in the study.

Table 2. *Model Summary*

Model	R	R^2	Adjusted R^2	S. E. of Estimate	R^2 Change	F Change	df1	df2	Sig. F Change
1	.475	.225	.221	3.891	.225	47.154	2	324	.000

Table 3. *Regression Analysis on Resilience and Self-Concept Impact on Achievement Motivation*

Model	Unstandardized Coefficient		Standardized coefficient			
	B	Std Error	Beta		T	Sig.
1 (Constant)	9.926	2.131			4.659	.000
A.Resilience	.251	.055	.233		4.539	.000
A.Self-Concept	.229	.034	.349		6.794	.000

Dependent Variable: Achievement Motivation, p < .05

Prior to the examination of the predictive value of each of the predictors in explaining the model, preliminary analysis was conducted to test for key assumptions. Standard multiple regression assumptions such as linearity, adequacy of sample size, multicollinearity, normality and homoscedasticity were all satisfied.

The two hypotheses sought to investigate the individual effect of resilience and academic self-concept on students' achievement motivation. The hypotheses were tested using standard multiple linear regression analysis which has resilience and academic self-concept as the predictors in the model, and achievement motivation as a criterion variable.

Results from Table 2 indicated that students' resilience and their academic self-concept accounted for 22.5% of the variance in achievement motivation. The model was significant, $F (2, 324) = 47.154$, $R^2 = .225$, $p = .001$, which means that resilience level and academic self-concept were crucial in predicting students' achievement motivation. Further analysis as shown in Table 3 also revealed that resilience ($\beta = .233$, $t = 4.539$, $p = 001$) and academic self-concept ($\beta = .349$, $t = 6.794$, $p = 001$) were significant predictors of students' achievement motivation. Substantially, a student's dynamic capacity to overcome adversity (i.e., resilience), and the individual's belief about himself or herself relative to academics (i.e., academic self-concept) tend to affect their overall desire for excellence while in school. Implications of the findings are discussed.

Discussion

Achievement motivation emphasizes the attitude to achieve rather than the achievement itself. It actually arises from an interaction within the person. Due to the inherent nature and the critical role of achievement motivation in

the lives of students, it is always important for stakeholders of education to understand the drivers of such psychological construct in order to improve it. This present study aimed at examining the impact of resilience and academic self-concept variables on students' achievement motivation. In line with the general objective, the study explored College of Education students' resilience and academic self-concept level. Findings revealed that college students had high level of resilience. This was not surprising because first year students are mostly noted to have flexible thinking for their new environment as well as strong determination to overcome challenges in the new found context (Loh et al., 2014). Anasuri and Anthony (2018) also discovered that college students in the states of Alabama and Tennessee had high resilience. Hence, they know how and what to do in their educational context. Moreover, McGillivray and Pidgeon (2015) previously discovered university students in Australia to have high resilience. Students having high level of resilience are not only impressive but also crucial since such a status helps them to know what to do when faced with academic and life adversities. This is in line with Ungar and Liebenberg (2011) who opined that resilience which is an individual protective factor is extremely important, and it has a crucial role in the way individuals respond and react in difficult situations.

The present study also discovered college students to have high level of academic self-concept. The findings corroborate with Rubie-Davies and Lee's (2013) study which showed that New Zealand tertiary students had higher academic concept, but differed significantly based on gender. Enhanced self-concept of college students is good because within the self-concept literature, it has been associated with numerous beneficial academic outcomes, such as better course choice, choice of major, career choice and so on (Michie, Glachan & Bray, 2001; Rodriguez, 2009). Respondent rating higher on the resilient and academic self-concept scale was good. However, more crucial was the thought of whether both variables will significantly predict students' achievement motivation. Findings from this present study indicated that resilience and academic self-concept variables were significant contributors of achievement motivation construct. This is to say that students' self-evaluations and resilience do affect their desire to achieve excellence or succeed within the academic environment. The finding is in line with earlier study findings which reported that resilience of students does not only determine how students cope with the academic environment, but also heightened their desire to perform (Hartley, 2011; Leary & DeRosier, 2012). Narasimhan (2018) also intimated that achievement motivation, though it is present in varying degrees in all human beings, is largely influenced by an individual's evaluation of self. In effect, a college student becomes more desirous to succeed the academic environment when he/she has a positive view about the programme and his or her capabilities. The contribution of

resilience and academic self-concept in explaining achievement motivation further strengthens the proposition of need achievement and self-worth motivation theory that, success-oriented students tend to be optimistic, adopt a proactive and positive orientation to their studies, and are not discouraged by challenges but rather respond to it with optimism and energy (Covington & Omelich, 1991; Martin et al., 2001).

Conclusions and Implications for Practice and Research

The findings from the current study suggest that college students who were selected from four regions of Ghana were resilient and had high academic self-concept relevant for meaningful academic journey. The reliance of students implies that, even as fresh men and women of the colleges, they were psychologically ready for the hectic intellectual tasks and were more likely to cope well with adverse stressful situations. Higher academic self-concept implies that students had positive impressions about their own academic capabilities. Hence, they are more likely to actively participate fully in all academic tasks as may be required. Furthermore, the study findings also showed that resilience and academic self-concept were relevant variables for a person to desire excellence or to do well in the programme he or she is doing. This is to say that, in the quest for education stakeholders to improve college students' performance that would translate into quality teacher education in this 21st century, students' resilience and academic self-concept should be a priority and a topical issue for further interrogation. More often than not, stakeholders (i. e., teachers, researchers, education administrators and so on) attention has been on performance. However, the study has revealed that the relevant issues of 'a person's innate ability to cope with stressful academic situations (resilience), and the perception that the person has about his or her own capabilities for a particular discipline or course of action.'

Tutors/lecturers should be encouraged to relate with students with utmost good faith in order to maintain or enhance the teacher-learner relationship that has the potency to improve students' academic self-concept. Thus, tutors/lecturers should at each point in time during instructional period appreciate differences in abilities among students, and work harder to meet the diverse academic needs of students in order to enhance their academic self-concept. Furthermore, academic counseling within Colleges of Education institutions in Ghana should be made a priority and enhanced to address both self-doubt issues and that of learned helplessness, particularly to improve individual resilience and achievement motivation. Future researchers are encouraged to replicate this study in different jurisdictions for better understanding of the issue and generalizability of the study finding. Future researchers are also urged to investigate the joint effect of resilience and academic self-concept on achievement motivation in specific course domains.

References:

1. Abramson, L. Y., Seligman, M. E. & Teasdale, J. D. (1978). Learned helplessness in humans: Critique and reformulation. *Journal of Abnormal Psychology*, *87*(1), 49-61.

2. Abukari, Z. (2018). Not giving up: Ghanaian students' perspectives on resilience, risk, and academic achievement. *SAGE Open*, *8*(4), 12-17.

3. Alpert, R. & Haber, R. (1960). Anxiety in academic achievement situations. *Journal of Abnormal and Social Psychology*, *61*, 207-215.

4. Amedahe, F. K. (2002). Fundamentals of educational research methods. *Mimeograph, UCC, Cape Coast*.

5. Anasuri, S. & Anthony, K. (2018). Resilience levels among college students: A comparative study from two southern states in the USA. *IOSR Journal of Humanities and Social Sciences, 23*(1), 52-73.

6. Atkinson, J. W. (1957). Motivational determinants of risk-taking behavior. *Psychological Review*, *64*(2), 359.

7. Awad, G. (2007). The role of racial identity, academic self-concept, and self-esteem in the prediction of academic outcomes for African American students. *Journal of Black Psychology, 33*, 188-207.

8. Awan, R. U. N., Noureen, G. & Naz, A. (2011). A study of relationship between achievement motivation, self-concept and achievement in English and mathematics at secondary level. *International education studies*, *4*(3), 72-79.

9. Bayram, N. & Bilgel, N. (2008). The prevalence and socio-demographic correlations of depression, anxiety and stress among a group of university students. *Social Psychiatry and Psychiatric Epidemiology, 43*(8), 667–672.

10. Bong, M. & Skaalvik, E. M. (2003). Academic self-concept and self-efficacy: How different are they really? *Educational Psychology Review, 15,* 1-40.

11. Campbell-Sills, L. & Stein, M. B. (2007). Psychometric analysis and refinement of the Connor–Davidson resilience scale (CD-RISC): Validation of a 10-item measure of resilience. *Journal of Traumatic Stress: Official Publication of the International Society for Traumatic Stress Studies*, *20*(6), 1019-1028.

12. Chetri, S. (2014). Achievement motivation of adolescents and its relationship with academic achievement. *International Journal of Humanities and Social Science Invention, 3*(6), 8-15.

13. Cokley, K. (2000). An investigation of academic self-concept and its relationship to academic achievement in African American college students. *Journal of Black Psychology, 26*, 148- 164.

14. Cokley, K., Komarraju, M., King, A., Cunningham, D. & Muhammad, G. (2003.) Ethnic differences in the measurement of academic self-

concept in a sample of African American and European American college students. *Educational and Psychological Measurement Journal, 63,* 707–722.

15. Covington, M. W. & Omelich, C. L. (1991). Need achievement revisited: Verification of Atkinson's original 2 model. In Spielberger, C. D., Sarason, I. G., Kulcsar, Z. & Van Heck, G. L. (Eds.). *Stress and emotion*. New York, NY: Hemisphere.

16. Cyrulnik, B. (2009). *Talking of love: How to overcome trauma and remake your life story*. New York, New York: Penguin Group.

17. DeFreitas, S. C. & Rinn, A. (2013). Academic achievement in first generation college students: The role of academic self-concept. *Journal of the Scholarship of Teaching and Learning, 13*(1), 57-67.

18. Dramanu, B. Y. & Balarabe, M. (2013). Relationship between academic self-concept and academic performance of junior high school students in Ghana. *European Scientific Journal, 9*(34), 94-104.

19. Eccles, J. S. (2005). Influences of parents' education on their children's educational attainments: The role of parent and child perceptions. *London Review of Education, 3*(2), 191- 204.

20. Galatzer-Levy, I. R., Burton, C. L. & Bonanno, G. A. (2012). Coping flexibility, potentially traumatic life events, and resilience: A prospective study of college student adjustment. *Journal of Social and Clinical Psychology*, *31*(6), 542-567.

21. Hartley, M. T. (2011). Examining the relationships between resilience, mental health, and academic persistence in undergraduate college students. *Journal of American College Health*, *59*(7), 596-604.

22. Ibrahim, Z. (2018). Back to school—resilience among student mothers in Ghana: The case of Nkawkaw. *Scientific Research Journal (SCIRJ), 6*(11), 68-73.

23. Isiksal, M. (2010). A comparative study on undergraduate students' academic motivations and academic self-concept. *The Spanish Journal of Psychology, 13*(2), 572-585.

24. Jacob, J. E., Lanza, Osgood, D. W., Eccles, J. S. & Wigfield, A. (2002). Changes in children's self-competence and value: Gender and domain differences across grades one through twelve. *Child Development, 73*, 509-527.

25. Krejcie, R. V. & Morgan, D. W. (1970). Determining sample size for research activities. *Educational and Psychological Measurement*, *30*(3), 607-610.

26. Kumi-Yeboah, A. (2016). Educational resilience and academic achievement of immigrant students from Ghana in an urban school environment. *Urban Education*, *55*(5), 753-782.

27. Lang, J. W. & Fries, S. (2006). A revised 10-item version of the achievement motives scale. *European Journal of Psychological Assessment*, *22*(3), 216-224.

28. Laryea, J. E., Saani, A. J. & Dawson-Brew, E. (2014). Influence of students' self-concept on their academic performance in the Elmina township. *European Journal of Research and Reflection in Educational Sciences, 2*(4), 1-10.

29. Leary, K. A. & DeRosier, M. E. (2012). Factors promoting positive adaptation and resilience during the transition to college. *Psychology*, *3*(12), 12-27.

30. Linnenbrink, E. A. & Pintrich, P. R. (2002). Motivation as an enabler for academic success. *School Psychology Review*, *31*(3), 313-327.

31. Liu, W. C. & Wang, C. K. J. (2005). Academic self-concept: A cross-sectional study of grade and gender differences in a Singapore secondary school. *Asia Pacific Education Review, 6*(1), 20-27.

32. Loh, J. M., Schutte, N. S. & Thorsteinsson, E. B. (2014). Be happy: The role of resilience between characteristic affect and symptoms of depression. *Journal of Happiness Studies*, *15*(5), 1125-1138.

33. Maehr, M. L. (2008). Culture and achievement motivation. *International Journal of Psychology*, *43*(5), 917-918.

34. Marsh, H. W. (2006). *Self-concept theory, measurement and research into practice: The role of self-concept in educational psychology*. (Unpublished manuscript) British Psychology Society, 25th Vernon-Wall lecture.

35. Marsh, H. W., Ellis, L. & Craven, R. G. (2002). How do pre-school children feel about themselves? Unravelling measurement and multidimensional self-concept structure. *Developmental Psychology, 38*, 376-393.

36. Martin, A. J. & Marsh, H. W. (2006). Academic resilience and its psychological and educational correlates: A construct validity approach. *Psychology in the Schools, 43*(3), 267-281.

37. Martin, A. J., Marsh, H. W. & Debus, R. L. (2001). A quadripolar need achievement representation of self-handicapping and defensive pessimism. *American Educational Research Journal*, *38*(3), 583-610.

38. Matovu, M. (2012). Academic self-concept and academic achievement among university students. *International Online Journal of Educational Sciences, 4*(1), 107-116.

39. McClelland, D. C. (1987). *Human motivation*: Cambridge University Press.

40. McGillivray, C. J. & Pidgeon, A. M. (2015) Resilience attributes among university students: A comparative study of psychological

distress, sleep disturbances and mindfulness. *European Scientific Journal 11*(1), 33–48.

41. Michie, F., Glachan, M. & Bray, D. (2001). An evaluation of factors influencing the academic self-concept, self-esteem and academic stress for direct and re-entry students in higher education. *Educational Psychology*, *21*(4), 455-472.

42. Murray, H. A. (1938). *Explorations in personality*. New York: Oxford University Press.

43. Narasimhan, P. (2018). Self-concept and achievement motivation as a predictor of academic stress among high school students of ICSE Board, Chennai. *Indian Journal of Psychological Science*, *10*(1), 77-84.

44. Plante, I., O'Keefe, P. A. & Théorêt, M. (2013). The relation between achievement goal and expectancy-value theories in predicting achievement-related outcomes: A test of four theoretical conceptions. *Motivation and Emotion*, *37*(1), 65-78.

45. Rodriguez, C. M. (2009). The impact of academic self-concept, expectations and the choice of learning strategy on academic achievement: The case of business students. *Higher Education Research & Development*, *28*(5), 523-539.

46. Rubie-Davies, C. M. & Lee, K. (2013). Self-concept of students in higher education: are there differences by faculty and gender?. *Educational Studies*, *39*(1), 56-67.

47. Seligman, M. E., Ernst, R. M., Gillham, J., Reivich, K. & Linkins, M. (2009). Positive education: Positive psychology and classroom interventions. *Oxford Review of Education*, *35*(3), 293-311.

48. Snyder, K. E. & Wormington, S. V. (2020). Gifted underachievement and achievement motivation: The promise of breaking silos. *Gifted Child Quarterly, 64*(2), 63–66.

49. Sossah, L. & Asiedu, Y. (2015). Stress management and resilience in junior and senior nursing students in Ghana. *European Journal of Research and Reflection in Educational Sciences, 3*(2), 23-33.

50. Stallman, H. M. (2011). Embedding resilience within the tertiary curriculum: A feasibility study. *Higher Education Research & Development*, *30*(2), 121-133.

51. Trautwein, U., Lüdtke, O., Köller, O. & Baumert, J. (2006). Self-esteem, academic self-concept, and achievement: How the learning environment moderates the dynamics of self-concept. *Journal of Personality and Social Psychology*, *90*(2), 334-354.

52. Ungar, M. & Liebenberg, L. (2011). Assessing resilience across cultures using mixed methods: Construction of the child and youth

resilience measure. *Journal of Mixed Methods Research*, *5*(2), 126-149.

53. Vaez, M. & Laflamme, L. (2008). Experienced stress, psychological symptoms, self-rated health and academic achievement: A longitudinal study of Swedish university students. *Journal of Social Behavior and Personality 36*(2), 183–196.

54. Wigfield, A. & Gladstone, J. R. (2019). *What does expectancy-value theory have to say about motivation and achievement in times of change and uncertainty?* Bingley: Emerald Publishing Limited.

55. Zautra, A. J., Hall, J. S. & Murray, K. E. (2010). Resilience: A new definition of health for people and communities. In J.R. Reich, A.J. Zautra, & J.S. Hall (Eds). Handbook of Adult Resilience (pp. 3-30). New York: Guilford.

56. Zenzen, T. G. (2002). *Achievement motivation*. (Unpublished master's thesis), University of Wisconsin-Stout, United State of America.

Droits des Enfants dans le Programme Scolaire au Primaire en Cote d'Ivoire et Leurs Perceptions par les Enseignants

Ouattara Kanndanan Insiata
Ecole Normale Supérieure d'Abidjan, Cote d'Ivoire

Résumé

Le 20 novembre 1989, l'Assemblée Générale de l'Organisation des Nations unies a adopté, à l'unanimité, la Convention relative aux droits de l'enfant . Une éducation aux droits de l'enfant semble être alors essentielle, en ce sens qu'elle permet à l'enfant en tant qu'être vulnérable et dépendant, d'acquérir des connaissances sur ces droits. Ainsi, cette étude se propose d'une part, de mettre en exergue les contenus d'enseignements relatifs au thème des droits de l'enfant dans le programme scolaire de l'école primaire en Côte d'Ivoire. D'autre part, elle met en relation le contenu de cet enseignement et les représentations des instituteurs interrogés à ce sujet. Une analyse de contenu des guides maître et des entretiens semi directifs réalisés avec 12 instituteurs montrent que, si les droits des enfants sont pris en compte dans le curriculum formel, nous notons une divergence de point de vue dans la perception chez ceux-là même qui sont chargés de les dispenser.

Mots clés: Droit de l'enfant, Guide-maître, Perception, Enseignant, Ecole primaire

Children's Rights in the Primary School Program in Cote d'Ivoire and Their Perceptions by Teachers

Ouattara Kanndanan Insiata
Ecole Normale Supérieure d'Abidjan, Cote d'Ivoire

Abstract

On November 20, 1989, the United Nations General Assembly unanimously adopted the Convention on the Rights of the Child. Education of the child's rights seems, therefore, to be very essential because it helps the child, as a vulnerable and dependent being, to acquire knowledge about these rights. This paper focuses, on the one hand, on highlighting the teaching content relating to the theme of the rights of the child in the school curriculum of primary school in Côte d'Ivoire. On the other hand, it focuses on the content of this teaching and the representations of the teachers questioned in this subject. A content analysis of the master guides and of the semi-structured interviews carried out with 12 teachers show that if the rights of children are taken into account based on the formal curriculum, a divergence of viewpoint would be mentioned through the perceptions of those who are even in charge of teaching them.

Keywords: Children's rights, Master guide, Perception, Teacher, Primary school

Introduction

En accédant à la souveraineté nationale en 1960, la Côte d'Ivoire a eu comme priorité, la valorisation des ressources humaines sans laquelle aucun développement endogène n'est possible. Cette valorisation passe nécessairement par l'éducation et la formation de ses enfants. Or, l'idée que l'enfant est un être vulnérable qu'il faut protéger et lui garantir des droits spécifiques et les faire respecter, a conduit à l'adoption de la Convention Internationale des Droits de l'Enfant (CIDE).[1] 191 pays y compris la Côte d'Ivoire[2], ont signé et ratifié cette convention dont les quatre principes fondamentaux sont : la non-discrimination, la priorité donnée à l'intérêt supérieur de l'enfant, le droit de vivre, de survivre et de se développer, le respect des opinions de l'enfant.

---

[1]La Convention internationale des droits de l'Enfant (CIDE) a été adopté le 20 novembre 1989 par l'Assemblée Générale de l'Organisation des Nations Unies.

[2]La Côte d'Ivoire a ratifié le 04 février 1991 la Convention Internationale des Droits de l'Enfant.

Le droit à l'éducation[3] en tant que droit fondamental stipule que tout enfant a le droit d'aller à l'école et d'avoir accès à des connaissances qui l'aideront à préparer sa vie d'adulte. Dès lors, le droit à l'éducation semble être une question importante pour toutes les sociétés. L'UNESCO[4] considère, que l'éducation est l'un des outils les plus puissants pour sortir de la pauvreté les enfants et les adultes socialement exclus, et faciliter leur insertion dans la société. Cette institution affirme que si tous les adultes achevaient leur cycle d'études secondaires, le nombre de personnes touchées par la pauvreté dans le monde pourrait être divisé par deux, sinon plus[5]. Or, En 2018, Selon ISU[6], 8,2% des enfants en âge d'aller à l'école primaire ne sont pas scolarisés. Seuls six jeunes sur dix termineront leurs études secondaires en 2030. Le taux d'alphabétisation des jeunes (15-24 ans) est de 91,73%, ce qui signifie que 102 millions de jeunes n'ont pas les compétences de base en lecture et en écriture. Si on s'intéresse au système éducatif ivoirien, le rapport 2019-2020 du PASEC[7], indique que 66,9% des apprenants ne disposent pas de compétences leur permettant de poursuivre sans difficultés leurs apprentissages.

Conscient que l'éducation est l'un des investissements les plus importants qu'un pays puisse faire pour son avenir, la loi n° 2016-886 du 8 novembre 2016 portant Constitution de la République de Côte d'Ivoire a, en son article 10 et les différents textes législatifs et règlementaires, qui en définissent les modalités d'application, affirmé que « l'école est obligatoire pour tous les enfants des 2 sexes dans les conditions déterminées par la loi ». D'ailleurs, les autorités ivoiriennes ont institué la gratuite de l'éducation et fait adopter la politique de l'école obligatoire[8] qui confère le droit à tous les enfants de six (6) et seize (16) ans d'accéder et de poursuivre une scolarité. La mise en œuvre des dispositions[9] de cette politique devrait à terme faciliter le

---

[3]Le droit à l'éducation est l'article 18 de la convention des droits de l'enfant.
[4]Organisation des Nations Unies pour l'Education, la Science et la Culture.
[5]Extrait du document d'orientation, intitulé « Réduire *la pauvreté mondiale par l'enseignement primaire et secondaire universel » de juin 2017*
[6]Consulté sur le https://fr.unesco.org/news/ce-que-vous-devez-savoir-droit-leducation
[7]Programme d'Analyse de Systèmes Éducatifs (PASEC), produit régulièrement des rapports d'évaluation sur les compétences de bases des élèves du primaire dans différents systèmes éducatifs en Afrique.
[8]L'école obligatoire intervient suite au projet de loi portant modification de la loi N°95-696 du 07 septembre 2015 relative à l'enseignement.
[9]Les grandes articulations de cette nouvelle loi concernent la réforme du système éducatif ivoirien, les pesanteurs sociologiques et religieuses, la proximité des écoles des lieux de résidences, le rôle des collectivités territoriales, la prise en compte des langues nationales dans le programme scolaire, les dispositions prévues à l'encontre des enseignants fondateurs d'établissements scolaires privés, le manque d'infrastructures, de matériels didactiques et de personnel enseignant, la distribution tardive des kits scolaires gratuits, les conditions de vie des enseignants et le déclin du système éducatif

déroulement du cursus scolaire c'est-à-dire l'accès, le maintien et la réussite à l'école, en tant qu'espace de promotion des droits de l'enfant. Etudier les droits de l'enfant dans le contexte scolaire, peut être jugé comme un sujet d'actualité dont certains aspects qui le justifie ont été relevé par Zermatten (2004)[10]. Si, l'une des missions de l'enseignement est de former les élèves à la citoyenneté, le traitement de la thématique des droits de l'enfant dans les classes pourrait contribuer à développer l'esprit critique de ceux-ci en tant que citoyens de demain. En travaillant sur cette problématique, la préoccupation centrale est de mettre en évidence les notions des droits de l'enfant intégrées dans les contenus l'éducation de base notamment au primaire. Cette étude se propose également d'analyser les perceptions des instituteurs chargés de les enseigner et de les promouvoir dans le contexte de la classe.

Methodes

Le terrain de l'étude dans la circonscription de l'Enseignement Préscolaire et Primaire de Yopougon Maroc qui couvre au total 51 écoles dont deux (2) ont été choisies de façon aléatoire. Il n'est nullement question de généraliser les résultats de ce travail au reste du pays mais plutôt d'apporter une contribution à la compréhension de l'enseignement des droits de l'enfant en Côte d'Ivoire. Pour la collecte des données, la méthode qualitative a été adoptée. En effet, il a été procédé, à une analyse de document, précisément des guides maîtres dans la discipline Education aux Droits de l'Homme et à la citoyenneté (EDHC) qui prennent en compte les leçons relatives aux droits de l'enfant. En outre, dans le but de recueillir les perceptions, douze (12) enseignants de tous les niveaux de l'ordre de l'enseignement du primaire ont été soumis à des entretiens individuels semi directifs enregistrés sur des supports magnétiques. Les questions du guide d'entretien auxquelles ils ont répondu sont entre autres : Quelles sont vos perceptions vis à vis des droits des enfants en général ? Que pensez-vous de leur prise en compte dans le curriculum du primaire ? Quels aspects sont-ils pris en compte ? quels sont les aspects à approfondir ? Ces entretiens ont été choisis car comme le souligne Patton (2002), ils aident à accéder aux pensées de quelqu'un et à l'ampleur de ces dernières, ce qui cadre bien avec le deuxième objectif de cette étude relatif à la perception des enseignants. L'analyse de contenu des données obtenues grâce aux retranscriptions des entretiens semi-directifs, a permis de relever les points de convergence et divergence.

---

[10]Zermatten (2004, pp. 195-196).

Resultats et Discussion

La Prise en compte des thèmes relatifs aux droits de l'enfant dans le curriculum du primaire

L'enjeu majeur pour toute école respectueuse des droits de l'enfant est de s'assurer que tous les apprenants disposent de droits, qu'ils soient codifiés dans la Déclaration universelle des droits de l'homme, ou dans la Convention Internationale des Droits de l'Enfant (CIDE), ou toute autre convention applicable. La question du curriculum au sein de l'institution scolaire qui porte le plus souvent sur les savoirs transmis est important, puisque l'école est le lieu où se forgent les valeurs humaines indispensables pour le développement harmonieux d'une nation. Il faut noter que lorsqu'on parle de curriculum, l'aspect le plus évident est le débat récurrent sur les « programmes scolaires » à savoir ce qui doit être enseigné, comment l'enseigner et à quel niveau. Le curriculum étant perçu comme un construit social, qui traduit des postures idéologiques et des rapports de pouvoir, certains auteurs Nozaki et Apple (2002), puis Apple (2006) considèrent que sa mise en place aboutit systématiquement à la construction d'un curriculum caché, dans la mesure où le curriculum est toujours une sélection de savoirs sélectionnés par des groupes d'intérêt en situation de pouvoir dans la société. Le recours aux guides maitres de l'école primaire, montre bien la volonté des autorités éducatives ivoiriennes, de prendre en compte les droits de l'enfant dans le choix du curriculum à enseigner. En effet, pour une offre éducative inclusive, équitable et de qualité, l'Unesco a élaboré la stratégie pour la santé et le bien-être dans le cadre de son mandat international de coordination et de suivi de l'ODD4[11] à travers l'Agenda Education 2030[12]. C'est une exigence qui repose sur le droit à une éducation complète à la sexualité. Selon une enquête[13], ce sont 5076 cas d'élèves en grossesse dans le primaire avec un âge minimum de 9 ans et au niveau scolaire de CE2 qui ont été enregistrés au cours de l'année scolaire 2012-2013 contre 1292 en 2007-2008, soit une augmentation annuelle de 41% en moyenne. En prenant donc en compte un module sur l'éducation complète à la sexualité, cela peut être considéré comme une réponse à plusieurs facteurs d'abandon scolaire et de disparité de genre dans l'éducation du fait des grossesses en cours de scolarité. Toutefois, ce module qui est en

---

[11]ODD4 : « Assurer l'accès de tous à une éducation de qualité, sur un pied d'égalité, et promouvoir les possibilités d'apprentissage tout au long de la vie ». Cet objectif vise donc à garantir à tous et à toutes l'accès à une éducation équitable, gratuite et de qualité à travers toutes les étapes de la vie en éliminant notamment les disparités entre les sexes et revenus. Il met également l'accent sur l'acquisition de compétences fondamentales et de niveau superieur pour vivre dans une société durable.

[12]En septembre 2015, les 193 États membres de l'ONU ont adopté le programme de développement durable à l'horizon 2030, intitulé Agenda 2030. C'est un agenda pour les populations, pour la planète, pour la prospérité, pour la paix et par les partenariats.

[13]Enquête du ministère en charge de l'éducation nationale sur les grossesses en milieu scolaire

phase d'expérimentale n'est pas encore généralisé bien qu'il vise à apporter aux apprenants les connaissances, les compétences, les attitudes et les valeurs qui leur permettront d'avoir une vision positive de leur sexualité dans le cadre de leur développement émotionnel et social. Par ailleurs, lorsqu'on parcourt le guide du maître dans la discipline EDHC, nous y notons l'inscription de plusieurs leçons sur les droits de l'enfant dans les différents niveaux d'enseignement comme illustrées dans le tableau ci-dessous.

Tableau 1. Les leçons sur les droits de l'enfant et les objectifs attendus en fonction du niveau d'étude dans le primaire en Côte d'Ivoire

Niveau d'étude	Leçons	Consignes pédagogiques
CP1	Les Droits de l'enfant	-Amener les enfants à comprendre que chaque enfant a droit à un nom et un prénom ; -Amener les enfants à comprendre que nous sommes tous égaux malgré la différence et la diversité de nos noms.
CP2	Le droit à la différence.	Amener les apprenants à comprendre que le respect de l'autre et de ses différences permet de prévenir l'extrême violence et d'être un bon citoyen : 　　-éviter les injures, les humiliations, les offenses ; 　　- respecter la dignité des autres ; 　　- respecter la liberté, l'égalité, le genre, - amener les apprenants à donner leur avis sur des décisions qui les concernent.
CE1	L1 : Le droit à la nationalité.	Amener les apprenants à faire ressortir l'importance du droit à la nationalité, en être fier et respecter celle des autres pour éviter l'extrême violence.
	L2 : Les droits à l'éducation et à la santé et le bien-être de l'enfant.	Amener les apprenants à comprendre que la violence trouve souvent ses sources dans le manque d'éducation et le citoyen éduqué est mieux outillé pour éviter l'extrême violence. - Amener les apprenants à comprendre
CE2	Le droit à la différence et le bien-être de l'enfant	-Amener les apprenants à accepter l'autre avec ces différences religieuses, ethniques, physiques sociales. Amener les apprenants à comprendre l'importance d'accepter l'autre avec ses différences évite l'extrême violence.
	Notion de la liberté d'expression	Le droit pour toute personne de penser comme elle le souhaite et de pouvoir exprimer ses opinions. - La liberté de donner son avis sur tous les sujets - La liberté d'association, de réunion…
CM1	L 1 : Les droits et les devoirs.	-Amener les apprenants à comprendre que tous les Hommes ont les mêmes Droits. - Avoir les mêmes droits signifie que l'Etat doit pourvoir à nos besoins de santé, d'éducation, de participation et de protection dans l'équité ; - respecter les Droits de l'autre est de comprendre que nos droits ont des limites ;

		- assumer ses obligations, c'est ~~de~~ contribuer au développement de son pays.
	L 2 : Le droit à la protection de l'enfant	Amener les apprenants à initier des actions de promotions de leur droit à la protection à travers leur participation active aux activités de vie scolaire**.**
CM2	Les Droits à la participation de l'enfant.	. Amener les apprenants à comprendre qu'ils ont l'obligation de participer aux prises de décisions pour éviter l'extrême violence

Source : Auteur elle-même (2021), données tirées des guides du maitre

Nous constatons que les contenus en Education aux Droits de l'Homme et à la Citoyenneté portent sur le droit à la vie, le droit à une nationalité, le droit à la protection, les droits et les devoirs et aussi le célèbre article 12 de la convention des droits de l'enfant qui stipule le droit à exprimer librement son opinion. Cette dernière étant dûment prise en considération pour toute question concernant l'apprenant. Nous nous sommes cependant posé la question de savoir ce qu'en pensent les acteurs chargés de dispenser ces leçons ?

Perceptions des droits des enfants dans le curriculum par les enseignants

Il a été question dans un premier temps de savoir ce que les enseignants du primaire pensent de la prise en compte des droits des enfants dans les contenus enseignés. Cette question semble importante, car la théorie sociale cognitive de Bandura (1997) souligne l'importance que jouent les systèmes d'attentes dans les décisions de s'engager ou non dans une action déterminée. Un enseignant dans sa pratique, doit amener les élèves vers la connaissance. Or, la pratique enseignante peut être influencée par la manière d'interpréter et de penser la « réalité », le contexte. Lorsque nous avons procédé à l'analyse de contenu des entretiens, il ressort que les enseignants interrogés évoquent plusieurs éléments dans leurs perceptions concernant la prise en compte des droits des enfants en tant que leçons enseignées à travers EDHC.

D'un côté, il y a ceux qui estiment que c'est un avantage que les élèves possèdent des connaissances sur leurs droits dès leur première année de scolarité. « *Inculquer à l'enfant le respect des droits de l'homme et des libertés fondamentales* » me semble très important selon cette institutrice. D'ailleurs, certains considèrent que la « journée internationale des droits de l'enfant » qui a lieu chaque année le 20 novembre, est une preuve manifeste de cette importance. Si cette autre enseignante relève que cela répond à « *une nécessité d'ouvrir les élèves au monde* », cet autre interviewé quant à lui, affirme que non seulement le droit pour toute personne de penser comme elle le souhaite et de pouvoir exprimer ses opinions est enseigné, mais que son application

dans le contexte classe est une réalité. En effet, La stratégie pédagogique utilisée au cours des leçons à travers le jeu de rôle, qui dramatisent la leçon étudiée permet de mieux assoir la connaissance. « *A partir de la Classe de cours Elémentaire (CE), les élèves sont libres de former des groupes. Ils choisissent eux même un chef qui est leur porte-parole, un rapporteur et chacun s'exprime au sein du groupe, lors des travaux »* atteste cet enseignant de la classe de CE2. L'importance de consacrer du temps à la participation des enfants a été souligné par plusieurs chercheurs (Tisdall, 2015b ; Spyrou, 2011 ; Lansdown, 2001). Les enfants doivent être encouragés à donner leur opinion même si celle-ci n'est pas identique à l'avis de l'adulte (Lansdown, 2010). En outre, dans ce groupe d'enquêtés, certains ont une perception négative de l'enseignement de l'éducation complète à la sexualité, qui ne cadre pas avec le contexte africain car la pudeur est au cœur des valeurs selon eux. On pourrait alors se poser la question de savoir comment un enseignant dispensera un cours sur la sexualité avec une telle perception.

D'autres enquêtés par contre, estiment qu'un accent particulier devrait être mis sur les devoirs au dépend des droits des enfants. Selon eux, les droits impliquent forcement les devoirs. « *A force de parler chaque fois de droit à nos élèves, cela me pose un véritable problème. En tant enseignante, j'accorde plus d'importance aux devoirs et aux responsabilités de l'enfant. Si on y prend garde, l'enfant grandira avec l'idée qu'il n'a que des droits et ça c'est dangereux ».*

Ils considèrent que les droits de l'enfant sont trop respectés, et que l'on devrait plutôt travailler sur les devoirs des enfants de nos jours vus les comportements déviants dans les écoles. Selon Desbiens J-F. et al. (2008), « la gestion de la classe s'effectue dans un contexte où l'école, à l'image de la société, doit composer avec la pluralité des valeurs morales et spirituelles de même qu'avec les répercussions des transformations de la vie et des rapports entre adultes et enfants au sein de la cellule familiale ». Les enseignants se retrouvent fréquemment alors confrontés à des difficultés pour gérer leur classe. Les deux courants de recherche qui se distinguent dans leur approche, permettent de comprendre les perceptions de ceux-là mêmes qui sont chargés de dispenser aux élèves les cours sur leurs droits en tant qu'enfants. D'un côté, l'approche s'intéressant à la structure des représentations sociales initialement développée par Abric (1976) puis par Flament, Guimelli (1998), Moliner et Rouquette (199). L'autre courant développé à la suite des travaux de Moscovici (1961), Doise (1990), Clémence et Lorenzi-Cioldi (1994) qui insistent sur les aspects différenciateurs des représentations sociales. Elles sont perçues comme étant « *(...) des principes générateurs de prises de position liées à des insertions spécifiques dans un ensemble de rapports sociaux et organisant les processus symboliques intervenant dans ces rapports. »* L'enseignement des droits des enfants n'étant pas toujours compris, il est

nécessaire, de ne pas simplement parler de la Convention en tant que connaissance, mais surtout en tant que valeur importante au sein de la classe.

Conclusion

La nécessité d'intégrer la thématique des droits de l'enfant dans les classes afin d'ouvrir les esprits des élèves dès les premières années de leur scolarité, a conduit à s'intéresser au curriculum en vigueur dans le primaire. En se basant sur les guides maîtres, la prise en compte des thématiques relatives aux droits des enfants cadrent bien avec l'une des missions non négligeables de l'école qui est de former des élèves à la citoyenneté. Traiter cette thématique dans les classes, permettrait de développer l'esprit critique des élèves et également d'augmenter l'estime de soi chez ceux-ci considérés comme des « citoyens de demain ». L'enfant pourra alors se sentir partenaire à part entière et non pas un vulgaire « amasseur de connaissances ». Les instituteurs perçoivent différemment l'enseignement du module « droits des enfants » dans le contexte classe, laquelle décrite par Doyle *« comme un environnement complexe caractérisé par la multidimentionnalité, la simultanéité, l'immédiateté, l'imprévisibilité, l'accessibilité ainsi que l'historicité des événements qui y surviennent »* (cité par J-F Desbiens et al., 2009, p.180)[14]. Or, comme l'avait déjà noté Emile Durkheim (1992, 1ère ed. 1922) qu'il est appris à l'école plus d'éléments, en faisant allusion au système de règles liées à la forme scolaire qui concourt à inculquer l'esprit de discipline chez l'enfant. Il décrit donc un système d'éducation morale qui construit un système de valeur donné. La prise en compte des droits des enfants dans les contenus enseignés participent à la construction de système de valeur, qui constitue un référentiel pour les enfants. Toutefois, une formation et renforcement de capacités seront nécessaire pour briser les schèmes.

References:
1. Abric, J.C. (1976). « *Jeux, conflits et représentations sociales* » (thèse de doctorat non publiée).   Université Aix en Provence, France.
2. Alpe, Y. (2006). « *Quelle est la légitimité des savoirs scolaires* », in Legardez A. & Simmoneaux L. [coord.], L'école à l'épreuve de l'actualité. Enseigner les questions vives. Paris : ESF, p. 233-246.
3. Apple, M. W. (2004). *Ideology and Curriculum, London*: Routledge & Kegan Paul.
4. Desbiens, J-F., Lanoue, S., Turcotte, S., Tourigny, J-S. & Spallanzani, C. (2009). « *Perception de la fréquence d'apparition des comportements perturbateurs par des stagiaires en enseignement de*

---

[14]Perception de la fréquence d'apparition des comportements perturbateurs par des stagiaires en enseignement de l'éducation physique et à la santé (EPS). Nouveaux cahiers de la recherche en éducation, 12(2), 179–193. https://doi.org/10.7202/1017466

l'éducation physique et à la santé (EPS) » Nouveau cahier de la recherche en éducation, vol. 12, no 2, 2009, p. 179 à 193.

5. Doise, W. & Lorenzi-Cioldi, F. (1994). Prise de position et principes organisateurs des représentations sociales. *In* Ch. Guimelli(dir.), *Structures et transformations des représentations sociales*. Lausanne : Delachaux & Niestlé

6. Doise, W. (1990). Les représentations sociales. *In* C. Bonnet, R. Ghiglione, & T.F. Richard.

7. Document réalisé par l'UNICEF Grande-Bretagne, en s'appuyant sur l'initiative britannique, Rights Respecting Schools Award : http://www.unicef.org.uk/Education/

8. Doyle, W. (1986). Classroom organization and management. In M.C. Wittrock (dir.), Handbook of research on teaching (p. 392-431). New York, NY : Macmillan.

9. Durkheim, E. (1992). Éducation et sociologie. Paris, PUF

10. Forquin, J. (1990). *Sociologie de l'éducation, dix ans de recherche*. Paris : INRP/L'Harmattan.

11. Guides maître de l'éducation nationale et de l'alphabétisation des différents niveaux (CP, CE et CM), année scolaire 2020-2021.

12. Lansdown, G. (2010). The realisation of children's participation rights : critical reflections. In B. Percy-Smith & N. Thomas (éds.), *A handbook of children and young people participation: Perspectives from theory and practices* (p. 11-23). Londres, Royaume-Uni : Routledge.

13. Lansdown, G. (2001). *Promouvoir la participation des enfants au processus décisionnel démocratique.* Florence, Italie: UNICEF.

14. Moliner, P. (1994). « *Les méthodes de repérage et d'identification du noyau des représentations sociales*. » In: C. Guimelli (Ed.), Structures et transformations des représentations sociales (pp. 199-232). Neuchâtel : Delachaux et Niestlé

15. Moscovici, S. (1961). *La psychanalyse, son image et son public.* Paris : PUF.

16. Nozaki, Y. & Apple, W. (2002). « Ideology and curriculum », in: Levinson, D. L., Cookson P.

17. Perrenoud, P. (1993). Curriculum : « *le formel, le réel, le caché* ». In Houssaye, J. (dir.) *La pédagogie : une encyclopédie pour aujourd'hui*. Paris : ESF, pp. 61-76.

18. Rapport sur la mise en œuvre de la Convention et de la Recommandation concernant la lutte contre la discrimination dans le domaine de l'enseignement (juin 2016).

19. Tisdall, E.K.M. (2015b). Addressing the challenges of children and young people's participation: Considering time and space. In T. Gal & B.F. Duramy (éds.), *Promoting the participation of children and young across the globe: From social exclusion to child-inclusive policies* (p. 381-404). Oxford, Royaume-Uni : Oxford University Press.

20. Zermatten, J. (2004). Informations complémentaires par Jean Zermatten. In J. Zermatten (Ed.), Les droits de l'Enfant : Douze récits pour ne pas s'endormir, IDE. (pp. 189-267). Saint-Maurice : Editions Saint-Augustin.

21. https://fr.unesco.org/news/ce-que-vous-devez-savoir-droit-leducation

Extensive and Improved Traditional Poultry Farming in Togo: A Comparative Analysis of Socioeconomic Characteristics of Farmers

Mawussi Kossivi Soviadan
Department of Agricultural Economics,
University of Nigeria, Nsukka (UNN), Nigeria
University of Bonn, Germany
University of Lomé, Togo
Anselm Anibueze Enete
Chukwuemeka Uzoma Okoye
Kossivi Fabrice Dossa
Department of Agricultural Economics,
University of Nigeria, Nsukka (UNN), Nigeria

Abstract

Since 2014, the Agricultural Sector Support Project (PASA) has been assisting smallholder farmers in Togo with the adoption of Improved Traditional Poultry Farming Technique (ITPFT) in rural areas for wealth creation, food security and poverty alleviation. This paper focuses on comparing the socioeconomic characteristics of beneficiaries and non-beneficiaries of PASA subsidies. Both random and purposive sampling techniques were used to select 400 farmers. The sample consisted of 86 project beneficiaries and 314 non-beneficiaries. Structured questionnaires were used to collect data. Results of analysis indicated that there is a significant difference in socioeconomic variables such as self-financing capacity, level of education, membership in cooperative societies, household size, farm size, and annual sale of poultry between project beneficiaries and non-beneficiaries prior to the implementation of PASA. Descriptive statistics show that five

years after the implementation of PASA, the annual poultry sales per farmer ranged from 0 to 1700 birds for beneficiaries and from 9 to 200 birds for non-beneficiaries. The turnover per farmer ranged from US $ 0 to US $ 42409 and from US $ 33 to US $ 996 for beneficiaries and non-beneficiaries, respectively. The profit per farmer ranged from US $ 0 to US $ 25446 for beneficiaries and from US $ 26 to US $ 797 for non-beneficiaries. The magnitude of the standard deviations of the potential outcome variables among beneficiaries and non-beneficiaries suggests that adoption rates of ITPFT may vary from one farmer to another. As a result, compared to non-beneficiaries, beneficiaries experienced a greater increase in potential outcomes five years after the implementation of PASA. Failure to comply with improved production technique on certain farms, despite receiving subsidies, is a factor that could negatively impact the effective, efficient, and optimal achievement of the project's expected results. Further research will concentrate on determining the added value of PASA through the use of appropriate and thorough econometric adoption and impact assessment methods.

1.   Introduction

Traditional poultry farming in rural areas is critical for sustaining livelihoods and supplying poultry products in rural, suburban, and urban areas, as well as providing important support to developing countries' most vulnerable groups (FAO, 2014). As long as poverty persists in rural areas, traditional poultry farming will continue to provide opportunities for high quality income generation and nutrition for the human population (FAO, 2015). Poultry farming in Togo is essentially characterized by two types of production, namely traditional poultry farming based on the breeding of local birds and the modern poultry faming based on the rearing of imported exotic breeds with different degrees of intensification. The bird species are mainly chickens, guinea fowls, ducks, turkeys, and pigeons (Tona, 1992; Aklobessi, 2003; Dao, 2010). Poultry farming is one of the largest livestock sectors in the country. It contributes significantly to the Agricultural Gross Domestic Product (Gauthier & Langlois, 2010) and occupies an important place in the daily living of Togolese people, especially in rural areas where poultry are raised not only for the production of meat and eggs, but also as a means of income through sales (Kondombo et al., 2003). In some African cultures, chickens are also used as gifts and for rituals.

Local poultry are characterized by high genetic variability (Hoffmann, 2007), hardiness, disease resistance under severe rearing conditions, better

breeding ability of the females (brooding and hatching) and protection of their offspring especially against predators, and bad weather (Kondombo, 2005). Traditional poultry farming is characterized by extensive free-range farming where the birds must look for their food in the environment (Kondombo, 2005; Pousga et al., 2005). However, supplement cereals are often distributed to birds at certain times of the day. This is characterized by low productivity because its production potential is inherently low combined with poor environmental and feeding conditions. Losses are usually greater during the rainy season, and are also due to theft and slaughter because of the extensive nature of this type of breeding. There is also high mortality and slow growth of birds essentially because of diseases, predation, external parasites, and accidents. Long brooding periods per poultry which results in low production of poultry ready for slaughter or sale is common (Mcainsh et al., 2004; Pousga et al., 2005).

The Agricultural Sector Support Project (PASA) is one of the projects of the National Program for Agricultural Investment and Food Security (PNIASA) developed by the government of Togo in its 2010-2015 investment plan with the assistance of the Food and Agriculture Organization of the United Nations (FAO) and the World Bank (WB) (Gauthier & Langlois, 2010). The overall objective of PNIASA is to increase the productivity and/or competitiveness of strategic food crops, export crops, and livestock production, as well as the promotion of an enabling environment for privately driven agricultural development (Gauthier & Langlois, 2010). In this regard, a second sub-component of PASA was aimed at reviving the livestock sub-sector. The specific objective is to provide short-term emergency assistance to rehabilitate poultry and small ruminant production, assist small livestock farmers to develop and improve livestock production in rural areas for wealth creation, food security and poverty reduction (PNIASA, 2016). With specific reference to the case of poultry, it was to enable farmers that will benefit from the grants to improve their poultry farming technique in order to reduce the constraints associated with the above-mentioned traditional extensive poultry farming, increase production, enhance food security, increase income, and reduce poverty.

Thus, as part of the implementation of this second PASA sub-component, the government provided farmers with a subsidy for the adoption of ITPFT in 2014. A total of 86 farmers were involved in the initial selection phase of PASA. The purpose of this research is to examine the socioeconomic characteristics of farmers, both beneficiaries and non-beneficiaries of the project's subsidies, before and after the implementation of PASA.

2. Materials and Methods
2.1. Field of Study

Togo, a West African country, is geographically located between 6° and 11° North latitude, and 0° and 2° East longitude, with a surface area of 56,600 square kilometers. It is bordered by the Bight of Benin and Burkina Faso in the south and north, respectively. Togo is bound in the west by Ghana and in the east by Benin Republic (RNA, 2012). It is subdivided into five regions namely, the Maritime Region, the Plateaux Region, the Central Region, the Kara Region, and the Savannah Region (Figure 1). The Togolese population is estimated at 8,082,366 inhabitants (UN-DESA-PD, 2019). Togo has significant agricultural potential despite its limited size. Cultivable land is estimated at nearly 3.4 million hectares (64% of the territory), 45% of which is currently cultivated. The country's varied climate divides it into several agro-ecological zones allowing the production of a diversified range of agricultural products. Irrigable land is estimated at 86,000 hectares and exploitable lowland at 175,000 hectares (Gauthier & Langlois, 2010).

Despite this significant agricultural potential, more and more regions are facing the adverse effects of climate change and increasing land pressure through over-exploitation of land, resulting in declining fertility and land degradation, and a decrease in agricultural production and productivity (Gauthier & Langlois, 2010; NDP, 2018). The rural population is estimated at 3,843,049 (FAO, 2013). In 2012, the number of active farmers was estimated at 3,738,430 representing more than 60% of the national population and was unevenly distributed in terms of space as follows (FAO, 2013):
- Maritime Region: 776,135 inhabitants, or 20.8%
- Plateaux Region: 1,161,580 inhabitants, or 31.1%
- Central Region: 457,173 inhabitants, or 12.2%
- Kara Region: 601,036 inhabitants, or 16.1%
- Savannah Region: 742,506 inhabitants, or 19.9%

2.2. Sampling Technique
2.2.1. Sampling Procedure

Documentation and field visits allowed us to identify the different districts and localities of the five major rural areas involved in this investigation. The study focused on Togolese farmers. The size of the target population represented the total number of farmers in Togo. The sample size for this study was determined using the sample calculation formula below, with a 95% confidence level:

$$n = \frac{N}{1 + N \times e^2} \qquad (1)$$

Source : (Fellegi, 2003)

With:

N = the size of the target population (Togolese farmers),

n = the sample size and

e = the level of precision (5%).

The vast majority of the active agricultural population is involved in both agriculture and traditional poultry farming. As a result, the national agricultural population size N of 3,738,430 was used to calculate the study's sample size.

Calculation of the Sample Size (n)

$$n = \frac{3\,738\,430}{1 + 3\,738\,430 * (0,05)^2} \; ; \; n = 399,957206 = 400$$

2.2.2. Sample Size Per Stratum

In 2014, 86 farmers participated in the Ministry of Agriculture's Agricultural Sector Support Project (PASA) for the adoption of improved traditional poultry farming technique. The project's beneficiaries were distributed across the country's five regions and by district, and they were included in the overall sample. The non-beneficiaries of the project made up the remainder of the sample which was also distributed by region based on the region's weight in the national agricultural population. The regional samples were also stratified based on the distribution of project beneficiaries by district (Table 1a and 1b).

2.3. Data Collection

This study adopted a farm household survey design in Togo. The study utilized primary data on extensive and improved traditional poultry farming. Data were collected using survey instrument administered on 400 respondents of which the beneficiaries of the project were purposively selected. Note that the beneficiaries of the project consisted of 86 farmers, while the non-beneficiaries consisted of 314 farmers. The 86 beneficiaries received a grant from the Ministry of Agriculture. Thereafter, they received technical training and technical support for the improvement of traditional poultry farming technique. Data collected covered five consecutive years of poultry farming and two periods, specifically, from 2014 (the year the project began, the baseline) to 2018 (five years after the implementation of the project, the follow-up).
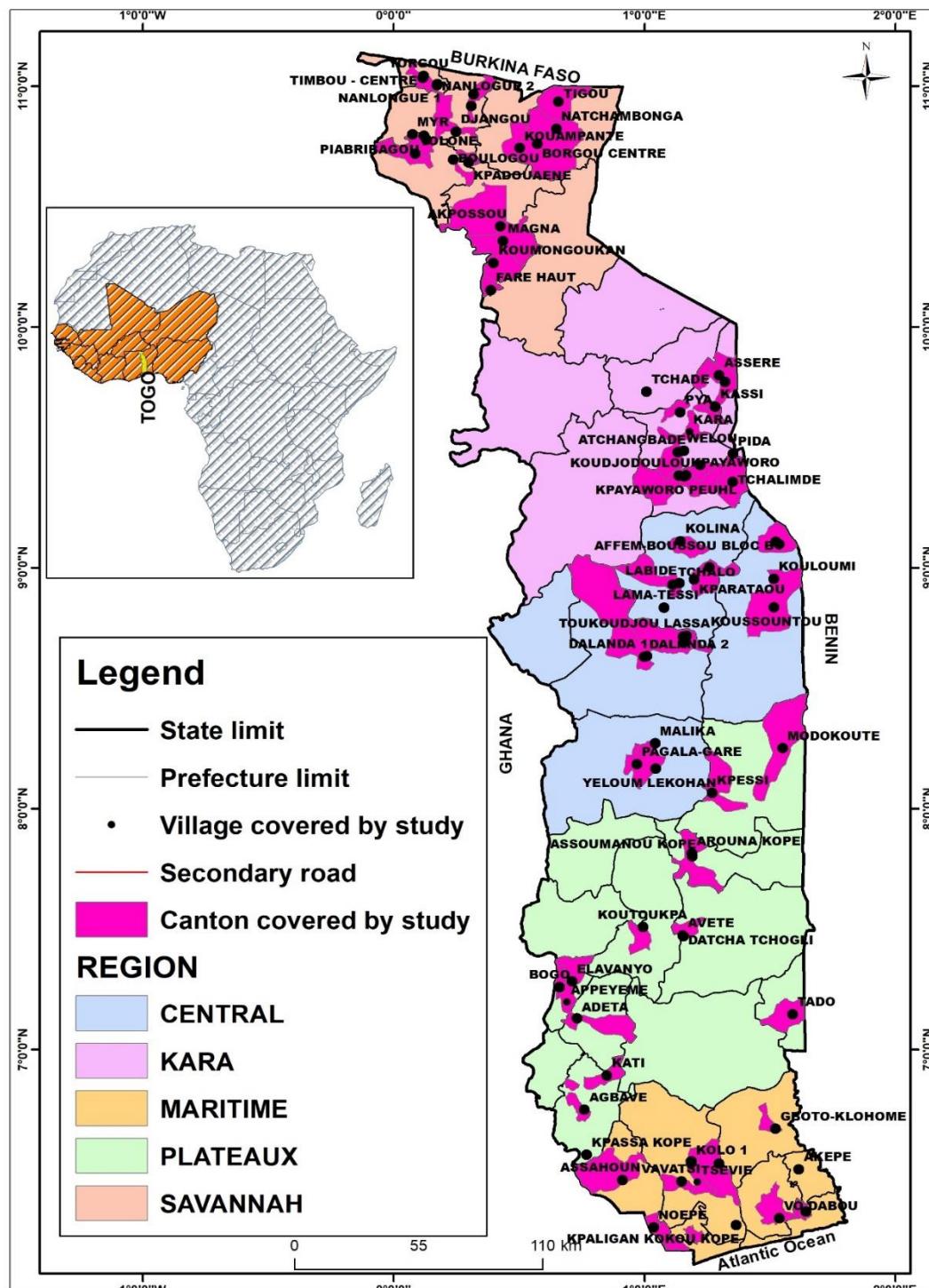
Figure 1. Map of the Study Area (Togo)
Source: Author's Conceptualization

2.4.   Estimation Method

Data for the study were analyzed using statistical and econometric tools. The objective of this investigation was achieved by describing and comparing the socio-economic characteristics of beneficiaries and non-beneficiaries of the project.

2.4.1. *Pearson Chi-Square Significance Test (χ2)*

The Pearson's Chi-square significance test ($\chi 2$) was used to compare the socio-economic qualitative variables of both beneficiaries and non-beneficiaries of the project. The equation is specified as thus:

$$\chi^2 = \sum_{i=1}^{n} \frac{(O_i - E_i)}{E_i} \qquad (2)$$

Source: (Franke et al., 2012)

Where:
χ^2 = Pearson Chi-Square
O = Observed Value
E = Expected Value
$\sum$ = Summation sign
n = The sample size
H_0 is not rejected if P-Value (Chi-square ($\chi 2$)) is greater than 5% or rejected otherwise.

2.4.2. *Student Significance Test (t-test)*

The Student Significance Test (t-test) was used to compare the mean of the socioeconomic quantitative variables of both beneficiaries and non-beneficiaries of the project. The equation is specified as thus:

$$t = \sqrt{n}\frac{\overline{x} - \mu_0}{s} \qquad (3)$$

Source: (Zabell, 2008)

Where:
t = Student Value
$\bar{x}$ = The mean of the beneficiaries of the project
μ_0 = The mean of the non-beneficiaries of the project
s = The standard deviation
n = The sample size

H_0 is not rejected if P-Value (T-Student) is greater than 5% or rejected otherwise.

Table 1a. Sample Size Per Region

Region	Agricultural Population by Region	Weight of the Region	Sample Stratified by Region
Maritime	776 135	21%	83
Plateaux	1 161 580	31%	124
Central	457 173	12%	49
Kara	601 036	16%	64
Savannah	742 506	20%	80
Total (Togo)	3 738 430	100%	400

Source: Author's Conceptualization

Table 1b. Full Sample Design of the Study

Region	District selected	Beneficiaries	Weight of Beneficiaries Per Districts	Non-Beneficiaries	Sample Per District selected
SAVANNAH	TANDJOARE	**5**	24%	14	19
	OTI	5	24%	14	19
	TONE	6	29%	17	23
	KPENDJAL	5	24%	14	19
Total Savannah	4	21	100%	59	80
KARA	BINAH	6	35%	17	23
	KOZAH	6	35%	17	23
	ASSOLI	5	29%	14	19
Total Kara	3	17	100%	47	64
CENTRAL	TCHAOUDJO	6	35%	11	17
	SOTOUBOUA	5	29%	9	14
	BLITTA	3	18%	6	9
	TCHAMBA	3	18%	6	9
Total Central	4	17	100%	32	49
PLATEAUX	AGOU	3	17%	18	21
	AMOU	1	6%	6	7
	EST-MONO	3	17%	18	21
	OGOU/ANIE	5	28%	29	34
	DANYI/KPELE	5	28%	29	34
	MOYEN MONO	1	6%	6	7
Total Plateaux	6	18	100%	106	124
MARITIME	GOLFE	2	15%	11	13
	LACS	2	15%	11	13
	ZIO SUD	4	31%	22	26
	AVE	3	23%	16	19
	VO	1	8%	5	6
	YOTO	1	8%	5	6
Total Maritime	6	13	100%	70	83
TOTAL	23	86	100%	314	400

Source: Author's Conceptualization

3.   Results and Discussion

Table 2. Socioeconomics Characteristics of Beneficiaries and Non-Beneficiaries of PASA

Attributes	Categories	Frequency			Percentage (%)		
		Beneficiaries	Non beneficiaries	Sample	Beneficiaries	Non beneficiaries	Sample
Region	Savannah	21	59	80	24.44	18.78	20
	Kara	17	47	64	19.76	14.97	16
	Central	17	32	49	19.76	10.20	12.25
	Plateau	18	106	123	20.93	33.75	31.00
	Maritime	13	70	83	15.11	22.30	20.75
Gender	Male	75	274	349	87.20	87.26	87.25
	Female	11	40	51	12.80	12.74	12.75
Age	22 – 30	1	28	29	1.16	8.92	7.25
	31 – 40	18	103	121	20.93	32.80	30.25
	41 – 50	33	115	148	38.38	36.62	37
	51 – 60	26	51	77	30.23	16.24	19.25
	61 – 76	8	17	25	9.30	5.42	6.25
Education	Yes	86	298	384	100	95	96
	No	0	16	16	0	5	4
Marital Status	Single	2	9	11	2.33	2.87	2.75
	Married	82	294	376	95.34	93.63	94
	Divorced	0	2	2	0	0.63	0.50
	Widower	2	9	11	2.33	2.87	2.75
Level of Study	Primary	19	232	251	22	74	62.75
	Secondary	39	55	94	45	18	23.50
	High School	23	11	34	27	3	8.50
	University	5	0	5	6	0	1.25
	Non-Formal	0	16	16	0	5	4
Membership of Cooperative	Yes	83	11	94	96.5	4	23.5
	No	3	303	306	3.5	96	76.5

Improved Poultry House	Yes	86	0	86	100	0	21.5
	No	0	314	314	0	100	78.5
Semi-Modern Equipment	Yes	59	0	59	68.60	0	14.75
	No	27	314	341	31.40	100	85.25
Incubator	Yes	32	0	32	37.21	0	8
	No	54	314	368	62.79	100	92
Food Quality	Yes	86	0	86	100	0	21.5
	No	0	314	314	0	100	78.5
Water	Yes	86	0	86	100	0	21.5
	No	0	314	314	0	100	78.5
Hygiene	Yes	48	3	51	55.81	1	12.75
	No	38	311	349	44.19	99	87.25
Health Care	Yes	79	118	197	91.86	37.58	49.25
	No	7	196	203	8.14	62.42	50.75
Type of Poultry Farm	Semi-Intensive	65	0	65	75.58	0	16.25
	Extensive	21	314	335	24.42	100	83.75
Technique Support	Yes	86	0	86	100	0	21.5
	No	0	314	314	0	100	78.5

Source: Author's Computation Based on Field Data, 2014, 2020

3.1. Descriptive Statistics
Region

Table 2 shows that 24.44% of the 86 farmers who benefited from the project were in the Savannah region, 19.76% in the Kara region, 19.76% in the Central region, 20.93% in the Plateaux region, and 15.11% in the Maritime region. Similarly, of the 314 non-beneficiaries of the project, 18.78% were in the Savannah region, 14.97% in the Kara region, 10.20% in the Central region, 33.75% in the Plateaux region, and 22.30% in the Maritime region. These findings support the results of MAEP (2014) and Aklobessi (2003), who found that the Savannah, Kara, and Plateaux regions are the most involved in traditional poultry farming in Togo.

Gender

Table 2 shows that out of the 400 farmers surveyed, 87.25% were males and 12.75% were females. Out of the 86 project beneficiaries, 87.20% were males while 12.80% were females. Furthermore, 87.26% of the 314 non-beneficiaries were males while 12.74% were females. Women are less represented in traditional poultry farming than men, according to these findings, in both beneficiary and non-beneficiary groups. These findings are consistent with those of Lombo et al. (2018) and Moussa Amadou et al. (2011). Concerning farmer participation in PASA for the improvement of traditional poultry farming, prior to receiving the project subsidy, which amounted to approximately US $ 6,364 per farmer in general, the government imposed on the farmers self-financing covering which is 10% of the cost of installation of the improved poultry farm. The self-financing capacity can be in cash or in kind, and in most cases, the beneficiaries used their land as a construction site for the improved poultry farm. This self-financing capacity criterion did not allow women to benefit from the subsidy in large numbers. This is because in rural areas, it is difficult for women to easily mobilize approximately US $ 637 and they also rarely have lands. These results are in line with those of Anyanwu (2014) and Guèye (2000a, 2000b, 2005). Along the same lines, Akinola and Essien (2011), Chowdhury (2013), Das et al. (2008), Guèye (2000a, 2000b, 2005, 2007), Riise et al. (2005), and Saleque and Mustafa (1996) argued that projects and programs promoting traditional poultry farming for rural development must encourage the participation of vulnerable groups, especially poor women with no financial resources and those who rarely have lands.

Age

The youngest of the 86 farmers who used PASA was 25 years old and the oldest was 68 years old, and this is five years after the implementation of PASA. With a standard deviation of 8.84, the average age was 48.

The youngest of the 314 non-beneficiaries of the project was 22 years old, while the oldest was 76. With a standard deviation of 9.82, the average age was 44 years. In terms of age groups, out of the 86 beneficiaries of the project, 1 farmer (1.16%) was between the ages of 22 and 30, 20.93% were between the ages of 31 and 40, 38.38% were between the ages of 41 and 50, 30.23% were between the ages of 51 and 60, and 9.30% were between the ages of 61 and 68. Similarly, out of the 314 non-beneficiaries of the project, 8.92% were between the ages of 22 and 30, 32.80% were between the ages of 31 and 40, 36.62% were between the ages of 41 and 50, 16.24% were between the ages of 51 and 60, and 5.42% were between the ages of 61 and 76. Beneficiaries and non-beneficiaries of the project were roughly the same age.

Marital Status

2.33% of the project's 86 recipients were single, 95.34% were married, and 2.33% were widowed. 2.87% of the 314 non-beneficiaries were single, 93.63% were married, 0.63% were divorced, and 2.87% were widowed. The majority of farmers in both beneficiary (95%) and non-beneficiary (94%) groups are married according to these findings. This could be one of the reasons why rural households practice traditional poultry farming to meet their financial and nutritional needs. Farayola et al. (2013), Sankara et al. (2018), and Umunna et al. (2012) all came to similar conclusions.

Education and Level of Study

96% of the 400 farmers polled were literate, while 4% were not. At least one form of education was available to all 86 project beneficiaries. 95% of the 314 non-beneficiaries of the project had at least one form of education, while 5% did not. According to the findings of the analysis, 22% of the 86 project beneficiaries had primary education, 45% had secondary education, 27% had higher education, and 6% had university education. In the case of the 314 non-beneficiaries of the project, 74% had a primary education, 18% had a secondary education, 3% had a higher education, and 5% had no formal education.

Despite the fact that the majority of the respondents were literate (Anyanwu, 2014; Umunna et al., 2012), project beneficiaries had a higher level of education than non-benefiaries. One of the motivating factors for participation in PASA for the improvement of traditional poultry farming could be the level of education.

Membership in Cooperative Societies

In terms of cooperative societies membership, 96.5% of the 86 project beneficiaries were members, while 3.5% were not. In addition, 4% of the 314 non-beneficiaries of the project were members of cooperative societies, while

96% were not. According to these findings, the majority of project beneficiaries (96.5%) are members of agricultural cooperatives societies, while only 4% of non-beneficiaries are members. Farmers' membership in agricultural cooperatives societies, according to Umunna et al. (2012), plays an important role in their access to needed information. One of the factors motivating farmers to participate in PASA for the adoption of the improved traditional poultry rearing technique could be their membership in agricultural cooperative societies.

Housing and Equipment

Table 2 shows that the 314 non-beneficiaries of the project continued to raise their poultry in traditional poultry houses using traditional equipment. This finding is in agreement with those of Dessie and Ogle (2001), Kumaresan et al. (2008), and Magothe et al. (2012) who argued that village poultry were raised in very poor housing. In contrast, all the 86 beneficiaries of the project had improved their poultry houses with 69% using semi-modern equipment. Similarly, Chowdhury (2013), Riise et al. (2005), and Saleque and Mustafa (1996) also found that traditional poultry housing and equipment had been improved through development programs and projects that benefited farmers in rural areas. Regarding feeding and watering equipment, Table 2 shows that none of the non-beneficiaries were using modern feeding and watering equipment in their poultry farm. However, the majority of beneficiaries of the project were using them. The maximum number of feeding troughs used per beneficiary was 52 and the average was 7 with a standard deviation of 7.96. As for watering troughs, the maximum number used per beneficiary was 40, and the average was 6 with a standard deviation of 6.35. All the non-beneficiaries of the project continued to use traditional poultry equipment due to insufficient means of obtaining modern or semi-modern equipment. In contrast, 31% of the beneficiaries of the project who were not using semi-modern poultry equipment had received subsidies to procure such equipment, but they voluntarily decided not to purchase or renew them when they were out of use. Magothe et al. (2012) argued that the use of feeding and watering equipment by farmers on their improved traditional poultry farms is very important for a healthy balanced diet and enables farmers to practice the sanitary measures indispensable for the reduction of mortality. The absence of semi-modern equipment in some improved poultry farms of project beneficiaries could affect the expected results of PASA.

Incubator

Regarding ownership of incubator, out of the 86 beneficiaries of the project, only 37.21% had incubator in their poultry farms, 62.79% did not have. All the non-beneficiaries did not have incubators in their poultry farms.

The incubator is the machine in the poultry sector that produces day-old bird in sufficient quantities to meet the needs of poultry farms. One of the most important equipment to be acquired by farmers that had received subsidies for the improvement of their traditional poultry farms was the incubator. Azahar et al. (2020) reported that not only will the egg incubator significantly improve traditional poultry production, it will also provide income consistency, and thereby, enabling smallholder farmers to move into eventual rural entrepreneurship. Unfortunately, out of the 32 incubators inventoried in the field, only 2 were operational. In addition, the farmers involved in PASA for the improvement of traditional poultry farming technique had not received any technical training on the use of these incubators. We must take note of the fact that manipulation of the incubator requires technical skills. The absence and the unsatisfactory condition of incubators on the improved poultry farms, and the failure to train the beneficiaries in its use could affect the project's expected results. It should be noted that none of the non-beneficiaries of the project was using the incubator for breeding day-old small birds, the incubation being natural, as it has always been the case in traditional free-range poultry farming. According to Chambers et al. (2012), natural incubation does not allow a rapid reproduction of poultry. The introduction of the incubator through PASA for the adoption of Improved Traditional Poultry Farming Technique (ITPFT) by project beneficiaries is a very commendable initiative, but much work remains to be done in terms of the effectiveness of this innovation.

Food and Water

Table 2 shows that all the 86 project beneficiaries provided their birds with a balanced diet and safe drinking water. Farmers who practiced traditional free-range poultry farming were attempting to balance their poultry's diet with the seasonal residual resources available. In the dry season, Mcainsh et al. (2004) discovered that feed intake is generally insufficient for any production beyond basic herd maintenance needs. According to FAO (2015) and Weis (2008), the size and productivity of traditional poultry farms are ultimately determined by the human population, including household and crop residues, as well as the availability of other food resources. Surveys in Nigeria resulted in the compilation of a list of food resources available to smallholders (Sonaiya & Swan, 2007). These ingredients were mostly kitchen or agro-industrial waste, and they were similar to other tropical foods. Kitchen waste, cereals and their by-products, roots and tubers, oil seeds, tree leaves and/or fruits, animal proteins, aquatic plants, and commercial foods make up the residual food base to peck (Moussa Amadou et al., 2011; Sonaiya & Swan, 2007). Food resources for poultry are available at all stages of production. Available resources are supplemented with appropriate ingredients, feed

waste, and insects as needed in the traditional poultry farming system. The importance of these food resources for poultry farming varies by region and is dependent on their availability in sufficient quantities (FAO, 2015). A regular supply of low-cost balanced feed, in addition to simple rationing, is essential for improved traditional poultry farming productivity.

Health Care and Hygiene

Five years after the implementation of PASA, 91.86% of the project's beneficiaries were taking sanitary measures to prevent disease. On the other hand, 37.58% of the non-beneficiaries of the project made health-related provisions to prevent disease. Only 55.81% of the beneficiaries were able to follow proper hygiene practices. Diseases are a bottleneck in most local poultry farms, resulting in significant losses. Predators (shrews, raptors, and wild animals), theft, and accidents are all important causes of poultry losses in addition to disease (FAO, 2015). According to farmers and the majority of extension workers, Newcastle disease is the leading cause of disease deaths. This conclusion is based on farmers' lack of understanding of poultry diseases and their symptoms (Guèye, 1999; Pattison et al., 2007). Virus-borne diseases are the most lethal. Vaccines can prevent them but not treat them. Vaccination of poultry against diseases, on the other hand, is not a common practice in traditional poultry farming management activities. This neglect is most likely due, on the one hand, to the government's disengagement from implementing periodic poultry vaccination programs in rural areas and, on the other hand, to farmers' lack of interest in vaccination. Among project beneficiaries, poultry care was limited to regular vaccinations. Whereas among the non-beneficiaries, poultry care was frequently limited to empirical treatments and rarely to therapeutic treatments using traditional or pharmaceutical remedies. Farmers must consider hygiene and health care rules, such as prophylaxis and vaccinations, when dealing with animal health in general, and poultry health in particular.

Type of Poultry Farming

Five years after the implementation of PASA, 75.58% of the beneficiaries were able to practice semi-intensive traditional poultry farming system. Free-range traditional poultry farming continues to be practiced by all the non-beneficiaries. Only the beneficiaries were able to practice the semi-intensive traditional poultry farming system because they were receiving advisory support, training, follow-up, and evaluation services from technical support structures such as the National, Regional and Prefectural Directorates of Agriculture and the Institute for Technical Advice and Support. According to Chowdhury (2013) and Singh et al. (2011), motivating farmers for semi-intensive or small-scale intensive poultry production systems can help with

livelihood security, because the basic scavenging model of production has shown its limits for poverty alleviation, and the system is being held responsible for the recent outbreak of emerging poultry diseases. Hence, the fact that not all project beneficiaries who received government subsidies practiced semi-intensive system could affect the project's expected results.

Household Size

There was only one person in the smallest household in the study area. The largest household had 34 and 22 people for project beneficiaries and non-beneficiaries, respectively. The average household size among beneficiaries was 10 with a standard deviation of 5.37, while it was 7 with a standard deviation of 3.18 among non-beneficiaries. These findings show that household size is significantly larger among project beneficiaries than non-beneficiaries. One of the factors associated with participation of farmers in PASA for the adoption of improved traditional poultry farming technique could be household size. Furthermore, the average household size was around ten people. This can be explained by the fact that for rural farm households, children and relatives serve as an available family labor force and a source of human resource wealth. According to Anyanwu (2014), the lack of well-developed social security systems and low savings in developing countries, particularly in Sub-Saharan Africa, tends to increase fertility rates, particularly in rural areas, so that parents can receive some economic support from their children when they reach adulthood. Moreover, as Schultz (1981) and Anyanwu (2014) pointed out, high infant mortality rates in sub-Saharan African countries tend to lead to an excess of replacement births or births to guard against high infant and child mortality, thereby increasing household size. Furthermore, developing countries in Africa (particularly rural populations) continue to believe that, in the face of a high mortality rate, a high birth rate is the best alternative. As a result, many people believe that they should have as many children as possible because they don't know which ones will survive. Furthermore, children are viewed as an essential component of the household labor force in order to ensure income and as a form of insurance against aging. However, a large number of children and their participation in household production may stymie investment in human capital, resulting in low household income and the creation or perpetuation of poverty-fertility traps (Lanjouw & Ravallion, 1995; Szekely, 1998; Anyanwu, 2014).

Farm Size

Prior to the implementation of PASA, among non-beneficiaries, the minimum number of poultry per farmer was 8, the maximum was 101, and the mean was 33 with a standard deviation of 19.24. While among project beneficiaries, the minimum was 14 per farmer, the maximum was 241, and the

mean was 72 with a standard deviation of 40.07. Five years after the implementation of PASA, among the non-beneficiaries, the minimum number of birds was 8 per farmer, the maximum was 380, and the mean was 42 with a standard deviation of 38.84. While among project beneficiaries, the minimum was 0 per farmer, the maximum was 1051, and the mean was 188 with a standard deviation of 201.10. In terms of types of poultry raised, among the non-beneficiaries of the project and on average per respondent, the results of the analysis yielded proportions of 67%, 24%, 6%, and 3% for chickens, guinea fowl, ducks, and turkeys, respectively before the introduction of PASA, and 65%, 26%, 7%, and 2% after the implementation of PASA. While among project beneficiaries, on average per respondent, the results of the analysis yielded proportions of 62%, 31%, 4%, and 3% for chickens, guinea fowl, ducks, and turkeys, respectively before the introduction of PASA, and 60%, 33%, 4%, and 3% after the implementation of PASA. These findings, in line with those of RNA (2012), Dao (2010), Aklobessi (2003) and Tona (1992), confirm that chickens followed by guinea fowl are the predominant poultry species in Togo.

Grant Value

The average amount granted to each project beneficiary was US $ 5,825. The minimum amount of subsidies granted to farmers who benefited from PASA for the adoption of ITPFT was US $ 3,440 and the maximum amount granted was US $ 6,364. The government approved a maximum grant amount of US $ 6,364 for each recipient under this project which is considered a standard grant. As a result, any amount less than US $ 6,364 was considered a substandard grant. According to descriptive statistics, 59% of the project's beneficiaries received the standard grant, while 41% received a substandard grant.

Hatching Rate of Eggs

Table 4 shows that, prior to the implementation of PASA, among the non-beneficiaries of the project, the minimum hatching rate of eggs per farmer was 40%, the maximum was 85%, and the average was 68% with a standard deviation of 0.08. While among project beneficiaries, the minimum hatching rate of eggs was 40%, the maximum was 80%, and the average was 65% with a standard deviation of 0.07. These hatching rates of eggs were in agreement with those reported by Chowdhury (2013), Ekue et al. (2002), Moussa Amadou et al (2011), Msami (2000), Sarkar and Golam (2009), and Sonaiya (1995). Five years after the implementation of PASA, among the non-beneficiaries of the project, the minimum hatching rate of eggs was 40% per farmer, the maximum was 85%, and the average was 66% with a standard deviation of 0.098. While among project beneficiary

es, the minimum hatching rate of eggs was 0%, the maximum was 95%, and the average was 91% with a standard deviation of 0.04. Conroy et al. (2005) stated that projects aimed at improving hatching rates of poultry eggs based on local equipment had demonstrated their effectiveness. In contrast, Kumaresan et al. (2008) reported that the hatchability percentages were higher under backyard conditions than in the intensive system. According to Kumaresan et al. (2008), the higher hatchability observed with natural hatching may be due to the use of fresh eggs, whereas the low hatchability observed with artificial hatching was due to delays in eggs setting due to time lost in transportation of the eggs. These findings show that the project's beneficiaries improved their eggs hatching rate by strengthening the technical production itinerary. One of them, however, had an egg hatching rate of 0%. After receiving the grant for the improvement of his poultry farm, the latter beneficiary abandoned this production to invest in other economic activities. This project beneficiary's 0% egg hatching rate may have negative impact on the project's expected outcomes.

Poultry Loss Rate

Disease is a major cause of poultry losses. Ignorance of hygiene rules, non-cleaning of drinkers, feeders, and shelters; the introduction of poultry into the flock without respecting the quarantine deadline; cramped habitat; wandering animals; lack of periodic vaccinations and prophylactic measures, and so on are all factors that favor susceptibility to diseases (Biswas et al., 2006; FAO, 2004, 2013, 2015). Table 4 shows that, prior to the project's implementation, the minimum poultry loss rate among non-beneficiaries was 50%, the maximum was 90%, and the average was 70% with a standard deviation of 0.85. Among project beneficiaries, the minimum poultry loss rate per farmer was 45%, the maximum was 90%, and the average was 69% with a standard deviation of 0.11. Traditional poultry farming is generally constrained by a high poultry loss rate. This is frequently due to death, predation, theft, and accidents. These findings are in agreement with those of Chowdhury (2013), Conroy et al. (2005), Das et al. (2008), Guèye (1998), Kumaresan et al. (2008), Mcainsh et al. (2004), Msami (2000), and Sarkar and Golam (2009). Following the implementation of PASA, among the non-beneficiaries of the project, the minimum poultry loss rate was 50%, the maximum was 95%, and the average was 76% with a standard deviation of 0.09. Among project beneficiaries, the minimum poultry loss rate per farmer was 5%, the maximum was 100%, and the average was 14% with a standard deviation of 0.04.

Table 3. Summary Statistics of the Primary Data Collected from the 400 Respondents

Attributes	Minimum			Maximum			Mean			Standard Deviation		
	Beneficiaries	Non-beneficiaries	Total Sample	Beneficiaries	Non-beneficiaries	Total Sample	Beneficiaries	Nonbeneficiaries	Total Sample	Beneficiaries	Non-beneficiaries	Total Sample
Farm Size before the treatment	14	8	8	241	101	241	72	33	41	40.07	19.24	29.72
Farm Size after the treatment	0	8	0	1051	380	1051	188	42	74	201.10	38.84	115.2
Chickens before the treatment	8	8	8	128	62	128	45	23	28	22.13	10.20	16.41
Chickens after the treatment	0	8	0	884	180	884	113	28	47	120.38	19.41	67.75
Guinea Fowl before the treatment	0	0	0	113	42	113	23	8	11	19.60	9.48	13.78
Guinea Fowl after the treatment	0	0	0	839	161	839	62	11	22	117.41	16.77	59.95
Ducks before the treatment	0	0	0	35	16	35	3	2	3	6.99	4.42	5.08
Ducks after the treatment	0	0	0	78	35	78	7	3	4	15.18	5.49	8.70
Turkeys before the treatment	0	0	0	16	9	16	2	1	1	3.09	0.85	1.66
Turkeys after the treatment	0	0	0	89	16	89	7	1	2	14.91	1.94	7.49
A.A.S of Poultry before the treatment	9	10	9	123	69	123	49	24	30	24.71	12.70	18.88
A.A.S of Poultry after the treatment	0	9	0	1700	200	1700	287	31	86	303.71	22.58	176.3
A.A.S. of Chickens before the treatment	6	8	6	74	38	74	31	17	20	14.39	6.84	10.62
A.A.S of Chickens after the treatment	0	5	0	1025	95	1025	174	21	54	184.75	12.21	106.5
A.A.S of Guinea Fowl before the treatment	0	0	0	58	29	58	15	5	7	11.61	6.35	8.68
A.A.S of Guinea Fowl after the treatment	0	0	0	1198	85	1198	82	8	24	152.34	10.25	77.15
A.A.S of Ducks before the treatment	0	0	0	25	14	25	3	2	2	4.87	3.43	3.78
A.A.S of Ducks after the treatment	0	0	0	182	25	182	10	2	4	25.30	4.09	12.63
A.A.S of Turkeys before the treatment	0	0	0	16	10	16	1	1	1	2.80	0.78	1.50
A.A.S of Turkeys after the treatment	0	0	0	676	16	676	18	1	4	76.38	1.75	35.99
Age	25	22	22	68	76	76	48	44	45	8.84	9.82	9.76
Household Size	1	1	1	34	22	34	10	7	8	5.37	3.18	3.86
Waterers	0	0	0	40	0	40	6	0	1	6.35	0	3.79
Feeders	0	0	0	52	0	52	7	0	2	7.96	0	4.67
Grant Value	3440			6364			5825			794		

Table 4. Summary Statistics of the Potential Outcomes of PASA

Attributes	Minimum		Maximum		Mean		Standard Deviation	
	Beneficiaries	Non-beneficiaries	Beneficiaries	Non-beneficiaries	Beneficiaries	Non-beneficiaries	Beneficiaries	Non-beneficiaries
Hatching Rate of Eggs Before the treatment	0.4	0.4	0.8	0.85	0.65	0.68	0.07	0.08
Hatching Rate of Eggs After the treatment	0	0.4	0.95	0.85	0.91	0.66	0.04	0.098
Poultry Loss Rate Before the treatment	0.45	0.5	0.9	0.9	0.69	0.7	0.11	0.85
Poultry Loss Rate After the treatment	0.05	0.5	0.25	1	0.14	0.76	0.04	0.09
Turnover Before the treatment	33	37	796	529	222	99	152	63
Turnover After the treatment	0	33	42409	996	2498	134	4913	125
Profit Before the treatment	26	29	637	424	178	79	122	51
Profit After the treatment	0	26	25446	797	1499	107	2948	100

Sources (Tables 3 and 4): Author's Computation Based on Field Data, 2014, 2020
Notes: A.A.S.= Average Annual Sale.
Farm Size: Total number of poultry in the farm (Average Annual)
Monetary values are estimated in US dollars. (US $ 1 = XOF 550 at the time of the study)

These findings show that by improving habitats, implementing a semi-intensive system, balancing diet, and adhering to hygiene and health care measures, the poultry loss rate in project beneficiaries' poultry farms decreased dramatically. The findings back up those of Kumaresan et al (2008). However, one of the beneficiaries had a 100% poultry loss rate because, after receiving a state subsidy to improve his poultry farm, he abandoned this production to invest in other economic activities. This project beneficiary's 100% poultry loss rate may have negative impact on the project's expected outcomes.

Poultry Sales, Turnover, and Gross Profit

Prior to the implementation of PASA in Togo, among the non-beneficiaries, the average annual minimum number of poultry sold per farmer surveyed was 10, the maximum was 69, the mean was 24, and the standard deviation was 12.70. Among the beneficiaries, the average annual minimum number of poultry sold per farmer surveyed was 9, the maximum was 123, and the mean was 49 with a standard deviation of 24.71. Five years after the implementation of PASA, the information collected from the 400 respondents showed that among the non-beneficiaries, the average annual minimum number of poultry sold per farmer surveyed was 9, the maximum was 200, and the mean was 31 with a standard deviation of 22.58. While among the beneficiaries, the average annual minimum number of poultry sold per farmer surveyed was 0, the maximum was 1,700, and the mean was 287 with a standard deviation of 303.71.

In terms of turnover, prior to the implementation of PASA, the minimum annual turnover among the non-beneficiaries was US $ 37 per farmer, the maximum was US $ 529, and the mean was US $ 99 with a standard deviation of 63. While among the beneficiaries, the minimum annual turnover was US $ 33 per farmer, the maximum was US $ 796, and the mean was US $ 222 with a standard deviation of 152. Five years after the implementation of PASA, among the non-beneficiaries, the minimum annual turnover was US $ 33 per farmer, the maximum was US $ 996, and the mean was US $ 134 with a standard deviation of 125. While among the recipients, the minimum annual turnover was US $ 0 per farmer, the maximum was US $ 42409, and the mean was US $ 2498 with a standard deviation of 4913.

In terms of profit, prior to the implementation of PASA, the minimum annual profit among the non-beneficiaries was US $ 29 per farmer, the maximum was US $ 424, and the mean was US $ 79 with a standard deviation of 51. While among the recipients, the minimum annual profit per farmer was US $ 26, the maximum was US $ 637, and the mean was US $ 178 with a standard deviation of 122. Five years after the implementation of PASA, the minimum annual profit for the non-beneficiaries was US $ 26 per farmer, the maximum was US $ 797, and the mean was US $ 107 with a standard deviation

of 100. While among the beneficiaries, the minimum annual profit was US $ 0, the maximum was US $ 25446 per farmer, and the mean was US $ 1499 with a standard deviation of 2948.

Traditional poultry farming is generally practiced for three main purposes and this include sale, consumption, and ceremonies (Dolberg, 2007; FAO, 2004, 2013, 2015; Guèye, 2000a). Before the implementation of PASA, farm size, average annual poultry sale by farmer, turnover, and profit of each farmer surveyed among the beneficiaries of the project were slightly higher than those of non-beneficiaries, indicating that these variables could be determinants in farmers' decision to participate in PASA. The findings show that five years after the implementation of PASA, the non-beneficiaries of the project naturally experienced a slight increase in annual number of poultry sold, turnover, and gross profit. Five years after the implementation of PASA, the increase in these variables was much greater for project beneficiaries than non-beneficiaries, and this could positively affect the project's potential outcomes. However, the absence of birds on certain beneficiaries' farms despite the subsidies received is a negative indicator for effective achievement of the expected results within the framework of PASA, because this absence of production is explained by the fact that certain farmers, after benefiting from the subsidies for the improvement of their poultry farms, have abandoned traditional methods of production. Furthermore, five years after the implementation of PASA, the magnitude of the standard deviations of the potential outcome variables among project beneficiaries such as farm size, average annual sale of poultry by beneficiary, turnover, and profit of each beneficiary indicate that the adoption rate of ITPFT may differ from one farmer to the next.

3.2. Comparative Analyses of Certain Socioeconomic Characteristics of the Beneficiaries and Non-Beneficiaries before the Implementation of PASA

Following the work of Lancaster (1969), Plackett (1983), Franke et al. (2012), Gosset (1908), Raju (2005) and Zabell (2008), the inferential statistics (the Pearson's Chi-square significance test (χ2) between the qualitative variables and the Student significance test (t-test) between the means of the quantitative variables) yielded the results presented in Table 5. The levels of significance of these two tests revealed that prior to the implementation of PASA, for some socioeconomic variables such as location, gender, age, marital status, religion, education, and poultry loss rate, there is no significant difference between beneficiaries and non-beneficiaries surveyed. As a result, these variables may or may not influence farmer participation in the project, and they may also be used as control variables in the project's impact evaluation analysis. Other socioeconomic variables, such as self-financing capacity in cash or in kind, level of education, household size, agricultural

cooperative membership, hatching rate of eggs, farm size, and average annual sale of poultry, show a significant difference at the 1% level between beneficiaries and non-beneficiaries surveyed prior to the implementation of PASA. As a result, these variables could be related with participation of farmers in the project. Furthermore, five years after the implementation of PASA, there is a significant difference in the means of potential outcome variables such as poultry loss rate, hatching rate of eggs, farm size, annual sale of poultry, turnover, and gross profit for both beneficiaries and non-beneficiaries. The impact evaluation of the adoption of improved traditional poultry rearing technique on the potential outcomes of project beneficiaries is thus justified and necessary in order to quantify the added value created by this emerging agricultural practice among farmers in rural areas.

Table 5. Comparative Table of Socioeconomic Characteristics of the Beneficiaries and Non-Beneficiaries before and five years after the Implementation of PASA

Socioeconomic Characteristics	Unit/Measurement	Chi-square test ($\chi2$)	Student test (T-test)	P-Value
Before the Implementation of PASA				
Sex	(Male=1, Female=0)	0.0002		0.99
Age	Years		-3.57	0.99
Marital Status	Categories	0.7125		0.87
Religion	Categories	12.35		0.15
Canton/Location	Categories	59.89		0.82
Self-Financing Capacity	US $	296.20		0.0000
Level of Study	Years	116.65		0.0000
Household Size	Number of members		-4.91	0.0000
Membership of Cooperative	(Yes=1, No=0)	324.85		0.0000
Loss Rate of Poultry	In %		0.55	0.58
Hatching Rate of Eggs	In %		3.30	0.0011
Farm Size	Number of Poultry		-12.57	0.0000
Average Annual Sale of Poultry	Number of Poultry sold		-12.33	0.0000
Education	Years	3.39		0.066
Five years after the Implementation of PASA				
Loss Rate of Poultry	In %		56.38	0.0000
Hatching Rate of Eggs	In %		-22.93	0.0000
Total Number of Poultry	Number of Poultry		-12.12	0.0000
Average Annual Sale of Poultry	In US $		-14.47	0.0000
Turnover	In US $		- 8.54	0.0000
Profit	In US $		- 8.37	0.0000

Source: Author's Computation Based on Field Data, 2014, 2020

Conclusion

The purpose of this investigation is to analyze the socioeconomic characteristics of beneficiaries and non-beneficiaries of government subsidies in Togo within the framework of the implementation of the second sub-component of the Agricultural Sector Support Project (PASA) in 2014. Significance levels of Pearson's Chi-square test ($\chi 2$) and Student's t-test indicate that before the implementation of PASA, there is a significant difference between the beneficiaries and non-beneficiaries of the project with respect to socioeconomic variables such as self-financing capacity in cash or in kind, level of education, household size, farm size, membership in cooperative societies, hatching rate of eggs, average annual sale of poultry, turnover, and profit. These variables could therefore be important determinants of farmers' participation in PASA.

Five years after the implementation of PASA, it emerged from the results of the study that the beneficiaries of the project experienced a larger and very important decrease in their poultry loss rate and increases in their hatching rate of eggs, farm size, average annual sales of poultry, turnover, and profit due to participation in the project, and this might have a positive impact on their income and welfare. However, the large discrepancy between the standard deviations of the outcome variables of the beneficiaries of the project indicate that the adoption rates of improved traditional poultry farming technique might differs from one farmer to another.

In addition, the non-compliance of all the beneficiaries of the project with the semi-intensive poultry farming system, the failure to scrupulously respect the improved traditional poultry farming technique, the absence and inadequacy of hatcheries or incubators, the lack of training and strengthening of technical production capacities, the failure to comply with hygiene and sanitary care measures and the absence of production and sales in some improved poultry farms after receiving PASA subsidies are factors that could have negative effect on the efficient, effective, and optimal achievement of the expected results of PASA.

Like every other scientific research, we end by mentioning a limitation of the study. Firstly, we guide the understanding of this analysis from a correlation viewpoint. Given the fact that we used cross-sectional data and could not control for many confounding in the way of identifying participation into PASA, we do not make any causal claims. Future research may want to credibly identify participation into PASA as well as the impact evaluation of PNIASA through the use of longitudinal data sets or in a more controlled experimental setting.

Conflict of Interests

The authors declare no conflict of interest.

References:

1. Akinola, L. A. F. & Essien, A. (2011). Relevance of rural poultry production in developing countries with special reference to Africa. *World's Poultry Science Journal*, *67*(4), 697–705. https://doi.org/10.1017/S0043933911000778
2. Aklobessi, K. K. (2003). Revue et stratégie de développement du sous-secteur petit levage: aviculture, cuniculture, et aulacodiculture.Lomé-Togo.
3. Anyanwu, J. C. (2014). Marital Status, Household Size and Poverty in Nigeria : Evidence from the 2009/2010 Survey Data. *African Development Review*, *26*(1), 118–137.
4. Azahar, K. B. B., Sekudan, E. E. A. & Azhar, A. M. Bin. (2020). Intelligent Egg Incubator. *International Journal of Recent Technology and Applied Science*, *2*(2), 91–102. https://doi.org/10.36079/lamintang.ijortas-0202.129
5. Biswas, P. K., Uddin, G. M. N., Barua, H., Roy, K., Biswas, D., Ahad, A. & Debnath, N. C. (2006). Causes of loss of Sonali chickens on smallholder households in Bangladesh. *Preventive Veterinary Medicine*, 76(3–4), 185–195. https://doi.org/10.1016/j.prevetmed.2006.05.001
6. Chambers, V., Foresti, M. & Harris, D. (2012). *The Final Report: Political Economy of Regionalism in West Africa - Scoping study and prioritisation*. *4(3)*, 1–24.
7. Chowdhury, S. D. (2013). Family poultry production in Bangladesh: Is it meaningful or an aimless journey? *World's Poultry Science Journal*, *69*(3), 649–665. https://doi.org/10.1017/S0043933913000652
8. Conroy, C., Sparks, N., Chandrasekaran, D., Sharma, A., Shindey, D., Singh, A. N. & Anitha, K. (2005). Improving Backyard Poultry-keeping: A case study from India. *Agricultural Research and Extension Network*, *146*(2005), 1–16.
9. Dao, B. (2010). Recensement (qualitatif/quantitatif) de toutes les exploitations avicoles et des structures de la filière dans toutes les régions du pays.Togo.
10. Das, S. C., Chowdhury, S. D., Khatun, M. A., Nishibori, M., Isobe, N.

& Yoshimura, Y. (2008). Poultry production profile and expected future projection in Bangladesh. *World's Poultry Science Journal*, *64*(1), 99–117. https://doi.org/10.1017/S0043933907001754

11. Dessie, T. & Ogle, B. (2001). Village Poultry Production Systems in the Central Highlands of Ethiopia. *Tropical Animal Health and Production*, *33*(2001), 521–537.

12. Dolberg, F. (2007). Poultry production for livelihood improvement and poverty alleviation. *Poultry in the 21st Century: Avian Influenza and Beyond. Proceedings of the International Poultry Conference, Held. 2007.*, (2005), 1–26.

13. Ekue, F. N., Poné, K. D., Mafeni, M. J., Nfi, A. N. & Njoya, J. (2002). Survey of the traditional poultry production system in the Bamenda area, Cameroon. Characteristics and parameters of family poultry production in Africa. *Institute of Agricultural Research for Development (IRAD). Yaounde, Cameroon*.

14. FAO (2004). Small scale poultry production. *Psikologi Perkembanga n*, 1–224. https://doi.org/10.1017/CBO9781107415324.004

15. FAO (2013a). Organisation des Nations Unies pour l'Alimentation et l'Agriculture: Quatrième recensement national de l'Agriculture 2011-2014: Résultats chiffrés détaillés sur l'agriculture togolaise,.

16. FAO (2013b). Poultry Development. In *Poultry Development Review*. ISBN 978-92-5-108067-2.

17. FAO (2014). Decision tools for family poultry development. FAO Animal Production and Health Guidelines (Vol. 16). Rome, Italy.

18. FAO (2015). Secteur Avicole Togo. Revues nationales de l'élevage de la division de la production et de la santé animales de la FAO (N°9). Rome.

19. Farayola, C. O., Adeyemo, A. A., Nwachukwu, S. C. & Yusuf, A. (2013). Extension Strategy Development and Training Needs for Small Scale Commercial Poultry Farmers in Nigeria. *Journal of World's Poultry Research*, *3*(4), 99–105.

20. Fellegi, I. P. (2003). Méthode et pratiques d'enquêtes. N° 12-587-X au catalogue. Ottawa, Canada.

21. Franke, T. M., Ho, T. & Christie, C. A. (2012). The Chi-Square Test: Often Used and More Often Misinterpreted. *American Journal of Evaluation*, *33*(3), 448–458. https://doi.org/10.1177/1098214011426594

22. Gauthier, J. & Langlois, A. M. (2010). Program National d'Investissement Agricole et de Sécurité Alimentaire: PNIASA. Plan d'investissement 2010-2015. Lomé-Togo.

23. Gosset, W. S. (1908). Student. The Application of the 'Law of Error' to the Work of the Brewery. *Biometrika,* 6(1), 3-6.

24. Guèye, E. F. (1998). Village egg and fowl meat production in Africa. *World's Poultry Science Journal*, *54*(March), 73–86.

25. Guèye, E. F. (1999). Ethnoveterinary medicine against poultry diseases in African villages. *World's Poultry Science Journal*, *55*(2), 187–198. https://doi.org/10.1079/wps19990013

26. Guèye, E. F. (2000a). The role of family poultry in poverty alleviation, food security and the promotion of gender equality in rural africa. *Outlook on Agriculture*, *29*(2), 129–136. https://doi.org/10.5367/000000000101293130

27. Guèye, E. F. (2000b). Women and family poultry production in rural Africa. *Development in Practice*, *10*(1), 98–102. https://doi.org/10.1080/09614520052565

28. Guèye, E. F. (2005). Gender aspects in family poultry management systems in developing countries. *World's Poultry Science Journal*, *61*(1), 39–46. https://doi.org/10.1079/WPS200440

29. Guèye, E. F. (2007). Evaluation of the impact of HPAI on family poultry production in Africa. *World's Poultry Science Journal*, *63*(3), 391–400. https://doi.org/10.1017/S0043933907001523

30. Hadji, E. L. & Gueye, F. (1998). Regional report Village egg and fowl meat production in Africa. *Poultry Science*, 54(3).

31. Hoffmann, I. (2007). Vaccination as a tool to preserve poultry genetic resources ? Proceeding of FAO conference on: "vaccination: a tool for the control of avian influenza", Verona 20-22

32. Kondombo, S. R. (2005). Improvement of village chicken production in a mixed (chicken- ram) farming system. PhD Thesis, Wageningen Institute of Animal Science, Wageningen University, The Netherlands.

33. Kondombo, S. R., Nianogo, A. J., Kwakkel, R. P., Udo, H. M. Y. & Slingerland, M. (2003). Comparative analysis of village chicken production in two farming systems in Burkina Faso. *Tropical Animal Health and Production* 35: 563- 574.

34. Kumaresan, A., Bujarbaruah, K. M., Pathak, K. A., Chhetri, B., Ahmed, S. K. & Haunshi, S. (2008). Analysis of a village chicken production system and performance of improved dual purpose chickens under a subtropical hill agro-ecosystem in India. *Tropical Animal Health and Production*, *40*(6), 395–402. https://doi.org/10.1007/s11250-007-9097-y

35. Lancaster, F. W. (1969). MEDLARS: report on the evaluation of its operating efficiency. *American Documentation*, *20*(2), 119–142. https://doi.org/10.1002/asi.4630200204

36. Lanjouw, P. & Ravallion, M. (1995). Poverty and Household Size. *The Economic Journal*, *105*(433), 1415–1434. https://doi.org/10.2307/2235108

37. Lombo, Y., Tona, K. & Bonfoh, B. (2018). Analysis of the Technical and Sanitary Constraints of the Traditional Breeding of Guinea Fowl in "Région des Savanes" of Northern Togo. *Journal of Pharmacy and Pharmacology*, 6(1), 77–87. https://doi.org/10.17265/2328-2150/2018.01.009

38. MAEP (2014). Ministère de l'Agriculture, de l'Elevage et de la Pêche. Principales caractéristiques de l'agriculture Togolaise: Quatrième recensement national de l'agriculture 20011-2014. Volume VI: Module complémentaire. (DSID). 147.

39. Magothe, T. M., Okeno, T. O., Muhuyi, W. B. & Kahi, A. K. (2012). Indigenous chicken production in Kenya: I. Current status. *World's Poultry Science Journal*, 68(1), 119–132. https://doi.org/10.1017/S0043933912000128

40. Mcainsh, C. V, Kusinaz, J. & Madsen, J. (2004). Regional Report Traditional chicken production in. *Poultry Science*, *60*(June), 233–246. https://doi.org/10.1079/WPS2OO4

41. Moussa Amadou, B., Idi, A. & Benabdeljelil, K. (2011). Characterization of traditional poultry farming in Niger. *World's Poultry Science Journal*, *67*(3), 517–530. https://doi.org/10.1017/S0043933911000560

42. Msami, H. M. (2000). Studies on the structure and problens of family poultry production in Tanzania. *Proceedings of the Research Coordination Meeting of IAEA, Held in Morogoro, Tanzania*, 95–106.

43. NDP (2018). National Development Plan (NPD). 2018-2022.

44. Pattison, M., McMullin, P., Bradbury, J. M., & Alexander, D. (2007). *Poultry diseases*. Elsevier Health Sciences.

45. Plackett, R. L. (1983). Karl Pearson and the Chi-Squared Test. *International Statistical Review / Revue Internationale de Statistique*, *51*(1), 59. https://doi.org/10.2307/1402731

46. PNIASA (2016). Program National D'Investissement Agricole et de Sécurité Alimentaire. Plan de Gestion des Pestes et des Pesticides (PGPP). Rapport Final (Version Actualisée).Togo.

47. Pousga, S., Boly, H., Lindberg, J. E. & Ogle, B. (2005). Scavenging chickens in Burkina Faso: Effect of season, location and breed on feed and nutrient intake. *Tropical Animal Health and Production* 37: 623-634.

48. Raju, T. N. K. (2005). William Sealy Gosset and William A. Silverman: Two "students" of science. *Pediatrics*, *116*(3), 732–735. https://doi.org/10.1542/peds.2005-1134

49. Riise, J. C., Permin, A. & Kryger, K. N. (2005). Strategies for developing family poultry production at village level - Experiences from West Africa and Asia. *World's Poultry Science Journal*, *61*(1),

15–22. https://doi.org/10.1079/WPS200437

50. RNA (2012). DSID (Direction de la Statistique de l'Informatique et de la Documentation). 4ème Recensement National de l'Agriculture (RNA).II: module de base. 571p.

51. Sarkar, K. & Golam, M. (2009). A move from subsistence to semi-commercial family poultry farming with local chickens : effective strategies for family poultry in Bangladesh. *World's Poultry Science Journal*,*65*(2), 251–259. https://doi.org/10.1017/S004393390900021X

52. Saleque, M. A. & Mustafa, S. (1996). Landless Women And Poultry: The Brac Model in Bangladesh. *Livestock Feed Resources within Integrated Farming Systems*, 349–371.

53. Sankara, F., Pousga, S., Dao, N. C. A., Gbemavo, D. S. J. C., Clottey, V. A., Coulibaly, K. & Kenis, M. (2018). Indigenous knowledge and potential of termites as poultry feed in Burkina Faso. *Journal of Insects as Food and Feed*, *4*(4), 211–218. https://doi.org/10.3920/JIFF2017.0070

54. Schultz, T. P. (1981), Economics of Population, *Addison-Wesley, Reading*, MA.

55. Singh, D. P., Fotsa, J. C. & Thieme, O. (2011). Summary and conclusions of the first e-conference of the International Network for Family Poultry Development (INFPD) on the theme *'Opportunities for poultry breeding programs for family production in developing countries: The bird for the poor.'* FAO, Rome, Italy.

56. Sonaiya, E. B. (1995). An assessment of some health and production costs for smallholder poultry in South-Western Nigeria. Proceedings ANRPD Workshop, Addis Ababa, Ethiopia, June 13-16, pp. 87-93.

57. Sonaiya, E. B. & Swan, S. E. J. (2007). *Small scale poultry production: technical guide* (Vol. 1). Daya Books.

58. Szekely, M. (1998). The Economics of Poverty, Inequality and Wealth Accumulation in Mexico, *St Anthony's Series,* New York.

59. Tona, K. (1992). Diagnostic du système de production en aviculture traditionnelle: cas de la région maritime. Mémoire de fin d'études agronomiques. ESA - UB. 85p.

60. Umunna, M. O., Adeeko, A., Onifade, O. T., Adigun, O. S. & Apapa, A. N. (2012). Poultry Farmers' Access to Extension Services in Atisbo Local Government Area of Oyo State, Nigeria. *African Journal of Basic & Applied Sciences*, *4*(6), 221–225. https://doi.org/10.5829/idosi.ajbas.2012.4.6.1117

61. UN-DESA-PD (2019). United Nations, Department of Economic and Social Affairs, Population Division. Volume II: Demographic Profiles (ST/ESA/SER.A/427). In World Population Prospects 2019.

62. Weis, T. (2008). The Global Food Economy: The battle for the future of farming. *Review of African Political Economy*, Vol. 35, pp. 689–689. https://doi.org/10.1080/03056240802574318

63. Zabell, S. L. (2008). On student's 1908 article "the probable error of a mean." *Journal of the American Statistical Association*, 103(481), 1–7. https://doi.org/10.1198/016214508000000030