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Education as an Opportunity

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"Studying is not a duty,
Studying is an opportunity"
Albert Einstein

On December 10th, 2020 ***The First Educational Science Conference*** organized by the European Scientific Institute was held online due to the COVID-19 pandemic that has been afflicting the whole world for some months now. Nonethless, the world continues to live, the world continues to produce, people continue to work, researchers continue to search, teachers continue to teach. The United Nations recognized the right for education for all and has recently set some of the goals for education – Goal 4.7 states "*By 2030, ensure that all learners acquire the knowledge and skills needed to promote sustainable development, including, among others, through education for sustainable development and sustainable lifestyles, human rights, gender equality, promotion of a culture of peace and non-violence, global citizenship and appreciation of cultural diversity and of culture's contribution to* sustainable development" (www.un.org., 2021)

Etymologically, the word 'education' derives from the Latin word *ēducātiō* – meaning 'breeding, bringing up, rearing'; from *ēducō* - meaning 'I educate, I train' and from its homonym *ēdūcō* – meaning 'I lead forth, I take out, I raise up, I erect'. Education is the coupled process of teaching and learning, where teaching is facilitating and providing learning, while learning is the acquisition of knowledge and skills. Education can be either formal or informal and any experience that has a formative aim may be considered educational. Formal learning is a program of learning recognized by a qualification or certificate, which is different from non-formal learning that is not usually recognized. Formal education occurs in structured environments like schools with classrooms and multiple students, and it is classically divided into multiple stages: preschool or kindergarten, primary school, secondary school and then college, university. Instead, informal learning is any learning resulting from daily activities and experiences, and it occurs in a variety of places, such as at home, work, and through daily interactions and shared relationships among members of society.

Education takes place in conditions ranging from a one room, rural classroom with one teacher instructing students in many grades to single

students who are into distance learning and are able to reach the world, and degrees, credentials, and certifications measure formal education. Currently, education is not necessarily accompanied by credits earned to obtain degrees or credentials, but it represents a lifelong learning experience for both individuals and organizations. Increasingly, innovation, and creative productive capital demand a multidisciplinary approach, not specialization. Therefore, education should be beyond borders, it should be considered as a fundamental public good, it should be inclusive not exclusive and it should be accessible to all (Lott and Bennett, 2010).

Two viewpoints seem to exist that place competency against modularization. The essence competency is that the content of courses should be based on occupational standards, and competency has been the centerpiece of reforms in many countries. Competency education should equip individuals with the ability to perform a set of tasks that are useful in the labor market. Another approach views competence in terms of desirable attributes, but many of these (e.g., problem-solving) are highly context-dependent. A third approach that seems to aggregate the previous ones views competence in terms of knowledge, abilities, skills, and attitudes in the context of a set of realistic occupational tasks. Competency is counteracted by the modularization viewpoint, in which modules are thought of as a group of competencies and can be built into whole qualifications. Modular structures have the advantage that they can be more rapidly updated because they are smaller than complete course and that they provide individuals with flexibility in skill building. Unfortunately, both models of education yield an enormous number of drop-outs, and the main reasons for noncompletion are institutional factors such as quality of teaching, support for students, flexibility, and monitoring and the student specific condition like family background, financial position, intentions, previous educational experience, work situation, motivation, and so on (Karmel, 2010).

From an educational perspective life-span development can be described as a continuous and active process of coping with developmental tasks. Life-span development is as a process of personal growth and it is closely connected to a concept of education that implies two meanings: the process of being engaged in educational activities (person educating himself) and the result of this engagement (the educated person). Education does not only lead to the establishment of differentiated knowledge systems, but also facilitates a broader understanding of own and others experiences and actions (Kruse and Shmitt, 2001).

In philosophical literature, education is known as a teleological concept that implies a *telos*, which is, an aim or purpose. In other words, education is not an activity carried out just for its own sake, but always because something is achieved. So, what is education? Education can be better

approached discussing its functions, and especially formal education has the function of qualification. This implies that children, young people and adults should be provided with the knowledge, skills, and understandings that allow them to 'do something', which ranges from the very specific vocational or professional to a more general education. Education has also the fuction of socialization, involving all those modes through which we become part of existing social, cultural, political, professional, or religious communities, practices, and traditions. However, education not only contributes to qualification and socialization but it always also impacts on the human person. Thus, "education performs the function of subjectification, that is, of becoming a subject of action and responsibility rather than remaining an object of the demands and directions of others" (Biesta, 2015).

Franca Daniele opened the session dedicated to ***Teaching Specialized English*** and her work assesses the different educational English language needs of medical students, and a survey was carried out using the Internet to see what each Italian university offers in terms of English language teaching. English courses in Italian medical schools as they appear today from the present survey seem to be useless. They cannot in any way fulfill the specific needs of medical school students and even less of medical doctors. A unified program is necessary for all Italian medical schools, and English should be taught with specific pathways for each individual student. ***Tatiana Canziani*** addressed the problems faced by teachers when designing an English course in Nursing School: 1) the identification of students needs which are technical and specific; 2) the development of a syllabus that considers the heterogenous level of students who are quite often English native speakers. She designed a syllabus for students attending Nursing School entirely taught in English at the University of Palermo, which is based on different communicative teaching strategies and techniques employed in order to help students to communicate more effectively in a clinical setting. ***Barbara Cappuzzo*** showed the results of a study obtained by using parallel corpora in scientific English classes in Italian sports sciences study courses where the bio-medical component of the curriculum is predominant. Students became gradually familiar with the discourse patterns of medical English and showed a better control in the correct use of scientific vocabulary. Most importantly, they developed awareness of the fact that producing a text in a specialized field in a language other than one's own is an activity that demands rigorous compliance with the rules and conventions of a given linguacultural domain. ***Stefania Cicillini*** reported her preliminary findings obtained through an online questionnaire sent to a group of first-year students, which show that the participants have a good command of the English language at the beginning of the term. She clearly addresses the issue that internationalization of education at tertiary level has led several academic institutions in non-English

speaking countries to adopt English as the medium of instruction, becoming the language of teaching and learning. ***Antonella Giacosa*** spoke about Emergency Remote Education, which has provided an effective response to the educational emergency determined by the coronavirus outbreak. Teachers, lecturers and students have experienced new teaching and learning strategies. Her study contributed to the discussion about short- and medium-term impact and it provides insight into challenges and best practices revealed during Emergency Remote Education classes, but at the same time could contribute to enhancing academic teaching in online and in-person courses concerning ways of interacting and meaning-making in an instructional context.

The second session dealt with ***Meeting Needs in Rural Schools*** and was opened by ***Mary Ann Hollingsworth*** who through 74 students conducted action research via interviews with volunteers across childhood and adult lifespan stages to ascertain impact and response the pandemic experience with a special focus on the role of school in that experience. Volunteers were interviewed on reactions to the pandemic experience, positive and negative life experiences both before and during the pandemic. Interview responses aligned with research already published on student experience with the pandemic. Then, ***Tanika Lankford Mitchell*** carried out an examination of existing literature uncovering favorable academic outcomes associated with integrating social emotional learning in the educational infrastructure. She reported the following strategies that were found to facilitate social emotional learning in rural schools: (1) an evidenced based social emotional learning curriculum, (2) a methodical process to train staff, (3) an intentional partnership with parents and (3) a coalition with wrap around teams. She concluded that social emotional learning assists children with developing personal and emotional skills.

The third session included ***Undergraduate Nursing Education with Transition to Nursing*** and ***Melissa Wholeben, Sarah Yvonne Jimenez*** and ***Carla Ellis*** reported on the important issue of community health care. They discuss the evolution of a community health care nursing course from didactic coursework to building inter-professional education collaborations. Inter-professional collaborations with students of other health care disciplines are crucial and hosting round table discussions, co-sponsor health care projects and community events are means that empower citizens to become active participants in improving their own health and well-being. ***Melissa Wholeben*** continued reporting on her study that evaluated the effect of a Simulated Hospital Day on the awareness and competency of pre-licensing nursing students regarding specific nursing interventions and critical thinking performed throughout the Simulated Hospital Day. Her findings showed a substantial rise in both core awareness and perceived skill competency, and she proposed that these findings may extend to SHD activities modified in

response to COVID-19 guidelines. Then, ***Sarah Yvonne Jimenez*** spoke about nurse residencies transition programs and their disparities, which have made it difficult to compare outcomes and identify specific elements that contribute to overall effectiveness. Her aim was to propose a common nomenclature of nurse residencies to promote standardization across programs and to provide guidelines to assist staff development educators to create and implement comprehensive, cost-effective, evidence-based programs.

The last session of the Conference was on ***Education*** and was opened by ***Don Martin*** and ***Magy Martin.*** They carried out a research project that examined the unfair treatment and disciplinary actions for African-American female students in an urban school district. They studied students in grades nine through 12 in both an early college high school and a traditional high school. Results indicated that African-American female students were often treated as older than they were and sexually more mature than female Caucasian students. In addition, the suspension and disciplinary rates were abnormally high in our African American population. ***Oleg Stiopca, Robert Cobb*** and ***Paula E. Faulkner*** reported on the effects of COVID-19 pandemic on educational systems, and on how best to move from face-to-face to online teaching and learning. Moldova policymakers and educators are meeting to address existing educational policies needed to continue educating its student population. The authors concluded that students would benefit best from online resources and adequate teacher feedback for online homework. They recommended that a collaborative approach should be employed to address the needs of students, their teachers, and parents to navigate the learning experiences during this time of uncertainty. Finally, ***Syafiq B. Assegaff, Hadi Sutopo, Sri Dhuny Atas Asri*** and ***Enrico Adhitya Rinaldi*** performed a research to develop a mobile multimedia-based learning on avoiding those imprecise Covid-19 patients. They presented a tutorial for a campaign on how to make patients and their families fearless to become stigmatized by the community. Subjects of the research were experts in education, medical, communication science and information technology and the preliminary findings show that this multimedia-based learning system is the most feasible model to be implemented.

Thanks to the organizers and the presenters, the mood in this successful Conference was lively and full of friendship feelings, and all attenders surely lived a professionally fruitful and enriching experience**.**

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SESSION ONE:
Teaching Specialized English

What Should Doctors Know?

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Abstract

Delors has established some of the pilasters of education that include learning to know, learning to do, learning to be, and learning to live together and that can be applied to medical school students. More specifically, knowledge is the first important skill students must develop in order to start becoming doctors. The present paper, considering exclusively medical degree courses, focuses on assessing the different educational English language needs of medical students and investigates to what extent such needs are satisfied. To address these issues, a survey was carried out using the Internet to look into all the different Italian universities and to see what each of them offers in terms of English language teaching. English courses in Italian medical schools as they appear today from the present survey seem to be useless. They cannot fulfill the particular needs of medical school students and even less of medical doctors. A unified program is necessary for all Italian medical schools, and English should be taught through specific pathways for each individual student.

Keywords: Medical English, English as a Special Language, medical school students, English teaching program, educational needs, medical school in Italy

Introduction

Delors has established some of the pilasters of education and the first concern, when approaching teaching, is target (Delors, 2013). In this context, target in the present paper refers to medical school (MS) students, aged 19 or over, who have just graduated from high school, and all have different backgrounds in terms of English language. English courses are usually at first year of MS, when students have no medical notions and therefore they do not know technical language not even in Italian, let alone in English. They do not have any idea of what being a doctor means. Some can speak fairly good English, others know the grammar, and others know how to read. Most of them do not understand correct Standard English and none of them know how to pronounce or spell medical terms. When teaching a language, any language, attention should be paid to the four language skills – listening, speaking, reading, writing, and translating should be added when teaching a second

language. Some doctors may need to understand and talk to foreign patients and colleagues but talking with colleagues necessitates a certain syntax and terminology – Ali's technical fluency, while talking with patients requires another type of register and syntax (Ali, 2003). After graduation, some doctors might want to go outside of Italy, and so they should know also standard language in order to be able to survive in a foreign country – what Ali defined as - ordinary fluency (Ali, 2003). Therefore, after six years of MS, doctors can work, but if they want to enter the Italian Health System, they must either take a two-year course to become family doctors, or stay in universities and take five more years to specialize in one of the branches of medicine. Later some of these might enter a PhD program, and the language needs increase, because they may participate to international congresses and so they must practice writing a presentation, presenting it and making and answering questions. In all Italian MS, English language course is mandatory; however, no uniformity exists among the courses in the different universities, resulting in diverse educational achievements by medical students. The present work assesses the different educational English language needs of medical students, focuses exclusively on medical degree courses and investigates to what extent such needs are satisfied. To address these issues, a survey was carried out using the Internet to look into all the different Italian MS and see what each of them offers in terms of English language teaching.

Language Needs of Medical School Students:

Language learning is an inductive process for a human being. Therefore, its acquisition is natural and does not require any particular type of training (Gollin, 1998). However, when teaching a second language, especially to adults, a number of mechanisms and strategies must be undertaken in order to achieve good results, especially teaching and training students on all language skills (listening, speaking, reading, writing and translating) (Howatt, 1984; Krashen & Seliger, 1975; Larsen-Freeman, 1991). Unfortunately, to the best of my knowledge, no researches have investigated either the language needs of MS students in Italy or the role of English teaching and English itself in non-English speaking countries. MS in Italy offer four main types of degrees: medical degree, specializations, doctorate degrees, and post-doctorate programs. Obviously, the language requirements in these many forms of training are different.

Medical Degree

In Italy, medical training is provided by MS in the various Universities, which accept a number of students as established and programmed by the Italian Ministry of University for each MS (Table 1). Students who wish to enter MS must first pass an extremely hard selection through a tough entrance test before being admitted into MS. The entrance test is administered on the

same day throughout Italy and yields a graded list based on the score obtained in the test. Thus, students choose the MS where they want to undertake their training based on their position in the list. While the first on the list chooses the MS first, the second chooses second, and so on.

The medical course itself lasts six years and, as already explained in the previous section, a number of requirements are necessary for any student to become a medical doctor. After graduating from the six-year training program, students are faced with two choices: either going into a two-year course to become a family doctor, or take another entrance test to be admitted into one of the many specialization schools, which takes another five years. It is clear that the language demands and requirements of these two groups of students are completely different. A family doctor in Italy has patients from 18 years old on because before that age, children have pediatricians (Brekke, 2013).

The demands for English are extremely reduced because the main activity of a family doctor is to follow the patients in their prevention, diagnostic, and therapeutic needs. Prevention consists of advising patients, based on their gender and age, on the different prevention tests and treatments that the patient should be subjected to in order to prevent major diseases such as cancers. The diagnostic work carried out by family doctors involves two principal actions: prescribing laboratory and/or imaging tests in order to begin to get oriented into the patient's possible disease, and referral of patients to specialists (Soler, 2008). Of course, all these processes and actions are performed in Italian, and the only skill the doctor might require in relation to English is talking with a foreign patient (Carelli, 2016). Foreign and non-Italian speaking patients are extremely rare. This is because most foreigners who have access to a family doctor have been living in Italy long enough to have learnt enough Italian to be able to speak with the doctor; otherwise, they may be accompanied by compatriots who can translate. In extreme cases, interpreters and cultural mediators can be hired, but this is extremely rare.

Consequently, in these conditions, family doctors necessitate English only to the extent to which they may access international literature for purposes of studying and updating. Subsequently, the only language skill they should have acquired is reading. It must be noted that in Italy, family doctors do not undergo any career progression and are hired according to a ranking that considers almost exclusively the years from graduation from medical schools and the work actually done in the Italian Public Health system, not taking into account neither publications nor experiences in foreign countries (Peluso, 2012).

Specializations

Table 2 reports all specializations that medical doctors can undertake in Italy, involving all branches of medicine, surgery, and service medicine. All

specializations are offered by MS in the various universities and each university can accept only a certain number of specializers as established and programed by the Italian Ministry of University. Medical doctors have access to specializations through an entrance test and like for MS, it is administered on the same day throughout Italy and yields a graded list based on the score obtained in the test. So medical doctors choose the MS where they want to obtain their specialization based on their position in the list. Thus, the first on the list chooses the MS first, the second chooses second, and so on.

Different from MS students, specializers are paid since they provide health care in the various hospital wards partnered with their MS. They are actual doctors working. Based on the different specializations, the duties of these doctors are to collect history, make diagnosis, perform surgical operations, and/or set therapies for those patients having diseases that cannot be handled by family doctors and that require hospitalization. They work while they learn and they learn while they work. Specializations last five years and, during this period, only a negligible number of doctors actively initiates research activities.

After five years, doctors are specialized and, as specialists, they can work in public or private hospitals and day care structures and in their own private surgeries. The Italian Health System hires specialists based on a '*concorso'*, which is a selection executed by taking into consideration specialization grade, past working experiences, and lastly publications (in some '*concorso'* no difference is made between Italian and English publications) (Corposanto, 2009).

In terms of English language needs, like family doctors, these specializers and specialists might require talking with foreign patients who do not understand Italian. Thus, it is important to note that due to the very nature, use and utility of hospitals, specializers and specialists encounter foreign patients more often than family doctors do. As previously stated, in those very rare extreme cases in which the patients are unable to speak with the doctors, interpreters and cultural mediators intervene. Career progression of these doctors is almost automatic. Thus, it is based on the number of years they have been working in the hospital, in that particular field, '*anzianità'*, while again, publications are negligible (Esposito, 2017). It is noteworthy that like family doctors, specializers and specialists-hospital doctors could train only their reading skill for studying and updating purposes. In addition, neither family doctors nor hospital doctors are asked to participate neither actively nor passively in international congresses.

Doctorate and Post-doctorate Programs

After having specialized, doctors might also choose to stay in universities and attempt an academic career. In Italy, three academic positions

exist: assistant professors, associate professors, and full professors. To become an assistant professor, the first prerequisite is to have a PhD, whose programs are provided by all MS and they usually last two years. During these years, doctors are asked mainly to continue with their hospital work but also to start training in the art and profession of research and teaching. As a result, they begin to be acquainted with the various research methodologies involving both basic and clinical sciences and they begin to learn how to survey international literature and write a scientific paper (Odone, 2017). During these two years, doctors participate in international congresses so they can start getting familiar with institutions outside Italy and with international literature. Some of them visit hospitals and research institutions outside Italy.

Post-doc programs vary according to the specific fields, having different durations and different aims and engaging doctors who continue their academic career. In terms of English needs, these doctors should train all language skills. First, they are obliged to reach an excellent level of knowledge of Standard English to enable them to live in a foreign country where they might be hosted for various reasons. Second, they must be able to understand and talk with patients, paramedics, and nurses and they are required to communicate with their colleagues both in hospital environments and in international congress settings. Third, they must know how to read and understand international literature for both updating and research purposes. Finally, they should practice writing a scientific paper addressed to either international scientific journals or international congress proceedings.

Materials and Methods:

The present paper focuses exclusively on medical degree courses and excludes specializations, doctorate and post-doctorate programs. In order to investigate to what extent the different educational English language needs of medical students are satisfied, a survey was carried out using the Internet to look into all the different Italian universities and see what each of them offers in terms of English language teaching. The Internet search was done entering into the website of each of the 40 universities hosting MS, and two items were evaluated: 1) Educational Objectives; and 2) Study Plan (*piano di studi*). The Educational Objectives (Annex 1) are derived from the five Dublin descriptors that were established in 2004 in the attempt to have a comprehensive and consistent educational plan in all European universities (Table 3). The Study Plan describes all the single courses for each of the six years with credits, professors, programs, etc. Table 4 reports all the single items that were considered for each MS. The number of students, the minimum, the maximum, and the mean number of credits that are reserved for English teaching were calculated. In this context, the maximum number of credits in a year was also counted. It must be noted that each credit corresponds to approximately 12,5

hours of in-class teaching. The year or the years in which English teaching is executed were included. Moreover, whether English is a single course or it is "integrated" with other courses, and if there is a dedicated professor or if the course is done by the university language center, were also explored. Finally, partnerships with other language institutions were also appraised. Other elements that seemed crucial to evaluate were the actual program of the course, the presence of a placement test, recognition of credits from previous courses, standard language teaching, and/or medical scientific English teaching. The courses that yield either a grade (18/30) or simply pass/fail judgements were also determined for each MS.

Results:

Educational Objectives of Medical Schools in Italy

Table 3 reports the five European descriptors established in Dublin, while Annex 1 reports the modifications by Italian MS. All 40 Italian MS more or less have the same objectives derived and revised from the indications and descriptors established by the European Union, with only negligible differences among the Italian universities. The educational objectives are:

"*The medical degree course includes 360 Credits, articulated into six years, at least 60 of such credits should be acquired in practical training activities aimed at maturation of specific professional capacities (professionalizing CFUs). The specific mission of the medical course is biomedical and psychosocial aimed at the true development of professional competence and medical values. The mission is founded on the importance of integrating the biomedical paradigm of curing the disease with the psychosocial paradigm of taking care of the human being in the metaparadigm of the complexity of care. This specific mission is therefore aimed at training a doctor, at an initial professional level, who possesses: - a multidisciplinary, inter-professional and integrated vision of the most common problems of health and diseases; - an education aimed at disease prevention and health promotion within the community and the territory; - a profound knowledge of the new requirements for care and health, centered not only on diseases, but, above all, on persons, considered in their entirety of body and psyche, according to their specificity of gender, population, and inclusion in a specific social context. The teaching method adopted is useful for achieving the expected qualifying characteristics provided for the horizontal and vertical integration of knowledge. Such a teaching method considers solid cultural and methodological bases and is aimed at the study of pre-clinical disciplines. Subsequently, it is mainly centered on skills to solve problems and make decisions on early contact with the patient, on the acquisition of good clinical skills, and on the human relationship with the patient. The right balance of vertical and transversal integration between: 1) basic sciences, which must be*

broad and include knowledge of evolutionary biology, molecular biology, genetics and biological complexity, is proposed in the teaching project aimed at the knowledge of the structure and function of the human body in normal conditions, for the purpose of maintaining health and for the correct application of translational scientific research; 2) knowledge of the morbid processes and the mechanisms that cause them so as to set up prevention, diagnosis and therapy and also from a gender perspective; 3) clinical and methodological medical practice, which must be particularly solid, through a wide use of tutorial teaching capable of transforming theoretical knowledge into personal experience in such a way as to build their own scale of values and interests, and also acquire the professional skills useful for managing the complexity of medicine; 4) the human sciences, which must constitute a useful background to achieve awareness of being a doctor and of the profound values of the doctor's professionalism; 5) the acquisition of the scientific, medical, clinical and professional methodology aimed at the health problems of the individual and the community, with due attention to population and sex/gender differences. The expected learning outcomes are defined here by integrating the European Descriptors (5 Dublin Descriptors) with what is proposed by the Institute for International Medical Education (IIME), Task Force for Assessment, and by The TUNING Project (Medicine) - Learning Outcomes /Competences for Undergraduate Medical Education in Europe" (Dublin, 2004).

In terms of English language teaching, among the five Descriptors noteworthy are Descriptor 4 and 5. Descriptor 4: Communication skills—Does not mention in any way communication with foreign patients, paramedics or peers and English language and/or specifically scientific-medical English are mentioned only in Descriptor 5: Learning skills. Indeed, the Descriptor reports: "*For learning skills, particular attention is paid to communication, also in English, and to IT and multimedia methodologies that facilitate critical reading of scientific articles, and also for the future ability to continuously update. Speaking and writing fluency in a European language other than Italian*".

Over the 40 universities evaluated, only one (2,5%) of the MS considers English teaching a prerequisite for the acquisition of good communication skills, while 37 (92,5%) do not mention it, and for or 2 (5%), it was not possible to find out because it was not reported on their websites. Concerning Learning skills, only 13 (32,5%) of the 40 universities consider English language a useful tool for permanent life-long learning, while 25 (62,5%) do not mention it, and for or 2 (5%), it was not possible to find out because it was not reported on their websites.

Study Plans in Medical Schools in Italy

Table 4 reports all the items that were evaluated for the English courses in each MS. The number of students accepted in the MS evaluated goes from a minimum of 70 to a maximum of 985, with a mean number of students of 260,25. Concerning the number of credits each of which corresponds to 12,5

hours of in-class teaching, the minimum number of credits is 3 corresponding to 37,5 hours (6 universities). On the other hand, the maximum number is 12 credits corresponding to 150 hours (2 universities), with a mean number of credits of 5,8, corresponding to 72,5 hours. Furthermore, the minimum number of credits in one year is 1, corresponding to 12,5 hours (1 university), while the maximum number of credits in one year is 8, corresponding to 100 hours (3 universities).

Table 5 depicts the year/years in which English is taught for each university. English is taught throughout almost all six years of MS. Majorly, it is taught first year of MS in 34 universities (85%), second year in 13 universities (32,5%), third year in 6 universities (15%), fourth year in only 3 universities (7,5%), and fifth year in only 1 university (2,5%). In 12 universities (30%), English is taught in more than one year.

Concerning the English course itself, variegated data were found. Indeed, 9 English courses (22,5%) are part of larger multiple courses (*corso integrato*) in which the students receive one single grade that represents the mean of all the grades received in each module part of the multiple course. Twenty-nine (29) courses (72,5%) are held as single courses where students receive a single judgement based only on the English course itself. Among these, 21 (72,4%) are taught by one or more professors, 7 (24,1%) courses are done by the university language center, and 1 (3,4%) is an online course. For 2 universities (5%), it was not possible to find out because it was not reported on their websites. Finally, one university (2,5%) has a permanent partnership with an outside language institution where students can take additional English courses.

Six (6) courses (15%) submit students to a placement test to find out their level of English knowledge, while 31 (77,5%) do not require it. For 3 universities (7,5%), it was not possible to find out because it was not reported on their websites. Furthermore, 8 universities (20%) accept language recognitions from institutions outside the university, while 20 (50%) do not accept them. Finally, for 12 universities (30%), it was not possible to find out because it was not reported on their websites. Twenty (20) universities (50%) teach medical and/or scientific English in various declinations. Of these 20 universities, 19 (95%) have mixed programs of standard language/medical English, while only 1 (5%) teaches exclusively medical English. On the other hand, only 3 (7,5%) teach exclusively standard language. For 17 universities (42,5%), it was not possible to find out because it was not reported on their websites.

The way students are judged either with a grade (from minimum 18 to maximum 30 cum laude) or pass/fail judgements: 33 universities (82,5%) use pass/fail judgements, while 17 (42,5%) give grades at the time of final

examination. For 8 universities (20%), it was not possible to find out because it was not reported on their websites.

Discussion:

The results obtained from the present survey show that the 40 Italian MS have more or less the same Educational Objectives and the same Language Educational Objectives. Almost all universities have a specific file published on their websites in which all the Educational Objectives each medical student must fulfill in order to become a doctor are reported. The present survey focused mainly on Descriptors 4 and 5 of the Educational Objectives that concern English language and language teaching in general, and Communication and Learning Skills students must acquire in order to become medical doctors. In the Educational Objectives of almost all MS, the following statement is reported "*Speaking and writing fluency in a European language other than Italian*". This statement is in direct contradiction with the fact that only 1 (2,5%) of the medical schools considers English teaching a prerequisite for the acquisition of good communication skills. This is an extremely alarming datum since languages are the only communication means human beings use. This datum is also in contradiction with some of the Study Plans observed, which require B1-B2 level of English, as has been set by the Common European Framework of Reference for Languages (Table 6) (North, 1995; North & Schneider, 1998; North, 2007). In the Educational Objectives, only 13 (32,5%), less than half of the MS, consider English language a useful tool for life-long learning. This observation is puzzling since international scientific literature is the only literature accredited by the international scientific community and by the Italian scientific community and it is almost all written in English. However, the data seem to show that for the MS evaluated, English language is not necessary for life-long learning.

Concerning the Study Plan, the first element that was taken into consideration is the number of students each MS accepts each year. The survey has yielded a mean number of students of 260,25, meaning that each class contains a number of students that cannot be adequately handled for language teaching goals. Furthermore, the mean number of credits each MS provides for English courses is 5,8. It must be noted that each credit corresponds to 12,5 hours. As a result, the mean number of hours of in-class English lessons is 72,5 hours. According to the Common European Framework of Reference for Languages, 120 hours of lessons are recommended for an A2 student to reach Level B1. In these conditions, if students enter MS at an A2 level, with 72,5 hours, they will probably be able to reach only B1.1 level (Table 6). From the data collected, it seems that the number of credits assigned to English courses is clearly insufficient to teach students any English (North, 1995; North & Schneider, 1998; North, 2007).

It is important to note that only 3 (7,5%) MS teach exclusively standard language and half of them have mixed programs - standard language/medical English. However, 85% of MS teach English during the first year; this is somewhat bewildering and inconsistent since first year students do not have any knowledge of medicine and therefore do not know medical language not even in Italian let alone in English. Furthermore, it is interesting to note that 82,5% of the MS give only a pass/fail judgement, indicating that students can put the minimum effort into this subject because the minimum is all that is required for them to pass the exam. Moreover, the absence of a grade means that the course and the judgement have no effect on the final graduation grade received by the doctor, which is important to gain access to specializations and doctorate programs. Thus, the English course seems to retain no importance for the future of the doctor.

Conclusion

The present paper reports on a survey carried out on the Internet to evaluate the state of the art in terms of English language teaching in Italian MS. For the 40 universities considered, two elements were studied in depth: 1) the Educational Objectives as derived and modified from the 5 Descriptors that were established in Dublin in 2004 and applied by the all European countries; and 2) the Study Plan (*piano di studi*) (Dublin, 2004). There seems to be a lack of agreement between what the European Union asks and what is actually taking place in Italian universities. It is interesting to note that none of the 40 universities collocate English teaching with a Communication Skill. Only 13 (32,5%) out of 40, much less than half, include English language among the Learning Skills and continuing education. Most universities state that English is important for the life of a medical doctor but they reserve only a mean of 72,5 hours to teach this language. No unified programs exist throughout the 40 universities assessed, and the courses that attempt to teach medical English seem to be destined to fail because first year MS students have no notion of medicine. As a result, they do not know its language not even in Italian, let alone in English.

Medical students have specific language needs that do not seem to be satisfied by the courses and the programs evaluated. Such specific needs involve mainly studying and updating through international scientific and medical literature for purposes of life-long education (Stem, 1983; Stern, 1992). Based on our target and their backgrounds, the attempt to fulfill such specific needs is practically impossible if they were seen in light of the data yielded in the present survey: English professors are alone, in most cases with no language teaching technological support, teaching in classes with a mean number of students of 260,25, and the credits each course is assigned with are a mean of 5,8, corresponding to 72,5 hours.

In sum, English courses in Italian MS as they appear today from the present survey seem to be useless. They do not seem, in any way, to fulfill the specific needs of MS students and even less of medical doctors. A unified program is necessary for all Italian MS, keeping in mind that it is not the duty of MS to teach languages. MS train doctors and, therefore, English should be a collateral, important, and a supportive activity that should be taught with specific pathways for each individual student. The university language centers should offer diversified courses that respond to the different needs of the students (North, 1995; North & Schneider, 1998; North, 2007). The role of English courses in MS should not be to teach the language but through the language, they should contribute to training doctors. Therefore, once the students have reached their C2 Level, as certified by the university language centers, the English professors, who should teach during the last years of MS, should train students to access scientific and medical international literature to reach a good level of knowledge of scientific and medical English, in order to study and update life-long. Besides reading and understanding, all the other language capacities related to scientific and medical English should be trained elsewhere like in specializations, doctorate and post-doctorate courses, based on the specific needs. In Italian MS, this seems to be the only way English courses can give their specific and unique contribution to training doctors. Future studies are necessary to investigate and set comprehensive programs aimed at unified teaching goals.

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Table 1 - Italian universities housing medical schools and the number of students accepted each year.

Bari – 297
Bologna – 364
Brescia – 223
Cagliari – 238
Catania – 400
Catanzaro – 280
Chieti-Pescara – 186
Ferrara – 596
Firenze – 365
Foggia – 99
Genova – 275
L'Aquila – 137
La Campania Valvitelli – 550
Marche - 205
Messina – 331
Milano – 400
Milano Bicocca – 155
Milano San Raffaele – 300
Modena e Reggio Emilia – 175
Molise – 94
Napoli Federico II - 557
Novara Piemonte Orientale - 194
Padova – 334
Palermo – 417
Parma – 240
Pavia – 244
Perugia – 301
Pisa – 288
Roma Campus Biomedico – 140
Roma Cattolica – 135
Roma La Sapienza – 985
Roma Tor Vergata - 220
Salerno – 154
Sassari – 138
Siena – 244
Torino – 70

Trieste – 180
Udine – 148
Varese Insubria – 150
Verona – 197

Table 2 - Specializations with the number of doctors accepted each year by Italian universities

MEDICINE	SURGERY	SERVICES
Allergology and Clinical immunology: 115 Dermatology: 144 Hematology: 220 Child Neuropsychiatry: 190 Community Medicine and Primary Care: 69 Cardiology: 635 Gastroenterology: 198 Pneumology: 371 Emergency Medicine: 905 Endocrinology and Metabolic Diseases: 185 Food Science: 72 Geriatrics: 405 Infectious and Tropical Diseases: 339 Internal Medicine: 793 Medical Oncology: 317 Nephrology: 246 Rheumatology: 121 Neurology: 303 Pediatrics: 600 Psychiatry: 432 Sports Medicine: 79 Thermal Medicine: 3	Cardiac Surgery: 96 General Surgery: 673 Gynecology and Obstetrics: 500 Maxillofacial Surgery: 67 Neurosurgery: 106 Ophthalmology: 210 Otolaryngology: 190 Orthopedics Surgery: 484 Pediatric Surgery: 75 Plastic Surgery: 100 Thoracic Surgery: 80 Urology: 227 Vascular Surgery: 136	Anesthesia, Resuscitation, Intensive and Pain Therapy: 1649 Audiology and Phoniatrics: 44 Clinical Pathology - Biochemistry: 219 Forensic Medicine: 158 Health Statistics and Biometrics: 28 Hygiene and Preventive Medicine: 575 Medical Genetics: 70 Nuclear Medicine: 91 Occupational Medicine: 188 Pathology: 158 Microbiology and Virology: 122 Pharmacology-Clinical Toxicology: 85 Physical-Rehabilitation Medicine: 277 Radio-diagnostics: 729 Radio-therapy: 176

Table 3 - Dublin Descriptors

	Knowledge and Understanding
1. Bachelor	[Is] supported by advanced text books [with] some aspects informed by knowledge at the forefront of their field of study..
2. Master	provides a basis or opportunity for originality in developing or applying ideas often in a research* context ..
3. Doctorate	[includes] a systematic understanding of their field of study and mastery of the methods of research* associated with that field..

	Applying Knowledge and Understanding
1. Bachelor	[through] devising and sustaining arguments

2. Master	[through] problem solving abilities [applied] in new or unfamiliar environments within broader (or multidisciplinary) contexts ..
3. Doctorate	[is demonstrated by the] ability to conceive, design, implement and adapt a substantial process of research* with scholarly integrity .. [is in the context of] a contribution that extends the frontier of knowledge by developing a substantial body of work some of which merits national or international refereed publication ..

	Making Judgements
1. Bachelor	[involves] gathering and interpreting relevant data ..
2. Master	[demonstrates] the ability to integrate knowledge, handle complexity, and formulate judgements with incomplete data ..
3. Doctorate	[requires being] capable of critical analysis, evaluation and synthesis of new and complex ideas..

	Communication Skills
1. Bachelor	[of] information, ideas, problems and solutions ..
2. Master	[of] their conclusions and the underpinning knowledge and rationale (restricted scope) to specialist and non-specialist audiences (monologue) ..
3. Doctorate	[with their peers, the larger scholarly community and with society in general (dialogue) about their areas of expertise (broad scope)..

	Learning Skills
1. Bachelor	have developed those skills needed to study further with a high level of autonomy ..
2. Master	study in a manner that may be largely self-directed or autonomous..
3. Doctorate	expected to be able to promote, within academic and professional contexts, technological, social or cultural advancement ..

Table 4 - Items investigated for each medical school

Descriptor 5: Educational Objectives
Communication Skills
Learning Skills
Study Plan
Number of Students
Number of Credits
Year/Years
Single vs. Multiple Course
University Language Center vs. Professor
Partnership with other Institutions
Placement Test
Recognition of Credits from Previous Courses
Medical English
Standard Language
Pass/Fail vs. Grade

Table 5 - Year/Years of English course for each medical school

Year	No. of U
1	34
2	13
3	6
4	3
5	1

Note: The total number is not 40 because some universities offered English courses for more than 1 year

Table 6 - Hours necessary to reach the different levels of English according to the Common European Framework of Reference for Languages

LEVEL		**HOURS**
A1.1	A1	30
A1.2		30
A2.1	A2	30
A2.2		30
B1.1	B1	30
B1.2		30
B1.3		30
B1.4		30
B2.1	B2	30
B2.2		30
B2.3		30
B2.4		30
C1.1	C1	60
C1.2		60
C1.3		60
C2	C2	180

Annex 1 - Descriptors

Descriptor 1: Knowledge and Understanding

Graduates must have knowledge and understanding skills to be able to describe and correlate the fundamental aspects of the bio-molecular, macro and microscopic structures, of the functions and pathological processes, as well as of the main disease pictures of the human being. They must demonstrate understanding of the principles and ability to argue based on the social and economic nature as well as the ethical foundations of human and professional action in relation to the issues of health and disease. In this regard, graduates: - will be able to correlate the normal structure and functionality of the organism as a complex of continuously adapting biological systems, interpreting the morpho-functional anomalies found in various diseases; - will be able to identify normal and abnormal human behavior, being able to indicate the determinants and main risk factors of health and disease and of the interaction between the human being and his physical and social environment with attention to sex differences /

gender and population; - will be able to describe the fundamental molecular, cellular, biochemical and physiological mechanisms that maintain the homeostasis of the organism, being able to describe the life cycle of the human being and the effects of growth, development and aging on the individual, family and on the community with attention to sex / gender and population differences; - will be able to illustrate the origin and natural history of acute and chronic diseases, having the essential knowledge relating to pathology, pathophysiology, epidemiology, health economics and the principles of health management. Consequently, they will also have a good understanding of the mechanisms that determine the equity of access to healthcare, the effectiveness and quality of healthcare itself in relation to existing sex / gender differences; - will be able to interpret the global needs of patients and their families, from a biopsychosocial perspective at any stage of the path of a disease, through competent communication and with an interdisciplinary approach, which also takes into account the cultural factors that modulate the relationships between patient, family, and illness. They will also be able to discuss clinical problems by addressing the diagnostic and therapeutic process, considering the centrality of the patient and the knowledge of pain therapy in consideration of evidence-based medicine; - will be able to correlate the principles of drug action with their indications, paying attention to sex / gender and population differences, to describe the main diagnostic, surgical and physical, psychological, social and other diagnostic interventions gender, in acute and chronic illness, in rehabilitation, prevention and end-of-life care; - will be able to list and discuss the main determinants of health and disease, such as lifestyle, genetic, demographic, environmental, socio-economic, psychological and cultural factors in the population as a whole. Such knowledge will be correlated to the state of international health and to the impact on it of globalization; - will be able to discuss the essential elements of professionalism, including the moral and ethical principles and legal responsibilities that are the basis of the profession; - will be able to discuss clinical problems by addressing the therapeutic diagnostic process in the light of the principles of evidence-based medicine, as well as the knowledge of pain therapy and symptoms that affect quality of life, including the area of palliative care in its various contexts. Knowledge and understanding was developed over the six years of the degree course, thanks to the teaching method implemented which is interactive and multidisciplinary and provides for the daily integration of basic sciences and characterizing disciplines. This is thanks to an early clinical involvement of the students, who, from the second year of the course, are oriented towards a correct approach through the psycho-social anamnesis at the patient's bed, and with the acquisition of semeiology techniques on mannequins. The choice of the specific objectives of the basic courses is also decisive for knowledge, made primarily on their relevance in the framework of human biology, and on their preparatory status with respect to current or foreseeable clinical issues. This is with particular attention to the component concerning the scientific methodology associated with the choice of specific objectives of the characterizing courses acquired primarily "in the field" with attendance in hospital wards and outpatient clinics of territorial structures. Hence, these structures allow the enhancement of the relationship with the patient and also, from the psychological aspect, according to the concept of holistic medicine (whole person medicine).

Descriptor 2: Applying Knowledge and Understanding

Graduates must be able to apply their knowledge to the understanding and resolution of health problems of individuals with attention to the specificity of gender, groups, and populations. This is also relevant to new issues that are inserted in broad and interdisciplinary contexts. Clinical skills must be aimed at addressing the complexity of the health problems of the population, social groups, and the individual patient—a complexity that is characterized in the dimensions of personal data, multiple pathology, and the intertwining of biological,

sociocultural and gender-specific determinants. For these purposes, graduates: 1) will be able to correctly collect a clinical history, complete with social aspects, and carry out an examination of the physical and mental state. They will be able to apply the principles of clinical reasoning, know how to perform basic diagnostic and technical procedures, analyze and interpret the results to correctly define the nature of a problem, and correctly apply the appropriate diagnostic and therapeutic strategies; 2) they will be able to establish diagnoses and therapies in the individual patient, also in consideration of gender-specific differences, recognizing any condition that puts their life in imminent danger, knowing how to correctly and independently manage the most common medical emergencies; 3) will be able to treat diseases and take care of patients in an effective, efficient, and ethical way by promoting health and the recognition of pain and its treatment even in the advanced and terminal stages of life, fulfilling the moral obligation to provide medical care, including palliative therapies for symptoms, pain, and existential suffering from a biopsychosocial and person-centered perspective. They will therefore be aware of the limit of treatment, especially in chronic degenerative incurable diseases or in the pathologies of the elderly, so that palliative therapy programs can also be activated in an anticipated time with respect to the terminality and with the aim of guaranteeing a quality of optimal life; 4) will be able to undertake adequate preventive and protective actions against diseases, maintaining and promoting the health of the individual, the family, and the community. They will refer to the basic organization of health systems, which includes policies, organization, financing, and restrictive measures on costs and principles of efficient management in the proper provision of health care. They will therefore be able to correctly use local, regional, and national surveillance data from demography and epidemiology in health decisions; 5) will know how to respect professional values that include excellence, altruism, responsibility, compassion, empathy, trustworthiness, honesty and integrity, and the commitment to follow scientific methods, maintaining good relationships with the patient and his family, to safeguard well-being, the cultural diversity and autonomy of the patient himself; 6) will know how to correctly apply the principles of moral reasoning and take the right decisions regarding possible conflicts in ethical, legal and professional values, including those that may emerge from ethnic or gender-specific differences, from economic hardship, from the commercialization of health care and new scientific discoveries. They will respect their colleagues and other health professionals, demonstrating the ability to establish collaborative relationships with them; 7) will be able to apply the essential principles of health economics in medical decisions with specific regard to the cost / benefit ratio of diagnostic and therapeutic procedures, hospital-territory therapeutic continuity, and organizational appropriateness. For the ability to apply knowledge and understanding, particular attention is given to the acquisition of practical skills through the learning of the semeiological bases of clinical sciences at the bedside during the internship organized as a guided tutorial activity in the third and fourth year of the course. Then there is attendance in university wards and clinics for the completion of clinical internship in the fifth and sixth year of the course and in territorial clinics, such as those of General Practitioners and Free Choice Pediatricians attended by students in the fourth and fifth year course.

Descriptor 3: Making Judgements

Graduates must have the ability to integrate knowledge and manage complexity, as well as to make judgements based on limited or incomplete information, including reflection on social and ethical responsibilities related to the application of their knowledge and judgements. To this end, graduates: 1) will be able to demonstrate a critical approach, constructive skepticism and a research-oriented creative attitude in carrying out their professional activities. They will be able to take into account the importance and limitations of information-based scientific thinking, obtained from different sources, to establish the

cause, treatment and prevention of diseases; 2) will be able to formulate personal judgements to solve analytical and complex problems and independently seek scientific information, without waiting for it to be provided to them, using the basis of scientific evidence; 3) will be able to formulate hypotheses, collect and critically evaluate data, to solve problems, in the awareness of the role played by complexity, uncertainty, and probability in the decisions taken during medical practice. They will be able to effectively plan and manage their time and activities efficiently to cope with conditions of uncertainty, and exercise the ability to adapt to change; 4) will be able to exercise personal responsibility in taking care of individual patients, in compliance with the code of ethics of the medical profession; 5) they will be able to exercise reflective thinking on their professional activity in relation to the relationship with patients and other operators, the methods used, the results obtained, and personal and emotional experiences. The autonomy of judgement begins to develop as early as the second and third year with the study of semeiology which guides the student towards clinical methodology. The development of independent judgement is completed thanks to the teaching methodology of the last years of the course that addresses the patient's problems essentially through the study of clinical cases, both in integrated courses and in clinical field activity.

Descriptor 4: Communication Skills

Graduates must be able to communicate their conclusions, knowledge, and the underlying rationale clearly and unambiguously to specialist and non-specialist interlocutors, as well as, in the manner required by circumstances, to their patients. To this end, graduates: a) will be able to listen carefully to extract and synthesize relevant information on all issues, understanding their contents, and exercising communication skills to facilitate understanding with patients and their relatives, enabling them to share decisions as equal partners; b) will communicate effectively with colleagues, with the community, with other sectors and with the media, and will be able to interact with other professionals involved in patient care through efficient teamwork; c) will demonstrate good sensitivity to cultural and personal factors that improve interactions with patients and the community; d) will be able to deal with critical situations on a communicative level, such as the communication of serious diagnoses, the interview on sensitive issues relating to sexual and reproductive life, on end-of-life decisions. For communication skills, particular attention is given to Human Sciences in the integrated courses of the second year. In this context, training is also implemented through techniques such as narrative medicine, reflection grids, role play as important tools in the acquisition of a true emotional and professional competence by the student.

Descriptor 5: Learning Skills

Graduates must have developed those learning skills that allow them to continue studying mostly in a self-directed and autonomous way. To this end, graduates: 1) will be able to collect, organize, and critically interpret new scientific knowledge and health / biomedical information from the various resources and databases available; 2) will be able to obtain specific information on the patient from clinical data management systems, using technology associated with information and communication as a valid support for diagnostic, therapeutic, and preventive practices and for the surveillance and monitoring of the state of health, including the application and also the limitations of information technology; 3) they will be able to manage a good archive of their medical practice for its subsequent analysis and improvement; 4) will be able to identify their training needs starting from auditing their own practice, planning self-training courses and assessing their own needs, professional risk factors, and professional burnout problems; 5) will be able to evaluate and use systems based on innovative technologies that will be introduced in clinical practice in the near future. For learning skills, particular attention is paid to communication in English. Particular attention is

also given to IT and multimedia methodologies that facilitate the accustomed to critical reading of scientific articles, and also prepare the graduate for the future ability to continuously update. Thus, this involves speaking and writing fluently in a European language other than Italian.

English for Nurses: Needs Analysis and Syllabus

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Abstract

In recent years, health profession degree courses entirely taught in English have become more and more frequent in Italy. Among these degree courses, the Associate Degree in Nursing has gradually spread in Italy since nursing is a profession that is highly required all over the world. As a matter of fact, Nursing is a profession that requires much specialized clinical competences and advanced communication skills (Schmidt 2003; Collins, 2005). From a linguistic standpoint, nurses have been defined as a sort of 'communication broker' (Bourhis et al., 1989) becoming linguistic mediators between doctors and patients (Garone & Van de Craen, 2017) since they have both to understand the doctor's technical language and 'translate' it into the patient's every day one. Thus, teachers face two main problems when designing an English course in Nursing: 1) the identification of student needs, which are technical and specific; 2) the development of a syllabus that considers the heterogeneous level of students who are quite often English native speakers. In this study, a syllabus designed for students attending the nursing degree course entirely taught in English at the University of Palermo based on the findings of the needs analysis will be proposed. Particular attention will be paid to the different communicative teaching strategies and techniques employed in order to help students to communicate more effectively in a clinical setting.

Keywords: ESP needs analysis; English for Nurses; Teaching strategies

Introduction

The Bologna Declaration (European Ministers of Education 1999) and its subsequent common European Framework of Qualification has led to an international movement of students within the European countries that accepted this declaration. As a consequence, over the past decades the number of English-language degree courses within the medical domain has significantly increased across the EU member states in order to attract incoming international students into European countries and to encourage the international mobilisation of students (Socha-Dietrich & Lafortune, 2019). Since 2009 on, more than 12 Italian public universities have opened English-language medical degree courses all over the country (e.g. Pavia, Bari, Milan,

Messina) from the North to the South of Italy. This tendency has been expanded to other health professional degree courses and in the past three years, some Italian universities (e.g. Palermo, 'La Sapienza' in Rome and 'Luigi Vanvitelli' in Campania) have activated nursing degree courses entirely taught in English. As a matter of fact, nurses are highly required all over the world and represent more than 50% of the current shortage in health workers and account for nearly 50% of the global health workforce (WHO, 2020). This shortage has become more evident with the COVID-19 pandemic that has caused, all over the world, an unprecedented demand for 'travel nurses' (registered nurses who take assignments in hospitals that have short term staffing needs). Nurses, indeed, spend more time with patients and are usually the first persons the patient asks for help in a hospital setting (Candlin, 2006). They take constant care of patients of all ages during their healthcare experience supporting them both physically and psychologically (Corrizzato & Goracci, 2013). Furthermore, they are the 'eyes and ears' of doctors providing them with information about patients' health status. From a linguistic standpoint, nurses are able to use different linguistic registers and often convert the Medical language of doctors into the everyday language of patients making them feel more at ease when communicating health information. Several studies (Bouhris et al., 1989; Koch-Weser et al., 2009; Garone & Van de Craen, 2017; Lu, 2018) have, indeed, shown that doctors normally use a highly specialised register to assert their status and patients may often feel embarrassed when they do not understand the doctors' language and so they refrain from asking questions. This is confirmed by Collins (2005) who found that in nurse consultations, patients' explanation tend to be on a continuous talk on their health status because such consultations focus on patient's talk and nurses directly use words the patient has employed during the interviews. On the contrary, in doctors' consultations, patients tend to be curtailed because the conversation normally starts from doctors' explanations in a language that is often technical. So, nurses play a central communicative role eschewing the medical jargon that generates communicative side-effects, understanding and meeting patients' communicative needs. In the following sections, the needs analysis of English for Nurses (EN) and the syllabus designed for student nurses will be presented.

English for Nurses:

General English differs from English for Specific Purposes (ESP) since it is designed to meet the specific needs of a group of learners focusing not only on the language (e.g. grammar and specialized lexicon) but also on the communicative skills and discursive strategies needed in order to use the language in a specific professional context. Within ESP, English for Medical Purposes (EMP) is a branch for a wide variety of medical (e.g. surgeons,

cardiologists) and allied health professions (e.g. nurses, midwives). English for Nursing Purposes (ENP) is one of the sub-branches of EMP and focuses on the use of English both in the clinical setting and in nursing education. Teaching ESP typically includes a range of tasks, such as investigating learner needs and specialist discourse, developing courses and materials tailored to the students' specific needs (Basturkmen, 2017). Therefore, when teaching in an ESP course, teachers should carry out the needs analysis of the 'how' and 'what' of an ESP course (Dudley-Evans & St John, 1998; Hyland, 2006; Flowerdew, 2013). As already observed by Richards (2001), the first two aims of ESP needs analysis concern the detection of the language necessary to perform a specific professional role and the identification of the gap between what students can do and what they need to able to do. To achieve these aims, needs are analysed from three main perspectives, that of the learner, that of the teacher and that of the professional working in the specific context. After detecting learning needs, ESP teachers should state the goals to determine the teaching activities and materials needed to create an effective syllabus. As far as ENP is concerned, various studies on the needs analysis of student nurse have revealed that in terms of skills, nurse students have an urgent need for speaking and listening skills whereas in terms of language, students need a combination of general English and ENP when interacting with medical professionals (using medical jargon) and when engaged in a conversation with patients (using plain English) in specific situations such as explaining nursing procedures, drug reactions, medical treatment, taking the patient's history or giving advice (Lu, 2018). These qualitative and quantitative studies have been conducted on non-native speakers of English (NNES) including students enrolled in nursing degree courses in Asian countries (e.g. Indonesia, Korea and Taiwan) and in the USA (Bosher & Smalkoski, 2002), or NNES nurses working in Australia (Hussin, 2002). To the best of my knowledge, no previous studies have explored the English language needs of students enrolled in an Italian degree course in nursing entirely taught in English. In the following paragraphs, after a brief description of the degree course in Nursing at the University of Palermo, the language needs of student nurses will be investigated with a focus on the teaching activities offered during the English course.

Description of the Degree Course:

In the academic year 2019-2020 a three-year-basic degree course in Nursing (Associate Degree in Nursing) entirely taught in English was activated by the University of Palermo. This study programme has restricted access and the number of places is set annually by the Italian Ministry of Education, University and Research (MIUR). In order to be admitted students must have level B2 English proficiency and pass a written admission test

prepared yearly at national level. Nursing student internship is offered from the second semester of the first year of the degree course program and takes place in a highly specialised local hospital where the English language is spoken since it is the result of an international partnership between the Region of Sicily and a University Medical Centre in the USA. The students have four-hour weekly lessons during the first semester for a total of 30 hours. This semester includes subjects such as Bioethics, Human Anatomy and Physiology, Psychology, Theory of Nursing, Biology and Genetics and Psychology. In the academic year 2020\2021, the total number of students enrolled in the first and second years of the course was 23 coming from different countries and half of them came from countries where English was one of the official languages.

Needs Analysis - Methods:

In order to get a clear picture of the student nurses' learning needs, needs analysis was conducted adopting the model proposed by Dudley-Evans & St. John (1998). According to them, needs assessment should encompass the analysis of three main situations (the learning situation, the present situation and the target one). The Present situation refers to the analysis of students' strengths and weakness in language in terms of what skills and knowledge learners have before the course begins. The learning situation refers to learners' perspective and involves their subjective needs (why they have decided to take up that course and what their preferences in terms of learning are). The target situation refers to the specific professional context and concentrates on the objective needs *viz* what the learners need to do in the target situation (hospital setting).

Present and Learning Situations:

As far as the student nurses of Palermo are concerned, the analysis of the Present situation (students' previous knowledge and skills) showed that students' English proficiency varied from upper intermediate (B2) to Proficiency (C2). Three out eleven Italian students were, indeed, native speakers since they were born in English speaking countries or had lived, studied and worked for a long period in the USA or the UK. Eight out 12 foreign students came from countries where English is one of the official languages (Philippines, Nigeria, Ghana and Gambia) and 4 students came from Ukraine, Rumania and Poland. As described in table 1, most students were 18-25 years old and only 5 out 23 students had a master degree (one of the Italian students had a Master Degree in Foreign languages).

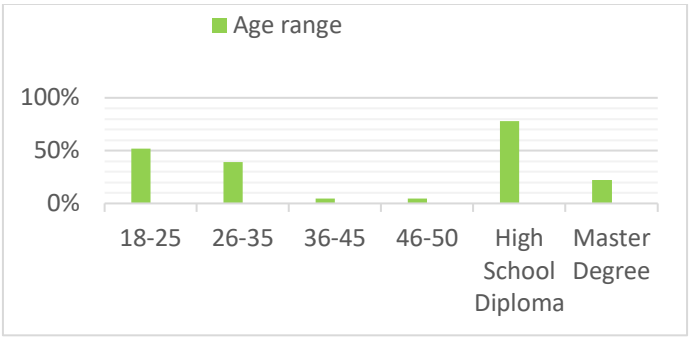

Table 1 - Students' ages and education

Therefore, out of a total of 23 students, 11 had a C2 level, 3 had a C1 level and 9 had an upper-intermediate one (B2). English proficiency evaluation was based on the English language certificates presented by students before enrolling in the degree course. Thus, 61% of students had a proficiency of General English ranging from C1 to C2. To investigate the learning situation and specify learning needs, a questionnaire was administered to the students. This questionnaire included various questions in order to identify their subjective needs in terms of: 1) motivation (why they were taking this degree course); 2) expectations and wants (what they are expected to learn from the course or wanted to learn in terms of contents); 3) background knowledge of English and specialised contents. The resulting answers have shown that in terms of motivation 40% affirmed that to become a nurse was their dream whereas about 22% cited as motivating factors a good job opportunity, a good way to improve their English proficiency or an opportunity to work abroad. In terms of expectations, most students declared that they expected to learn English medical language and use it in different registers in order to cooperate with doctors and interact with patients whereas a low percentage wanted to learn about communication techniques and enrich their level of English. In terms of background knowledge of the specialised context and language (nursing, medicine, biology) only two students out 23 had previous experiences in caring patients and none of them had a Bachelor of Science.

The Target Situation - Learners' Needs:

In order to evaluate what learners need to know in terms of required language and skills necessary to perform their specific professional role, previous studies on ENP have adopted different techniques such as ESP teachers' observation of nurses at work and interviews or surveys administered to professionals working in the specific field and students in the third year of their course. Unfortunately, in this case the target situation analysis has not

been conducted using these sources due to COVID-19 pandemic. From March 2020, indeed, nurses and physicians working in the local hospital have been totally absorbed by COVID-19 pandemic management and it was not possible to interview or observe the nurses working in a so highly specialised hospital. Moreover, students usually start their traineeship in the second semester of the first year but from March 2020, the Italian government has issued a series of decrees that gradually increased restrictions and lockdown. Thus, at the time of this research, except for a couple of months the second year students had not been allowed to do their training and the first year ones had not started it. Not having the opportunity of gathering information from professionals or trainee students, in order to collect data on the linguistic competence, skills and vocabulary needed by nurses when practicing their profession, this information was retrieved by official documents such as the Nursing Code of Practice (NCP) and web sources like the American Nurse Association website. The NCP (2018) represents the professional standards that registered nurses and midwives must uphold to practise in the UK. In terms of communication this Code lists that nurses must:

1. use terms that people in their care, colleagues and the public can understand;
2. take reasonable steps to meet people's language and communication needs, providing, wherever possible, assistance to those who need help to communicate their own or other people's needs;
3. use a range of verbal and non-verbal communication methods, and consider cultural sensitivities, to better understand and respond to people's personal and health needs;
4. check people's understanding from time to time to keep misunderstanding or mistakes to a minimum (p. 9).

Thus, according to these assumptions, student nurses need a combination of general English and ENP when interacting with medical professionals (using medical jargon) and when interviewing or taking care of their patients (using general English). Moreover, nurses should learn how to use different communicative strategies in relation to cultural diversity and registers adopting an empathic attitude when interacting with patients.

In order to investigate the clinical situations where students use English most, the teaching activities were prepared in terms of clinical simulations and reference was made to the American Nurse Association (ANA) website. The ANA is the premier organization representing the interests of 4 million American registered nurses. Founded in 1896, it is the strongest voice for the nursing profession.

Six main key nurse responsibilities were retrieved from this website:

1. Take detailed health care histories (medical histories and symptoms)

2. Listen to patients and analyse their physical and emotional needs
3. Draw blood, and perform other health-related testing
4. Check and monitor a patient's vital signs
5. Educate patients about management of illnesses
6. Provide support and advice to patients

These responsibilities overlap with the crucial situations identified by previous studies on ENP (Miyake & Tremarco, 2005; Nurakhir and Palupi, 2018; Saragih, 2014), which revealed that when engaged in a conversation with patients student nurses needed to face specific situations such as explaining nursing procedures, drug reactions, medical treatment, taking the patient's history or giving advice (Lu, 2018).

Teaching Materials and Activities - EMP Linguistic Features:

The tailor-made teaching materials as well as the battery of exercises have been designed by the teacher for this specific purpose and videos on specific nursing topics and 'scenes' representing the 'authentic' material were retrieved from ENS registered nurse websites and proposed to students during the course. The learning-centred syllabus was planned starting from the 4 main assumptions listed by the NCP (2018) regarding nurse communication in a medical context and various topics which are specific lexical features of the language of medicine and\or nursing were included in the syllabus (e.g. monoreferentiality, transparency, conciseness, metaphors). The first assumption of the NCP (2018) lists that nurses must: 'use terms that people in their care, colleagues and the public can understand' (p. 9). Thus, they should be able to: 1) understand and use the language of doctors (colleagues); 2) use terms and a language (plain English) that can be understood by patients (people in their care). In order to teach students how to use specialised and non-specialised vocabulary in a hospital context, students were introduced to the main EMP lexical features (monoreferentiality, conciseness and transparency). These linguistic features are, indeed, essential in order to comprehend the language of medicine and its technicality. Monoreferentiality refers to the generic rule that in Medicine a single word should be used to define a specific and unique concept (e.g. hepatitis cannot be substituted by another word but can be paraphrased as inflammation of the liver). However, many medical words may have synonyms due to the progress of medicine (e.g. Mongolism, Down Syndrome, Trisomy 21) or to the tendency to use new terms not having classical origin (e.g. thrombus or blood clot). Therefore, particular attention has been paid to the evolution of medical terms and their synonyms when defining diseases, techniques, symptoms and medical tools.

A second topic included in the syllabus was word formation with particular attention to Greek and Latin based medical terms (e.g. anaemia) formed

through affixation. These technical words are transparent since they can be understood through the analysis of their single parts (e.g. hyperglycaemia). Therefore, a list of affixes used in medicine in order to name a disease, a symptom, a surgical procedure or instrument or a radiological investigation was given to students and discussed in class. Exercises prepared for the specific purpose, foresaw a list of Greek or Latin based transparent medical words. Students were asked to analyse the single parts of these words dividing them into single parts specifying the correct meaning of each part and give the non-technical alternative to the technical Latin or Greek-based word (see the table below).

Technical term	**Analyse the word by dividing it into single components giving the correct meaning of each part**	**Give the non-technical term**
Hypercholesterolaemia	Hyper: High (excess) cholesterol: a waxy substance -aemia: blood condition	High cholesterol (An excess of waxy substance in the blood)

Table 2 - Exercises on affixation

These exercises helped students to shift from the technical language to the ordinary one. Conciseness refers to the use of abbreviations (e.g. acronyms, blending) which are often used in a medical context in terms of definition of diseases and disorders (e.g. ADHD or Attention Deficit Hyperactivity Disorder), laboratory test (e.g. PSA or Prostate Specific Antigen), radiological investigations (PET or Positron Emission Tomography), nursing procedures (IV or intravenous). These abbreviations are normally included in the electronic health record but they are often used when interacting with a patient. Although these standard medical abbreviations can be seen as efficient professional shorthand, a lack of their knowledge can act as a barrier to effective communication and understanding among patients. To improve this skill different videos recorded by ENS registered nurses presenting the most common abbreviations used in a medical record and in a clinical context when assessing patients' health history were retrieved from the web and proposed to the students. Moreover, a battery of exercises was administered to students regarding the identification of the abbreviations used in medical records, medical prescriptions and in brief clinical cases (see the table below).

Abbreviation	Meaning
CVS	CardioVascular System
a.c.	before meals
SOB	Shortness of breath
AMA	Against Medical Advice
BP	Blood Pressure
Hx	History
bid	Twice a day
qd	daily
qid	four times a day

Table 3 - Abbreviations in Medicine

The aim was to furnish students with the required knowledge in order to be able to read a medical record (e.g. DOB or Date of Birth) or a medical prescription (PO or by mouth) as you can see from the exercise below, proposed to students during the course.

Patient personal detail	
Name(s):	DOB:
Surname:	Date:
Prescription	
Dolores 40 mg - 1 tab a.c. qd	
Orson 50 mg - 1 pil PO qid	

Table 4 - A medical prescription in class

In this exercise students were asked to 'translate' the abbreviations included in the medical prescription and explain to patients when and how to take these drugs (the name of the drugs have been invented by the teacher).

In the second two weeks of lessons, in order to help students to enhance an effective communication with their patients taking 'reasonable steps to meet people's language and communication needs' (NCP, 2018:9), student nurses were introduced to the use and comprehension of metaphors which represent one of the most common communicative strategies used in a medical context. This linguistic figure is a useful tool that may be used by nurses when explaining a nursing procedure or when educating patients about the management of their illness explaining the physiological mechanisms which characterise the disease. Explanations are an important area of health care communication since they are attempts made by health professionals or patients in order to clarify an aspect of care or to justify it. Various authors (Reisfield & Wilson, 2004; Casarett et al., 2010) have, indeed, underlined the importance of using metaphors when explaining a medical concept or interpreting metaphors that patients may use when talking about their health.

As matter of fact, to relate an unfamiliar domain to a familiar one facilitates the comprehension of an unknown concept. For this reason, students were taught how to interpret a metaphor using psycholinguistic techniques such as analogical or conceptual reasoning. This strategy is based on the creation of a set of analogies or correspondences between two domains (Gentner 1983; Lakoff and Johnson 1980). The first metaphor employed to instruct students on metaphor comprehension was the war metaphor "cancer is a war" often used by doctors when interacting with their patients. This war metaphor is in the form of A is B and may be transformed into a simile composed by two domains or concepts. The source domain is the unknown, unfamiliar concept (cancer, chemotherapy) whereas the target one is the familiar one (war, nuclear weapons). Students were asked to identify the similarities between the two concepts or domains and give their own interpretations which were: 1) Physicians and patients are allied and fight together; 2) Nuclear weapons (chemotherapy) are used as in a battle to fight a common enemy (cancer).

The second example concerned metaphors in which the source domain was not an action but the visual image of an action. The metaphorical expression "Depression is falling into an abyss" is often used by depressed patients when narrating their mood. In this case, the source domain (unknown) is not a concept but the visual image of an action (falling into an abyss). This action reproduces three main visual images: 1) someone falling down in an unknown atmosphere (visual image); 2) someone crying and shouting but no one can hear him\her (auditory image); 3) an abyss or better a place where there is no bottom. In this case, students gave their interpretations in terms of the patient's feelings defining him\her as anguished, suspended in the air, unable to act or move, lonely and unable to find a way out. Therefore, the final interpretation was that depression is like falling into an abyss because depressed people feel alone, abandoned and anguished and cannot find a way out from their condition being unable to move or act due to it. Other metaphorical expressions (see the table below) used within the medical context were discussed in class and students were asked to interpret them using analogical reasoning.

Metaphors	
Explanations through metaphors	
1. Viral infection: "Antibodies are like little blood warriors. When you're sick, your body produces lots of soldiers (antibodies) to defend you against foreign invaders (viruses)";	
2. Food allergy: "You have a food allergy when your immune system identifies a protein in what you eat as an invader, and reacts by producing antibodies to fight it".	
Patients' narrative description of the symptoms	
1. Depressed patient: "It's like swimming in the treacle".	
2. Paraesthesia: "It's like ants running in my body".	

Table 5 - Metaphorical expressions used in class

Teaching Material and Activities - Communication Techniques:

Another linguistic role of nurses is 'to use a range of verbal and non-verbal communication methods, and consider cultural sensitivities, to better understand and respond to people's personal and health needs' (NCP, 2018: p.9). In order to underline the different cultural approach and way of communicating (verbal and non- verbal communication, a non-empathic and an empathic approach when asking about symptoms) videos concerning nurse responsibilities such as taking a history, monitoring vital signs (e.g. checking blood pressure) administering drugs and drawing blood were retrieved from different ENS (American, Canadian and British) nurse websites. Students were asked to observe both the nurse's and the patient's behaviour and identify the way of communicating of these nurses in order to understand the importance of a correct and respectful communicative behaviour when interacting with a patient in a clinical setting.

Moreover, in order to instruct students on nurse health assessment interview the history-taking sequence proposed by Douglas et al. (2005) was presented to students. This model proposes a systematic, sensitive and professional manner of taking a patient's history reducing mistakes to a minimum.

History-taking sequence
1) The presenting complaint
2) Past Medical History
3) Medication History
4) Family History
5) Social History
6) Sexual History
7) Occupational History
8) Summary
9)

Table 6 - History-taking sequence (Douglas *et al.* 2005)

Moreover, unhelpful questions that can interfere with an effective nurse-patient communication (the not to do list) were subject of discussion and students were asked to avoid using this type of questions in the role-play.

Unhelpful interview techniques
Ask why or how questions
Use persistent questions
Use technical language
Interrupt
Ask leading questions that suggest the answers

Table 7 - Ask me 3 questions

The use of these two techniques are essential in nursing assessment since they help nurses in organising their interview in an effectively manner. Moreover, when taking the patient's history, particular attention has been paid to pain assessment, which is essential to make an initial patient's health assessment. For this reason, the SOCRATES model (Swift, 2005) was proposed to students in order to conduct a systematic pain assessment.

SOCRATES	Questions
Site:	Where exactly is the pain?
Onset:	When did it start, was it constant/intermittent, gradual/ sudden?
Character:	What is the pain like e.g. sharp, burning, tight?
Radiation:	Does it radiate/move anywhere?
Associations:	Is there anything else associated with the pain, e.g. sweating, vomiting.
Time course:	Does it follow any time pattern, how long does it last?
Exacerbating factors:	Does anything make it better or worse?
Severity	How severe is the pain, consider using the 1-10 scale?

Table 8 - SOCRATES model

Finally, in order 'to check patients' understanding from time to time to avoid misunderstanding (NCP, 2018:9), the ask myself 3 questions technique and summarization were the last two topics of the syllabus. The ask myself 3 questions (Institute for Healthcare Improvement, 2018) encourage patients to understand the answers to three questions (see below):

1. What is my main problem?
   My bad cholesterol level is high and I'm at risk of heart problems.
2. What do I need to do?
   I need to take this drug once a day, do exercise and have a balanced diet.
3. Why is it important for me to do this?
   If I take these pills once a day, do exercise and have a balanced diet, my bad cholesterol level will reduce as well as the risk of having heart problems.

These three simple but essential questions in every health care interaction designed by health literacy experts can foster clear health communication between health professionals and patients in particular when a pharmacological treatment is required. The second technique employed was summarization which is one of the steps included in history-taking sequence but that may be used in different nursing situations (e.g. pharmacological treatment, instructing on how to dress a wound at home). Thus, when conducting an interview nurses should summarize or rather remind the patient the understanding of his\her symptoms demonstrating that they have been listening filling in holes in the patient's history. These techniques are essential because understanding health instructions reduces the risk of making mistakes when taking medicines or preparing for a medical procedure.

The activities in class foresaw the presentation of various clinical cases prepared by the teacher for the students and a lot of role-play and simulations were used in this phase in order to give them the opportunity of acquiring communicative competence when taking a patient's history, dressing a wound, monitoring vital signs and assessing pain. All the time students alternately changed their role and were actively involved in these activities as observers of the verbal and non-verbal strategies employed by their colleagues providing a feedback in a manner that acknowledges both the positive and negative aspects of the role play. Moreover, ENS students often played the role of linguistic supervisors correcting their colleagues' grammar mistakes.

Conclusion

This paper has described the context and teaching strategies within a degree course in Nursing entirely held in English and has outlined some

distinguishing features such as EMP lexical features and communication strategies. Psycholinguistic and linguistic techniques were employed as teaching strategies aiming at improving student nurse skills both as linguistic mediator between patients and doctors and as effective health communicator. Students' feedback was positive and they really appreciated the topics included in the syllabus. Among the topics that they appreciated most, scenes such as taking the history and specialised vocabulary were the ones that they considered most useful for their future profession and asked for the inclusion in the syllabus of a more exhaustive list of technical terms concerning medical instruments. In conclusion, although this teaching experience has been evaluated as positive, the syllabus could be improved in many ways. First of all, an accurate observation of nurses at work should be desirable in the future to investigate the specific circumstances in which nurses are required to use the English language in order also to acquire a more specialized knowledge of the medical instruments used by nurses at work. Moreover, the syllabus should also include academic reading and writing focusing the attention on the role of nurses as researchers and professionals who constantly need to be updated on specific professional topics. Therefore, the textual analysis of nursing papers published in international Journals of Nursing should be an integral part of the syllabus improving student nurse academic writing skills. However, to achieve this aim additional hours of lessons should be added to the course since 30 hours of lessons are not sufficient.

To conclude, even though an ESP teachers are not nursing experts and have no possibilities to observe or cooperate with students or experts working in their professional context, they can overcome this situation starting from an in-depth needs analysis of the duties of nursing profession taking the role of the learners themselves in order to help students to develop the language skills that nursing learners need in order to face the challenges of the labour market.

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Using Parallel Corpora for Translation Activities in L2 Medical English Undergraduate Teaching, with Specific Reference to Italian Sports Sciences Courses

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Abstract

English is the international language of science and, as such, it is also the international language of medicine. L2 English undergraduates do not generally have particular difficulties in translating from English into their mother tongue; by contrast, they do not perform very well when asked to translate into English. The aim of this report is to show the results of a study obtained by using parallel corpora in scientific English classes in the Italian sports sciences study course of the University of Palermo. The students were provided with a corpus of English texts taken from a well-known medical text with pedagogical purposes, and their corresponding Italian translations, which were carried out by medical doctors. The students were asked to compare the two languages and were guided to identify major differences in lexical choices, syntactical structures, textual features, and units of meaning. They were then invited to translate relevant parts of texts from English into Italian mainly on the basis of what they remembered of the Italian version, and afterwards they were asked to perform back-translation activities into English following the same procedure. They gradually became familiar with the discourse patterns of medical English and medical Italian, and showed a better control in the correct use of scientific vocabulary. Most importantly, they developed awareness of the fact that specialized translation is an activity that demands rigorous compliance with the rules and conventions of a given linguacultural domain.

Keywords: Parallel corpora, medical English, translation, Italian undergraduates' needs

Introduction

The aim of this report is to highlight the importance that parallel corpora-based translation can have in developing medical language competence, in both English and Italian, as for L2 English undergraduates, with particular focus on Italian sports sciences students. As a matter of fact, the work was prompted by the author's research and teaching activities in

scientific English in the study course in sports sciences at the University of Palermo, Italy.

As in most scientific curricula, the teaching activity in Italian sports sciences courses is characterized by frequent consultation of specialized literature in English. The majority of the dissertations discussed by sports sciences students at the end of both the three-year and the master's study courses belong to the bio-medical field. As a consequence, the dissertations are widely based upon the study and thorough analysis of scientific English material. Moreover, starting from the 2016-2017 academic year, an ever-increasing number of triennial courses of Italian Universities (e.g. Bologna, Forlì, Milan, Palermo, Venice) have abolished the traditional written dissertation in the three-year courses and have introduced a final exam – assessed in thirtieths – within a project of simplification of bureaucratic procedures in first-cycle degree curricula. As for the sports sciences course, the University of Palermo was one of the first to join the project. The final exam – as set up by the study course board – consists in the presentation and discussion of a scientific English text among those recommended during classes for an in-depth analysis of the topics treated throughout the course. The texts are translated into Italian by the students themselves and discussed in their language (optionally in English), and the presentations are enriched with personal reflections and analytical comments. Five sessions of degree final exams have taken place so far in the sports sciences course in Palermo starting from the 2019 summer session, and the number of candidates was 30 per session on average. It was observed that more than one third of all students did not show correct use of medical Italian, both in terms of terminological accuracy and of adequate stylistic forms. Their presentations proved rather 'unnatural' because of too literal translations that did not take into account the peculiarities of medical discourse in the Italian language.

Methods and Results:

Before going into the core of the work, it seems important to specify what kind of professional a sports sciences student is exactly expected to become, and, as a consequence, what specialized linguistic competence s/he needs to acquire. The main goal of sports sciences courses is to educate learners to become kinesiologists and sports rehabilitation experts. This entails that the curriculum of these courses is mostly based upon acquisition of knowledge related to the anatomy, physiology and mechanics of human movement, as well as upon knowledge of disorders affecting the musculoskeletal system, and corresponding treatments. Therefore, students are required to reach a good command of both medical English if they want to become members of the international community in their specific domain, and, of medical Italian too, when communicating in professional contexts with their

compatriots. In this respect, translation both from and into English plays an important role in developing L2 English undergraduates' specialized language competence. However, studies on the role of translation in medical English undergraduate instruction for L2 learners have shown that L1 to L2 translation exercises prove too demanding and provide little benefit (Micic, 2008). The reason is quite obvious. Students do not have particular difficulties in translating from English into their mother tongue; by contrast, they do not perform very well when asked to translate into English because their production is inevitably affected by their native language structures. Therefore, the question arises whether it is possible to conciliate the need for correct and adequate translation with a not too arduous but effective activity. Parallel corpora can be useful tools. They provide learners with first-hand comparison between different discourse styles and aesthetic conventions and they can be used for classroom translation activities, including back-translation.

Starting from the end of September 2019, the students were provided with a corpus of English texts taken from *The Netter Collection of Medical Illustrations*, one of the most important and authoritative medical texts ever published and reference tool for generations of medical learners worldwide. Some of the most significant parts of Volume 8 (in particular, Subvolume Part I and Subvolume Part III), devoted to the musculoskeletal system, were used, together with their corresponding Italian translations. The peculiarity of the latter is the fact that they were carried out by medical translators and not by professional translators; therefore, they stand out for terminological accuracy, content precision, and adherence to the lexical, syntactical and stylistic conventions of Italian medical discourse. Students were invited to read relevant parts of both source texts and corresponding target texts. Then, they were guided to find out any similarities and differences between source and target texts as further support to the activity. Afterwards, they were asked not to read the Italian versions any longer and to perform the translation of the chosen parts of text from English into Italian on the basis of what they remembered of the translated texts. Later, they were asked to perform back-translation into English following the same procedure as the previous one. The kind of translation activities the students performed was different from the traditional one, in that before translating into L1 and later back into L2, the students had preliminarily familiarized with both source and target texts; in other words, they already knew both the original texts and the translated versions – and this also offered the advantage to facilitate their work. By contrast, if one considers, for example, the typical back-translation, which is generally carried out to assess the quality of a translated text, the translator does not know the original text because s/he would be affected by it. In the translation activity that was carried out in the study course in sports sciences

in Palermo, the students were provided with both source and target texts since the beginning so that they *could be affected* by them and be exposed to learn the most appropriate equivalences between the two languages from the start.

With constant work performed both in classroom (about 45 minutes each class twice a week) and at home (1 hour and a half 3 times a week), the activity proved effective as the students gradually produced better quality translations whenever they were required to render any scientific English piece of writing into their language, and, vice versa, into English. They learnt to translate in compliance with the discourse patterns of both languages.

Before carrying out the translations from and into L2, the students were guided to compare source and target texts to find out some important aspects at the lexical and syntactical levels. Comparison between source and target languages showed a higher degree of syntactical conciseness in the English language, and therefore shorter sentences, and a higher amount of content words as compared with their Italian translations. Conversely, the Italian translations revealed more complex and articulated structures, longer sentences, the use of extra, often unnecessary, phrasal elements, mainly due to stylistic reasons, and a greater quantity of grammar words. From a terminological point of view, comparison of source and target languages displayed differences in the use of some terms as for their belonging either to common language or to specialised lexicon. In some cases, where the English texts used words and expressions taken from general communication, the Italian translations employed terms belonging to the specialised lexicon as equivalents. Moreover, lexical repetition was constantly searched for in the source texts, whereas the Italian translations showed a preference for expressive variety. The following extracts may serve as illustrating examples:

Ankle sprains occur frequently in sports activities as well as in daily activities. In addition, a previously sprained ankle is at significant risk for reinjury. Ankle sprains usually occur in persons less than 35 years of age, most commonly in teenagers 15 to 19 years of age (The Netter Collection of Medical Illustrations, Rehabilitation after Sports Injury, Vol. 8, Part III, Sec. IV, p. 207)

Le distorsioni della tibio-tarsica sono un evento di riscontro assai frequente sia nelle attività sportive sia in quelle della vita quotidiana. La caviglia che ha già subito un insulto di tipo distorsivo inoltre è più esposta a nuovi traumi. Questo tipo di lesione colpisce prevalentemente soggetti di età inferiore a 35 anni: si tratta per lo più di giovani fra i 15 e i 19 anni (Atlante di Anatomia, Fisiopatologia e Clinica, Riabilitazione dopo lesioni traumatiche da attività sportiva, Vol. 8, Part III, Sez. IV, p. 207)

What immediately stands out in the source text is the lexical repetition of "ankle sprains", which is repeated twice in the same form ("ankle sprains"), and with the variation "sprained ankle" in the second occurrence. By contrast, in the Italian translation lexical repetition it was completely avoided. Three different locutions were used to refer to the ankle sprain: 1) the name of the joint affected by the injury ("le distorsioni della tibio-tarsica"/tibio-tarsal sprains), 2) a periphrasis including a relative clause ("la caviglia che ha già

subito un insulto di tipo distorsivo"/the ankle that has undergone a damage to a joint), and 3) a sentence where to refer to the ankle sprain a partial definition of it is employed ("questo tipo di lesione"/this type of injury).

Some of the classes of scientific English at the study course in sports sciences at the University of Palermo is devoted to the translation activities that have been dealt with here, and the first students who used parallel corpora began the activities at the end of 2019. These students will take their degree starting from the next summer season. They are expected to produce better quality translations and, more in general, show improved communicative competence in both medical Italian, and medical English for those who will choose to discuss their dissertations in the foreign language.

At present, the students are gradually becoming familiar with the peculiar discourse patterns of medical communication in English and Italian, and they show a better control in the correct use of scientific vocabulary in both languages. Most importantly, they are developing awareness of the fact that translation is an activity that demands compliance with the rules and conventions of a given linguacultural domain.

Conclusion

Translation should be considered as an integral part of L2 medical English undergraduate teaching. Though mainly aiming at developing writing proficiency with the consequent need to be integrated with other types of 'more active' activities such as reading and speaking, translation can be a very useful and effective tool to acquire adequate specialised linguistic competence in one's own native language, and in English as an international lingua franca of scientific communication. It is strongly recommended as an in-classroom activity as it can offer an important thorough contribution to the development and reinforcement of all communicative skills.

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Studying in an English-Medium Instruction Medical Degree Program in Italy: Students' Perspective - Ongoing Research

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Abstract

In the last two decades, the internationalization of education at tertiary level has led several academic institutions in non-English speaking countries to adopt English as a medium of instruction (EMI) (Costa and Coleman, 2013; Macaro, 2018). English has become the language of teaching and learning of several academic degree programs and a key factor for attracting a more diversified student population and increasing the institutional prestige. Through an online questionnaire sent to a group of first-year students of a degree in Medicine and Surgery in Italy, this study (1) verifies the students' English language level at the beginning of their academic studies; (2) identifies the factors and reasons to enroll in this degree program; (3) observes the students' initial experience in an English-only academic setting. The preliminary findings show that the participants have a good command of the English language at the beginning of the term, as required. The research also identifies the students' most common motivations and expectations, which include English language improvement during six years of medical studies in English, highly competent lecturers at teaching through English and more opportunities to study and work abroad. Although English development is not a primary goal in EMI programs (Pecorari and Malmström, 2018), this study suggests that, as far as this medical course is concerned, the English language plays a key role in its overall success and in the students' general satisfaction.

Keywords: English-medium instruction; EMI; English proficiency; medical school; higher education

Introduction and Study Background:

In the last twenty years, education has undergone significant changes in order to be more international and attractive to a more diversified student population. Driven by the trend of globalization and the call for the internationalization of higher education (HE), many institutions in the world have begun to plan new educational policies and strategies to become more competitive and appealing (Doiz et al., 2011; Smit and Dafouz, 2012; Hultgren et al., 2015). In Europe, the turning point towards a more internationalized

education came after the Bologna process in 1999, which had envisaged a standardization of the European educational system and an increase of prestige, international mobility, overseas students and academic staff (Wilkinson, 2005; Wächter and Maiworm, 2014; Pulcini and Campagna, 2015).

One of the most tangible results of the new educational strategies has been the introduction of English-medium instruction (EMI) degree programmes, entirely taught in English, in those countries where the language is not the mother tongue of the majority of the population (Macaro, 2018; Pecorari and Malmström, 2018). In such a context, English is used almost exclusively as a means to teach and learn academic content, whereas language development and improvement are not explicit learning outcomes (Pecorari and Malmström, 2018). Thus, the focus of EMI classes is on the content delivered, which is the priority (Aguilar, 2017).

Nonetheless, English language improvement is one of the key motivations to opt for English-medium education across the different countries where the EMI courses are offered (Lei and Hu, 2014; Ackerley, 2017; Drljača Margić and Vodopija-Krstanović, 2017). Indeed, the immersion in an English-only environment may be perceived by some as a convenient way to learn and practice the language (TAEC EMI Handbook, 2019; Kamaşak et al., 2020) and "some incidental language learning is expected due to the exposure […]" as argued by Aguilar (2017: 726). In the same vein, other EMI scholars suggest that a certain degree of language development and improvement may take place while studying through English (Coleman, 2006; Smit and Dafouz, 2012; Rose et al., 2020). In a study spanning across 55 countries, Dearden (2015) noticed that there is some evidence that students improve their receptive skills but not the productive ones.

Yet, there is little published data about the type of language skills that are likely to improve in EMI contexts. While many scholars highlight that students' English skills are expected to expand, there is an ongoing effort to establish whether English language improvement is achieved by EMI students and to what extent the success of EMI programmes and students' satisfaction are related to language learning outcomes.

In light of the above considerations, this paper focuses on a group of first-year students enrolled in an EMI degree programme in Medicine and Surgery at the University of Torino (Italy) and analyzes their motivations and initial experience in such a programme. Starting from the investigation of the students' English language level and skills at the beginning of their academic studies, this research will shed light on the students' experience in a medical programme and their relationship with the English language.

Methodology:

This paper presents the initial findings of a forthcoming doctoral thesis on the role played by the English language in the EMI environment, specifically in a medical degree programme in an Italian university, taught through the medium of English. The main aims of this article are (1) to verify the students' English level proficiency at the beginning of their academic studies in Medicine and Surgery, (2) to identify the students' motivations to enroll and study in this programme and (3) to evaluate the students' feedback towards EMI in the initial phases of their university experience. This study seeks to answer the following research questions:

RQ1: Does the students' English language competence comply with the required standards?

RQ2: What are the students' motivations to study medicine in English?

RQ3: What is the students' feedback in the initial phases of their university experience?

Data collection instrument

The instrument chosen to gather the data was an online questionnaire in English created through the Google form tool and consisting of 21 open and close-ended questions and Likert scale items. The Likert scale questions were made up of 5 response anchors measuring the level of difficulty of specific tasks in EMI classes, ranging from very difficult (1) to very easy (5).

The questionnaire was divided into three sections:
(1) the first focused on the students' demographic characteristics and personal background through the first five items of the questionnaire (age, gender, nationality, mother tongue, type of secondary school attended).
(2) The second section dealt with the students' self-evaluation of their language skills according to the Common European Framework of Reference (CEFR) descriptors, on a scale from A1-A2 (basic user) to B1-B2 (independent user) and C1-C2 (proficient user). They were asked to reflect on their abilities in certain language activities according to the CEFR descriptor scale[1] in which the tasks are classified as follows: reception (listening and reading), production (speaking and writing), interaction (spoken and written) and mediation. For the purpose of the study, the latter was not considered.

In this part, they also provided additional information about their previous contacts with the English language by choosing from a range of different options and alternatives (e.g. preparation for internationally

[1] CEFR Descriptor Scale 2018: https://rm.coe.int/cefr-companion-volume-with-new-descriptors-2018/1680787989
Last access: 15/12/2020

recognized language examinations, prior experience studying through English, use of the language outside the academic context).
(3) The third and last section focused on the students' motivations to enroll in an EMI degree programme in Medicine and Surgery in Italy and the first impressions they had of the course.

Before administering the questionnaire to the participants, it was piloted with three colleagues of the university where the study took place. Small changes were done to make the questionnaire clearer and less time-consuming. It was sent to 100 students at the beginning of the term via email, after having obtained their contacts and the permission to involve them in the survey.

Context of the study

The data were gathered in November 2019 at the University of Torino where the EMI degree programme in Medicine and Surgery has been activated since the academic year 2017-18. This is a single-cycle course offered by the Department of Clinical and Biological Sciences lasting six years. In the academic year 2019-20, when this study began, it was in its third year of experimentation; thus, the first six-year cycle has not been completed yet. This degree course has restricted admission procedures with a fixed number of candidates and specific entry requirements decided at national level by the Italian Ministry of University and Research (MUR). To be admitted in the EMI programme, prospective applicants firstly have to pass the International Medical Admission Test (IMAT)[2] which usually takes place simultaneously in all the Italian universities where this degree programme is offered. If students pass the entrance test, the next step takes place locally at the university/ies chosen by the candidates, who are placed on a ranking of eligible applicants. Indeed, throughout Europe, admission policies and specific language entry requirements are individually set by the universities that offer EMI degree programmes (TAEC EMI Handbook, 2019; Dimova, 2020) in the forms of either internal tests (such as placement tests and oral interviews conducted by the academic staff) or external tests (e.g. international certifications) (Cicillini, forthcoming). Although candidates have already passed a first national selection, weaknesses may arise in some disciplinary

[2] IMAT: *International Medical Admissions Test* is offered by the Cambridge Assessment Admissions Testing and is aimed at measuring the prospective candidates' skills, specifically the students enrolling in EMI degree programmes in Medicine and Surgery and Dentistry in Italy. It evaluates the students' logical reasoning, general and scientific knowledge that they are expected to have for the admission to this degree programme. It is a 100 minute test composed of 60 multiple-choice questions.
https://www.admissionstesting.org/for-test-takers/imat/about-imat/
Last access: 16/12/20

areas or language competence; in these cases, students are expected to attend specific remedial courses during their first year.

Sample

The sample identified for this study is made up of 100 first-year students enrolled in the EMI degree programme in Medicine and Surgery at the University of Torino in 2019-20. 91% participated in the survey and among these 57% were female while 43% were male students (See Table 1). Roughly half of them were between 17 and 19 years of age, reflecting the fact that in Italy students usually enter university soon after the end of secondary school. This also reflects the different school systems in the countries where the international students studied. Instead, the other half of the participants were between 20 and 25 years of age.

In terms of nationality and first language (L1), 67% of the participants were Italian while 33% were international students, whose mother tongues included Persian, Bangla, Hindi, Turkish, English, Hebrew, Arabic, French, Greek, Hungarian and Vietnamese. Among the Italian-speaking students, 70% were mother tongue while the remaining self-evaluated themselves as basic (23%) and independent (7%) Italian language users. As regards international students, 66% came from the Middle East and the Asian countries while 33% were European.

In response to the question about their previous school studies, most of the students attended the "Liceo" (83%), a type of secondary school which offers a more academic-oriented education (Costa and Coleman, 2013); 15% studied in technical and professional schools, which are more vocationally-oriented (Costa and Coleman, 2013; Campagna and Pulcini, 2014), while just 2% attended international schools in their home countries.

Summary of demographics

Characteristics	**Category**	**Answers given**	**%**
Age range		n=88	
	17-19 years	46	52%
	20-25 years	42	48%
Gender		n=89	
	Female	51	57%
	Male	38	43%
Nationality		n=88	
	Italian	58	66%
	Other (international)	30	34%
Mother tongue		n=84	
	Italian	58	69%
	Persian	8	10%
	Bangla	3	4%
	Hindi	3	4%

	Turkish	3	4%
	English	2	2%
	Hebrew	2	2%
	Arabic	1	1%
	French	1	1%
	Greek	1	1%
	Hungarian	1	1%
	Vietnamese	1	1%
Secondary school		N=86	
	"Liceo"	71	83%
	Technical/Professional	13	15%
	International	2	2%

Table 1 - Summary of demographics

Findings and Discussion:

One of the main aims of the questionnaire used for this study was to verify the students' English language competence at the beginning of their first academic year in the EMI degree programme in Medicine and Surgery. For this reason, the survey considered their English language skills according to the CEFR descriptors, their self-evaluation and comments about their previous contacts with the English language. Their Italian language competence was also considered.

	English (89)	Italian (83)
A1	0	20% (16)
A2	0	3% (3)
B1	4% (3)	5% (4)
B2	33% (29)	2% (2)
C1	**50% (45)**	0
C2	13% (12)	**70% (58)**

Table 2 - Self-evaluation of English and Italian language competence (CEFR levels)

The results showed that 58 out of 83 participants (70%) self-evaluated themselves as Italian mother-tongue speakers (C2 level), while the remaining 30% were basic or independent Italian users. This may be explained by the fact that no Italian language entry requirement is explicitly requested to prospective international students, as can be seen in the annual report (Scheda SUA)[3] available online. Indeed, in an English-only medical school, the knowledge of Italian is not a requisite, although it may be of help in the students' daily life and relationships with non-English speaking people. This

[3] Scheda SUA: *Scheda Unica Annuale*. The university annual reports provide information about the degree programme objectives, the entry requirements and admission procedures (if any) and the assessment methods.
https://www.universitaly.it/index.php/scheda/sua/49045
Last access: 18/12/2020

may be even truer in a country like Italy where the English proficiency levels are very low compared to other European countries, as reported by the EF English Proficiency Index (2019).

An interesting finding of the English language proficiency is that 45 out of 89 of the students (50%) stated to be proficient English speakers and claim to have a C1 level (See Figure 1). Instead, 33% of them had a B2 level of English which meets the English language entry requirement set at B2 to enter the EMI degree programme analyzed. Moreover, B2 seems to be the most frequently requested and suitable level of the CEFR (Tatzl and Messnarz, 2013; Harsch et al., 2017; Harsch, 2018; TAEC EMI Handbook, 2019) for admission and successful career in EMI courses (Saarinen and Nikula, 2013). In the case of the Italian students, the B2 level should be achieved by the end of their secondary school education (Campagna and Pulcini, 2014) even though it is not always reached at that school stage (Cicillini, forthcoming). Instead, 13% of the students had a C2 level which corresponds to the highest level of English in the CEFR global scale[4].

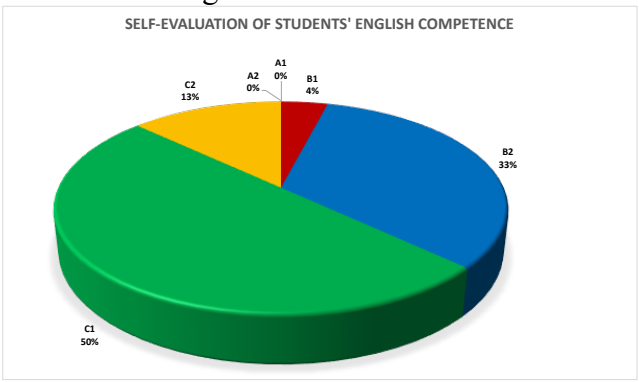

Figure 1 - Self-evaluation of students' English competence, according to the CEFR levels

Figure 2 presents a breakdown of the students' English skills according to the CEFR descriptor scale (2018), in which the language activities and strategies have been classified into receptive, productive and interaction skills. What stands out in Figure 2 is that the strongest skills are the *receptive* ones, with roughly half of the students reporting a C1 level in listening (47%) and reading (46%). As regards the *productive* skills, there seems to be a balance between the students who reported a C1 (38%) level and those who were B2 (36%) in spoken production. By contrast, 39% of the respondents had a B2 in the written production compared to 26% who were at a C1 level. When students were asked to reflect on their *interaction* abilities, over half of them

[4] CEFR Global Scale: https://www.coe.int/en/web/common-european-framework-reference-languages/table-1-cefr-3.3-common-reference-levels-global-scale

(48%) reported a B2 level and 25% a C1 level in written interaction whereas in the spoken interaction 42% reported a C1 level and 36% a B2.

This data show a positive self-evaluation of the students' English skills and confirms their overall English proficiency which mostly (83%) ranged from B2 to C1 (See Table 2). The data also revealed differences in the students' self-evaluation of their language skills. Whereas the receptive skills are the strongest, productive and interaction are slightly lower, especially the written skills.

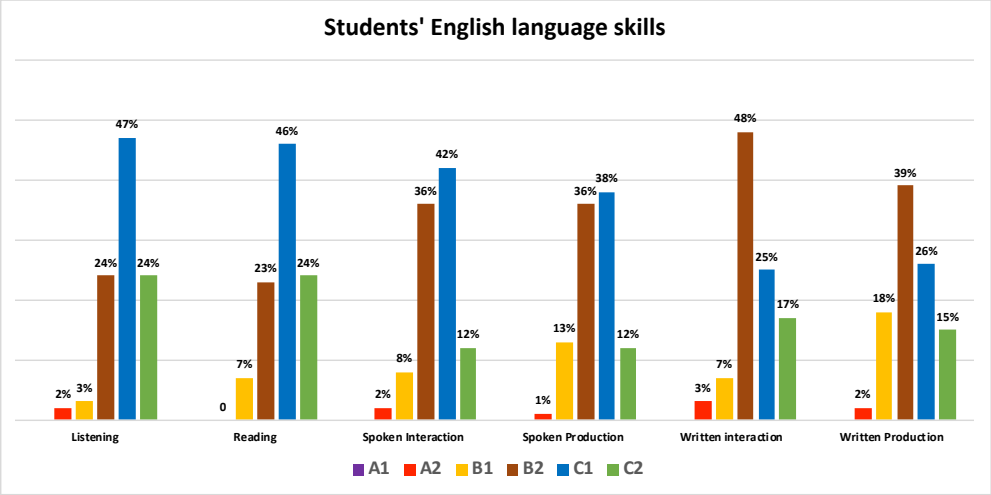

Figure 2 - Breakdown of the students' self-evaluation of their English skills according to the CEFR

The second part of the survey investigated the students' prior experience and contacts with the English language through a range of open-ended questions. The majority of the participants had studied English for more than seven years (88%) whereas 10% of them between five and seven years and just 2% for less than two years. At school level, over half of the students (49%) studied through the Content and Language Integrated Learning (CLIL) approach, which has a dual focus and aims at teaching both the content and the language used as the means to teach and learn (Coyle et al., 2010; Doiz et al., 2014; San Isidro and Lasagabaster, 2019). Among the respondents, just a few students (10%) followed a curriculum entirely taught in English. Instead, the majority (90%) studied single subjects through English. The hard sciences (58%) were the mostly taught and learned through English compared to the soft sciences (32%). This is also confirmed in the Eurydice report (2006) in which it is argued that science and social science are the most frequent subjects offered in English at school level. Among the hard sciences, physics (16%), mathematics (14%), biology (10%) and science (10%) are the disciplines mostly studied in English while history (9%), art (6%) and literature (4%) are the most popular among the soft sciences.

Most of the students (68%) stated to use English almost exclusively on the university campus with lecturers, classmates and patients, and only sometimes (32%) in their daily life, e.g. reading and watching films and TV series. Private tutoring was also mentioned by the respondents for improving their English skills and getting prepared for international certifications. Indeed, the respondents stated to have at least one internationally recognized language certification, among which Cambridge (66%), IELTS (27%) or TOEFL (7%). This may be due to the fact that many universities verify prospective students' language skills through international certifications (Cicillini, forthcoming). Although they are considered reliable to assess English proficiency (Charge and Taylor, 1997), there is a lack of evidence about their utility for admission procedures across EMI degree courses (Dimova, 2020; Galloway et al., 2020).

The second research question aimed at gaining insight into the students' motivations to enroll in a medical EMI programme in Italy. Table 3 shows the main reasons and factors that encouraged the respondents to choose an English-medium medical programme in a non-English speaking country. Among the most popular motivations, there is the awareness of the status of English as the international language (79%), which has become the language of business, science, technology, scientific publications and more recently of many academic programmes which are often offered in English only (Wilkinson, 2004; Wächter and Maiworm, 2008). Besides, more future opportunities in the job market (75%) locally and abroad, both for working (70%) or studying (67%), are perceived as major advantages and factors to opt for English-medium education. Moreover, according to students' answers, studying in the EMI context may give them the possibility *to meet international students* (65%) and *lecturers* (49%), *to have easier access to international publications* (64%) and, last but not least, *to improve their English skills* (60%). These results are in agreement with previous studies which underlined the most frequent reasons to choose an English-mediated education (Kırkgöz, 2005; Costa and Coleman, 2013; Lei and Hu, 2014; Ackerley, 2017; Costa and Mariotti, 2017; Drljača Margić and Vodopija-Krstanović, 2017; Dearden, 2018).

Motivations for studying Medicine and Surgery in English	%
Because English is the international language	79%
Have more job opportunities	75%
Work abroad in the future	70%
Continue my studies abroad	67%
Meet international students	65%
Have easier access to international publications	64%
Improve my English skills	60%
Have international lecturers	49%
Studying medicine in English is easier	1%
Entering Medicine programmes in English is easier	1%
I was accepted in the English programme only	1%

Table 3 - Motivations for studying Medicine and Surgery in English

The third research question focused on the students' feedback on the initial phases of their academic experience in English. In peer-to-peer communication, 60% of the students stated to alternate between English and Italian and that the code-switching largely depends on the context and the situation; instead, 28% use English regularly to talk to their classmates. 75% stated to speak English when they talk to their lecturers and to expect their professors to be proficient users of English (79%), ranging from a C1 to a C2 level of the CEFR; just a few (21%) chose the B1-B2 option as regards their lecturers' English proficiency. Despite these expectations, it seems to be unclear which benchmark of lecturers' proficiency may be the most appropriate to teach in an EMI context (Macaro et al., 2017). While B2 seems to be the minimum level to adequately cope with academic teaching, there is still a lack of consensus about the most meaningful threshold to teach content in English, ranging from the B2 to the C2 of the CEFR (O'Dowd, 2018).

In this survey, the participants were also invited to reflect on certain activities done during the first months of their university life and to express the level of difficulty experienced (1 very difficult – 5 very easy). What stands out in Table 4 is that most of the tasks proposed in the survey were considered very easy or easy to do. Surprisingly, half of the students (50%) considered the spoken interaction with classmates the easiest task to do in class followed by asking questions (35%) and interacting with lecturers (34%). This data is in contrast with previous studies about the EMI students' challenges, which underlined that productive and interactive activities are usually more challenging, as in the case of speaking in front of other people (Tatzl, 2011; Doiz et al., 2019) and giving oral presentations (Kırkgöz, 2005). This is also the case of note-taking, which was considered as a very easy (40%) or easy task (25%) by the respondents but not by other scholars who found out that taking notes (Airey, 2009) and writing academic essays (Evans and Morrison, 2011) are very challenging activities for EMI students.

As regards the receptive activities proposed, these were mostly considered very easy (28%) or easy (33%) as in the case of *following an EMI class* and *understanding specialized vocabulary* (very easy 38%; easy 18%). This corroborates the findings of a study conducted by Doiz et al., 2019, in which understanding technical terms was not regarded as the most difficult task, compared to other activities. Overall, no activities seem to be impaired by the use of English according to the students' feedback in the initial phases of their university careers.

How difficult (1) or easy (5) are the following tasks:							
	Follow an EMI class	Take notes in English	Interact with lecturers in English	Interact with classmates in English	Ask questions in English	Answer questions in English	Understand specialized vocabulary in English
Likert scale values	%						
5= very easy	28%	**40%**	**34%**	**50%**	**35%**	27%	**38%**
4= easy	**33%**	25%	**34%**	34%	33%	**37%**	18%
3= neutral	30%	26%	18%	9%	25%	26%	30%
2= difficult	8%	3%	11%	4%	4%	8%	12%
1= very difficult	1%	6%	3%	3%	3%	2%	2%

Table 4 - Students' view about the difficulty of certain tasks

Conclusion

This research has reported on a class of first-year students enrolled in a degree programme in Medicine and Surgery entirely taught in English at the University of Torino. Through an online questionnaire, this study has focused on the students' language background and English proficiency level at the beginning of the first term, their motivations to study in a medical school in English and their initial feedback on their experience.

Overall, it is a mixed group of domestic and international students with high English competence, ranging from B2 to C2. Thus, the English language requirements set for achieving successful academic outcomes seem to be met by this group of students. The students who speak Italian were almost exclusively Italian ones who have decided to remain in their home country and study in English.

The primary motivation for choosing an EMI programme is that English is considered to be the global language of communication and studying in that language may provide them with more and better opportunities, both in terms of future studies and work. According to the respondents, another major reason to choose a medical school in EMI mode is to improve their English proficiency level. Indeed, more than half of them hope to improve their skills through the immersion in an English-only environment and the practice with classmates, lecturers and patients. On the whole, the feedback provided by these first-year students during the first term of their programme is that most of the activities are considered easy or very

easy. In addition, what emerged from the answers to the questionnaires is that the receptive skills (listening and reading) are the strongest ones, followed by spoken interaction and production while writing (both in interaction and production activities) is weaker and probably needs more attention and emphasis in the academic curricula through specific support, activities and assignments.

Although improving English has also been reported in other previous studies (Lei and Hu, 2014; Ackerley, 2017; Drljača Margić and Vodopija-Krstanović, 2017) as one of the major motivations to study in EMI degree programmes, it is still uncertain whether language development takes place. Starting from the assumption that EMI lecturers are not English specialists and do not consider themselves as language instructors (Airey 2012; Costa 2012; Lasagabaster 2018), it has been suggested that the introduction of the CLIL approach at school level (Costa and Coleman, 2013; Costa, 2016) and of the Integrating Content and Language in Higher Education (ICLHE) approach at university level (Pulcini and Campagna, 2015; Dimova, 2020) would lead to a dual gain of both content and language. Undoubtedly, the English language plays a key role in the EMI context and for this reason the language factor in EMI is still under scrutiny by many scholars, especially as regards how language improvement may be promoted and achieved by the stakeholders involved.

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Interaction in Emergency Remote Higher Education: A Case Study

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Abstract

Emergency Remote Education (ERE) has provided an effective response to the education emergency created by the coronavirus outbreak. Teachers, lecturers and students have experimented with new teaching and learning strategies and digital tools, adjusting to the possibilities and the constraints of computer-mediated communication. This study investigates a case study to show how multimodal interaction, communication and engagement can be established during video lessons in English courses delivered in a university environment. Data collected through the participant observation of a 2-hour- online class will be analysed combining classroom discourse and multimodal analysis to investigate synchronous interaction and the different modes of meaning-making emerging during emergency remote teaching and learning. The goal of the present study is twofold: on the one hand, it aims to contribute to the discussion of the short-term and medium-term impact of wisdom gained during ERE on academic teaching in terms of interaction and multimodality. On the other hand, it sheds light on challenges and best practices revealed during ERE classes, which at the same time could contribute to improve lecturers' interactional competence in terms of ways of interacting and meaning-making in an instructional context.

Keywords: Emergency Remote Education - Classroom discourse analysis - Video lessons – Chat - Computer-mediated interaction

Introduction

In the spring 2020, due to the massive migration of education onto digital platforms, every teacher and lecturer and every student had to adjust to a new way of conceiving teaching and learning. The sudden shift of face-to-face courses onto digital platforms is referred to as Emergency Remote Education (ERE), or Emergency Remote Teaching (ERT) and is defined as the unplanned and necessary educational response to the pandemic (Bozkurt, 2020). This emergency pedagogy must not be confused with distance learning, which is planned to happen online and relies on consolidated models and research (Schlesselman, 2020). On the contrary, as the pandemic is an

unprecedented phenomenon, ERE or ERT cannot draw on extensive studies or consolidated models.

It appeared clear from the beginning that Covid-19 was causing a major educational emergency (Unesco, 2020) for both wealthy and developing countries, regardless of their resources and would affect different cohorts of students (Bozkurt, 2020). Several issues of concern were raised and can be roughly grouped as follows: a) difficulties due to the lack of access to digital devices, an internet connection and a suitable learning environment (Hall *et al.,* 2020, Lai&Widmar, 2021), b) the multiple literacies needed to meet students' educational and emotional needs (Bali, 2020), c) perceptions of challenges and opportunities revealed by the emergency educational response in different contexts (Cameron-Standerford *et al*., 2020, Erickson & Watthiaux, 2021). Even though the research on the ERE is taking its first steps, an initial survey of the literature shows that tertiary education institutions not only responded to the educational emergency but carried out studies on the students' and teachers' perceptions to identify best practices of quality education (Baldock *et al.*, 2020). For example, some positive aspects of ERT emerged, such as comfortable educational environments, efficient time utilization; at the same time, challenges were identified concerning network instability, reduced concentration, and insufficient interactions (Yoon, 2020, Shim&Lee, 2020).

Without being exhaustive, this brief overview aims to stress that ERE and its consequences are multifaceted and can be studied from various perspectives. As during the pandemic synchronous classes were provided through video conferencing tools, videoconferencing seems a relevant field of research. This article aims to contribute to investigating the phenomenon from the perspective of classroom discourse to analyse patterns of interactions between lecturer and students in the video-mediated setting. Indeed, as interaction was already considered a major issue of concern in distance education (Anderson, 2003, Cicillini & Salusso 2019), it seems germane to investigate how interaction has been achieved in video-mediated instructional settings under unforeseen and trying circumstances (Maydiantoro *et al.,* 2020, Cicillini&Giacosa 2020).

Before the pandemic, studies on video-mediated communication had already investigated video conferencing as a way to successfully interact (Sindoni 2011, 2012, 2014, 2019) and to support interactional exchanges in instructional contexts (Hampel&Stickler, 2012, Hampel&Pleines, 2013, Hampel& De Los Arcos, 2013, Austin *et al.*, 2017). Even though interaction is achieved in online classes, it seems relevant to observe how lecturers and students adjusted their way of interacting in lectures that had not been planned to be delivered online. Moreover, after an initial literature review on ERE, this perspective has not been investigated yet. To this end, a case study (a two-

hour online emergency class) will be presented and discussed by adopting a qualitative approach. It aims to identify ways in which interlocutors deployed the affordances provided by videoconferencing to compensate for the lack of physical proximity through and communicate successfully. To this purpose the following research questions will be addressed:
1 RQ what patterns are shown in interactions occurring in emergency video-mediated EFL classes?
2 RQ what opportunities and challenges characterize emergency online interactions?

First, the methodology will be presented by discussing how data has been gathered and analysed; secondly, the relevant patterns emerging from the analysis of a 2-hour- emergency EFL class will be identified; finally, data will be discussed in terms of challenges and opportunities and future lines of research in this field will be suggested. Even though it is limited to a 2-hour session and further and more extensive research is needed, this study could shed light on interactive possibilities related to video-conferencing, which could contribute to improving lecturers' interactional competence in video-mediated instructional environments.

Methodology:

In this paper a qualitative case study methodology is adopted in line with other studies exploring video-mediated and computer-mediated communication, as it is deemed as a useful approach to address questions relating to how interaction occurs in specific contexts (Sindoni 2020, Austin *et al.,* 2017). Data was collected through the participant observation of an online synchronous 2-hour class taught via Webex in March 2020, which was part of an English Linguistics course at the University of Turin[5]. Though unavoidably subjective, participant observation allows the researcher to collect data regarding the double perspective of the student and the lecturer. At the beginning of the lesson, the researcher was introduced to the attendees, who had already been informed about the presence of a participant observer and had been asked to state if they would agree to attend a class that was being observed. The researcher filled in a grid to collect general information about the class (number of attendees, the main topic dealt with, resources and tools), and took notes about the interactions between the lecturer and the students by writing down the verbal interventions and copying and pasting messages from the chat. To limit unspontaneous behaviour neither the lecturer nor the students knew that the focus of the observation was on the interactions.

[5] The main findings reported in this paper are based on direct observation of an, which is part of a wider corpus of data collected between March and May 2020 as a part of a PhD study on interaction in Emergency EFL teaching.

At a later moment in time, identifying elements were anonymized to comply with privacy regulations. The lecturer was associated with the code RS_II_1A_L, while the students were identified with RS_II_1A_S and the progressive number given to every intervening student. Messages copied from the chat were preceded by the symbol #. The posts reported in the transcription objectively correspond to written intervention, whereas spoken turns were more difficult to document. Therefore, to increase data reliability, the researcher integrated the manual transcription with missing details from the lesson recording, which was available on the Moodle course page and provided the timing and the exact content of the spoken intervention.

Finally, the manual transcription of the interactions was analyzed by using the most common pattern of classroom discourse, namely triadic dialogue, which is also known as Initiation-Response-Feedback or Follow-up Sequence and has been studied since the 1970s (Sinclair & Coulthard, 1975, Mehan, 1979 in Nassanij, 2000, Rezaje, & Lashkarian, 2015). As previous studies on video-mediated communication suggest, the concept of mode-switching will be applied to account for the multimodal quality of video-mediated interactions. This term paraphrases the linguistic notion of code-switching, which refers to the alternation of more than one language or variety in a conversation and seems very useful to describe a recurrent communicative strategy in emergency online classes (Sindoni, 2011, 2012, 2020).

Main Findings:

At the beginning of the observed online class, the lecturer introduced himself, welcomed the students and showed his slides by sharing his screen while keeping his camera on. While he interacted mainly verbally, the students typed messages in the chat window and kept their cameras off. The lesson was supposed to be taught in English, but the lecturer decided to introduce the lesson in Italian to make the students feel comfortable despite the unusual circumstances due to the unprecedented emergency.

From a preliminary analysis of the lesson transcription, it can be noticed that in the chat there were 134 posts, 133 typed by the students and one typed by the lecturer. In the first period of the lesson the lecturer and the students interacted in Italian (the lecturer spoke and read out the messages from the chat, the students typed their questions in the chat), while in the second period the lecturer started interacting in English, and the students carried on typing their posts either in Italian or in English (79% of the messages is in Italian, whereas 21% is in English).

As it was one of the introductory lessons (the course had just started when classes were moved online) students asked questions about the exam preparation and the assessment modality as well, therefore the most common pattern of interaction is composed of a question in the chat written by a student

and the verbal answer provided by the lecturer. Altogether students wrote in the chat 69 questions, 46 answers to the lecturer's questions, 14 comments, 3 thank you messages and 2 posts regarding technical problems. Almost all the students' interventions were addressed by the lecturer, who used the chat as a reminder, to provide answers and give feedback to the students' answers or comments; only four comments were overlooked (three of them were jokey comments and they might have been ignored on purpose).

The analysis of the interactions shows that the patterns IRF (Initiation-response -feedback), typical of classroom discourse, occurs 5 times: the lecturer initiated a sequence to encourage students to ask questions and checked if they had doubts (2 occurrences), tried to elicit students' previous knowledge on a topic (2 occurrences) and wanted to make sure they could access a certain webpage (1 occurrence). The following excerpt shows an example of how the conversation developed during the class. Originally it was a 46 turn- sequence, but for space constraints, only the salient passages are reported here. Every contribution to the conversation is numbered on the left; the symbol […] refers to the omitted passages. The messages in Italian were translated by the researcher and reported in italics and brackets next to their English translation. The number at the end of the message in square brackets, on the right, refers to the timing of the interactions.

INITIATION A:
(1) RS_II_1A_L […] This is my proposal. Shall we have them (our classes) in English? […] (*La proposta è questa. La facciamo in inglese?*) [9:23]

RESPONSE A:
(2) RS_II_1A_S24 It's ok by me […] (*va bene per me*) [9:23]
(4) RS_II_1A_S22 yes (*si*) [9:23]
(5) RS_II_1A_S25 yeees in English please (*Siiiii ingleseee please*) [9:23]
[…]
(7) RS_II_1A_S21 Yeeeeees [9:23]
[…]
(14) RS_II_1A_S2 shall we have a mix? (*facciamo un mix*)? [9:23]
[…]
(19) RS_II_1A_S4 let's do it [9:23]
[…]
(23) RS_II_1A_S16 yup [9:23]
(24) RS_II_1A_S17 Yes! [9:23]
(25) RS_II_1A_S5 but us too? (*ma anche noi*)? [9:23]
[…]
(29) RS_II_1A_S34 absolutely yes ahahah (*assolutamente sì ahahah*) [9:23]
[…]
(31) RS_II_1A_S17 deal [9:24]
(32) RS_II_1A_S7 I'm scared (*io ho paura*) [9:24]

FEEDBACK A
(33) RS_II_1A_L somebody has written "yup. Shall we have a mix?", well, no mix please, no. "us too?" yes, but no mix please. "I'm scared". Good, let's face our fears. (*qualcuno scrive yup. facciamo il mix? Ecco, no il mix no ma anche noi? Ecco il mix no io ho paura, ma bene affrontiamo le nostre paure*) [9:23- 9:24]
[…]
(35) RS_II_1A_S20 me too (*anche io*) [9:24]
INITIATION B:
(36) RS_II_1A_L Okey dokey. Where does English come from? [9:24]

RESPONSE A BIS:
(37) // RS_II_1A_S2 (by mixing) I mean, when you think something is difficult to understand you can translate it (*mix, nel senso, quando pensa di aver espresso una cosa difficile lo traduce)* [9:24]
[…]

FEEDBACK B:
(46) RS_II_1A_L The language of the Celts. I'm writing it in the chat.
(47) RS_II_1A_L The Celts [9:47]

The lecturer started two IRFs by verbally asking a question to elicit feedback from students (Initiation A, Initiation B), while the students provided responses only to the first one by typing their answers in the chat. *Initiation A* (this is my proposal. Shall we talk in English?) received 32 Responses: "it's ok" (7 answers, in Italian), "yes" (7 in Italian with different spelling such as "si", "sì", "siiii" and "Si!"), "yes (9 in English, with different spellings such as "yeeeeees", "yess", "yep" and "yup"), and various expressions of agreement ("let's do it", "absolutely yes ahah", "deal"), another question ("us too?"), a comment ("I'm scared"). The lecturer read out the answers and provided *Feedback* to all the students' responses by reading them aloud from the chat and commenting on them. More specifically, the feedback given to the RS_II_1A_S2's response ("shall we have a mix"?) is negative: the lecturers addressed it three times expressing his disapproval for the student's suggestion. While the lecturer was starting a new topic, the student felt the need to express himself better by typing a new message in the chat (# (37) // RS_II_1A_S2 (by a mix) I mean, when you think something is difficult to understand you can translate it [9:24]), but he received no feedback.

Initiation B was started by the lecturer's question, which did not receive a *Response,* so the lecturer showed a video and then provided himself the answer both verbally and by typing it in the chat. The sequence was ended by the lecturer who provided *feedback* to Initiation B by giving the answer verbally and typing in the chat. This can be considered an example of *mode-switching*, which shows how written and oral mode can be intertwined and enrich each other in computer-mediated communication as previous studies have shown (Sindoni 2011, 2012, 2020).

Discussion and concluding remarks:

Regarding the first research question (what patterns are shown in interactions occurring in emergency video-mediated EFL classes?), this study shows that EFL classes are characterized by patterns of interaction typical of classroom discourse, namely *IRF*. By analyzing data collected during the participant observation of an EFL emergency class, the researcher could investigate interactions from both the lecturer and the student perspective.

The interactional sequence described in the previous section shows that, although interaction in ERE was challenging, both lecturers and students were able to adapt to the new setting and to interact. Despite the unusual and trying circumstances, the lecturer was able to interact with the students by initiating a conversation, collecting their responses and providing feedback. The students, in turn, could ask questions, respond and comment. Therefore, even if interactivity remains an issue of concern for online classes, and even more for ERE classes, this case study shows that the new setting does not hinder conversation per se, but it provides interlocutors with various opportunities to interact. For example, as shown in studies on video-mediated communication, the alternation of spoken and written interactional turns, namely mode-switching, (Sindoni 2011, 2012, 2020), allows the lecturer to rely on an additional tool to explain contents and help students understand, which by the way is not available in face-to-face classes.

Even if it cannot be argued that IRF and mode-switching are typical only of ERE settings, this paper aims to raise awareness on opportunities for interaction in online classes. Provided that lecturers are familiar with the available tools, they could be as interactive as in face-to-face classes.

Concerning the second research question (what opportunities and challenges characterize emergency online interactions?), this paper shows that video-mediated communication offers more opportunities for the students to interact and have feedback if compared to face-to-face lessons. *Initiation A*, for example, received 32 responses, which the lecturer was able to address with the help of the chat. Even if the lecturer had to select the responses to deal with in the feedback, he was able to synthesize them by mentioning the answer "yup", which was a way to give indirect feedback to the other students who had posted informal comments. Moreover, he was able to single out two questions ("shall we have a mix?" and "us too?") and provide feedback.

These preliminary study outcomes are in line with other studies on ERE education, which show that computer-mediated classroom discourse can increase students' participation and interactivity (Luporini, 2020): the opportunity to simultaneously elicit answers from various students would not usually be possible in normal classroom circumstances, where students must wait for their turn or are reluctant to interrupt the lesson. Moreover, in F-to-F classes, students cannot talk at the same time (to give answers, for example)

which can result in one or more students declining to respond (time constraints would not allow all students to take turns and more confident students may dominate).

Furthermore, the chat serves also as an additional tool for "chalk talk": in video-mediated communication, the lecturer can type keywords or interactive links either on the interactive whiteboard embedded in the tool or in the chat window. As the excerpt in the previous section shows, the possibility of *mode-switching* displays that interlocutors can rely on more channels to express their communicative needs. Therefore, the chat increases the options also for the lecturer to give feedback and communicate more effectively with his students.

Regarding the opportunities provided by video-mediated communication, the excerpt shows that creative strategies were adopted to compensate for distance and lack of non-verbal elements typical of face-to-face interactions such as facial expressions or tones of voice. Even though through video-conferencing the interlocutors can see each other, the students decided to keep their cameras off, but they typed in the chat messages and disregarded on purpose conformist spelling, added punctuation, used informal expressions ("deal", "yup"). This is in line with studies on ERE which highlight an increased level of informality of online classes, where lecturers and students strive to overcome the barriers to distance (Luporini, 2020).

However, video-mediated communication poses some challenges. Apart from connection problems, which are not dealt with in this study, this kind of instructional setting requires the lecturers to juggle many tasks at once. Not only they have to carry on with the lesson, but they must read the chat and meaningfully integrate the interventions in the lessons, which can prove to be a tough task. First, it is not always an easy task because, while sharing the screen, it is not effortless to keep track of the posts in the chat. To read them properly, the lecturer has to stop the sharing and address them, which can be time-consuming and demanding, as the lecturer may feel compelled to read out all the answers.

Second, due to the increased interactivity of students, the lecturer has to manage many comments or questions from the chat, which appear uncontrollably one after another. Moreover, messages in the chat are linear and their order of appearance is caused by the fact that messages are posted in the order received by the system, without regard for what they are responding to (Herring, 1999). So, the lecturer must interpret and select them, and this requires familiarity and confidence with the tool. The lecturer who taught the class observed for this study seemed at ease during the lesson, but it may not have been the case for all the lecturers who had to suddenly become familiar with video-conferencing tools during the pandemic.

By the way, video-mediated interaction in ERE classes proved to be challenging also from the researcher's point of view in many ways. For example, keeping track of the several posts in the chat actions required a great effort to avoid overlooking data or misinterpreting messages, which is an additional possible limitation of participant observation. At the same time, the chat was a reliable source of important information for the researcher, such as the interlocutor's name and the timing, which facilitated the interpretation and analysis of data. Moreover, the researcher could experience the student perspective as she could rely on the same interactional possibilities as the other attendees. Nonetheless, some important elements may have been overlooked, such as the private exchanges among students or with the lecturer which might have been sent in the chat privately and could not be seen by the other attendees. This information could have been accessed by asking the students' and the lecturer to take screenshots of their screens and chats, but this option was ruled out because it would have affected spontaneous interaction.

Another possible limitation of this study is the size of the data set: this case study is limited to the observation of one class and its outcomes cannot be generalized, therefore its aim is to provide preliminary observations, which could pave the way for more extensive studies. Furthermore, being one of the introductory lessons the high number of students' intervention could be affected by the need for information on the course, whereas the following lessons might have been less interactive, and the results of a wider study might be different.

Even so, despite its limitations and possible shortcomings, this article shows that in video-mediated classroom discourse interlocutors can rely on affordances, such as the chat, which could facilitate and even increase interaction in line with previous studies on computer-mediated and video-mediated communication. Given that ERE is a massive phenomenon and for the first time almost every lecturer and student experienced video-mediated communication, further studies on pedagogical implications of this setting might benefit from larger datasets and widespread interest in the topic. Possible areas of research could be the integration of video-mediated communication in hybrid teaching (in-person streamed classes), its consequences on cognition and the learning process, its relevance in increasing the student talk time in EFL classes, alternation of native language and foreign language in EFL classes, and possible improvements of the available tools to make them more user- friendly.

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SESSION TWO:
Meeting Needs in Rural Schools

Living through a Pandemic: How Students Cope

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Abstract

The Coronovirus pandemic of 2020 has brought much challenge and disruption to the lives of students in elementary through high schools, their families, and their communities. 74 students in a graduate course in human growth and development conducted action research via interviews with volunteers across childhood and adult lifespan stages to ascertain impact and response the the pandemic experience with a special focus on the role of school in that experience. The majority of volunteers were students, with other participants being educators, parents, and various community members. Volunteers were interviewed on reactions to the pandemic experience, positive and negative life experiences both before the pandemic and during the panding that influenced coping, and reflections on what their local schools were doing to facilitate educational functtio Interview responses aligned with research already published on student experience with the pandemic and also produced new insight for future endeavors by the educational community in promotion of d evelopment of protective factors before similar crises occur and optimal interventions by schools during the experience of crises.

Keywords: Students and Covid-19, Schools and Covid-19, Student resilience and risk in crises

Introduction

The Coronavirus (Covid-19) pandemic has brought life disruption across the globe to people of all ages. This disruption has impacted business and industry, national economics, community life, family life, and the lives of individuals. The experience of education is a core life component for people from the ages of five (kindergarten) to the late teens for those who are in college. Education is even a core part of life for children under the age of five who may be in a day-care setting or pre-kindergarten. These contexts of life have moved into a new normal for survival through the pandemic and perhaps laid the foundation for a more permanent new normal.

The Ecological theory of human development by Urie Brofenbrenner was initially proposed in 1989 and has continue since then to develop as a key framework for the integrated systems of life that have mutual impact with life-long development of individuals. Johnson (2008) emphasized the complex

non-linear changes that can affect the education process for all ages of students. Johnson's research provided in-depth examination of the interaction of the various systemic contexts of the Ecological theory within an individual school. As these contexts impact schools, they likewise impacted the individual students and their respective life contexts.

Szente (2016) noted that a disaster experiences tend to be actions of or on nature such as hurricanes and tornadoes or actions by and on humans such as terrorism or health-related. The Covid-19 pandemic has been likened to the Spanish Flu pandemic of 1918-1919 in which one-third of the world's population at that time became infected (CDC, 2020). The Covid-19 pandemic has generated worldwide infection and impact as well. This phenomenon is well aligned with the current framework of Brofenbrenner's Ecological theory – the Person-Process_Context-Time (PPCT) model (Rosa and Tudge, 2013).

Rosa and Tudge (2013) noted that in the PPCT model, Person is best described as a component of Disposition toward generativity force of pro-activty and goal orientation or disposition toward destructive force of tendencies toward impulsivity, or violence. Person also included "Resource characteristics that helped a person to effectively engage in proximal processes (p. 253). Processes are best described as "a joint function of the developing person and environment (both immediate and remote)" (p. 252). Context was described as those environmental contextual systems that had been a core of the Ecological theory from inception forward – with the four contexts of "Microsystem as the setting that supports face to face interaction between person and others, Meosystem as the relationship that occurs between microsystems, Exosystem as environmental components outside participation by a person, but with influence on the person, and Macrosystem as those environmental influences per the culture the person lives in" (pp. 246-247). Finally Time was described by the model as the timeline of a person's life development journey embedded in the historical times in which a person lives>" (p.54).

The experience of students in Covid-19 has been strongly integrated with the systems of life influence and development as portrayed by the ever-evolving Ecological theory by Brofenbrenner. Much of this also impacted the educational experience of school and students along with impact on the way schools do business. Life before the pandemic, life and school during the pandemic, and life in the future once the pandemic is past are integrated as the person and environmental systems frame ultimate development.

Literature Review:

As Covid-19 is still a global pandemic experience with unknown ending date, published literature is still limited on impact of the experience

and lessons to be learnt – this is still a work in progress. Szente (2016) noted a disaster category that included a health crisis, which could embrace the current Covid-19 pandemic. There is much literature on disaster experience and impact with education that can support study of impact of Covid-19 on the person in the experience of education and the business of education. Guidance from such literature can inform educators and individuals in both development of prevention of negative impact and implementation and sustainment of coping and growing during a disaster or pandemic. Insight can also be gained on parameters for planning future intervention to help students and schools survive and thrive through pandemics or similar disasters.

Building Resilience Pre-Pandemic or Disaster:

Building resilience and survival or thriving in the midst of a crisis are results of both risk factors and protective factors that have developed within the individual. Forest-Bank, et al (2014) specifically examined development of these with the multitude of students who live in public housing across the United States. Study results indicated impact within Ecological systems that integrate with the student-school experience.

In recent years, there has been increased focus on the role of Social Emotional Learning (SEL) within the context of education. Knight, et al (2019) discussed SEL as primary prevention for students to grow capacity for survival and thriving amidst crises situations. In a study with middle-school students, Knight, et al (2019) implemented a program that had a 16-lesson curriculum on SEL topics such as self-regulation, "understanding boundaries, or recognizing manipulative behaviors. Interactive activities, practice skills, and strategies included in the program incorporated a variety of cognitive–behavioral techniques, expressive art, and metacognition and mindfulness techniques that are geared toward improving emotional regulation, social competence, self-awareness, and motivation through the implementation of a generalized learning experience." (p. 215). Results indicated efficacy in use of such a curriculum. These lessons could be taught through individualized or group participation in an online setting as well as with face-to-face instruction.

Stark, et al. (2020) noted a shift in the current Covid-19 experience from "coping with immediate impact of the crisis to planning for future success in navigation of a new normal." (p. S133). They noted that many aspects of life can be protective factors to build the resilience of a child when confronted with life adversity. These protective factors are present in each of the contextual systems within the Ecological theory. Examples that were given were monitoring and warmth of conscientious caregiving and access to appropriate social services and health care within the local community. Stark, et. al. also noted that an experience like the Covid-19 Pandemic could undermine efficacy of protective factors present at onset of a pandemic. This

supported purposeful pro-active intervention during a pandemic for maintenance and strengthening protective factors.

The strongest influences in the developmental trajectory of life are perhaps those instilled in the earlier hears of life. Much research has been shared on the impact of Adverse Childhood Experiences (ACEs). Sciaraffa, et al. (2013) discussed the promotion of resilience-building by Early Childhood Educators in the presence of these. Though this study was conducted before the current pandemic, insights from the study are still beneficial to a global ACE). Sciaraffa, et al. (2013) noted three core protective systems that can be strengthened with habitual attention from Early Childhood Educators. These systems are individual capacities of the child, the child's connection with a nurturing caregiver and other caring, competent people, and presence within a protective community especially in the areas of faith and culture. (p. 346). Examples of potential intervention by Early Childhood Educators were helping children to build skills or self-regulation and appropriate expression of emotions; strengthening the quality versus quantity of caring by respective Early Childhood teachers and attendants; maintain safe and child-friendly learning environments; and initiation of and collaboration with community-wide efforts to support health and well-being of the community youngest citizens.

In-Pandemic Coping and Growing:

As noted in the previous section, Stark, et al. (2020) indicated need for intervention during a pandemic or other crisis that helped students to sustain and grow personally and academically through the crisis – to both survive and to thrive. Stark et al. shared four implications for intervention, two of which could be within the realm of local school coordination. Schools could support access to mental and physical health services support via telemedicine such as connection between students and families with telehealth practitioners. Schools could also support both short-term and long-term solutions. Short-term solutions could address acute student needs for intervention such as use of local referral for service. Long-term solution integrate coordination of school resource staff such as school counselors, nursels, or social-workers for a combination of in-house and external resources service and edication support for students. Examples are increased onsite health checks or psychoeducation classes and groups for students.

Forest-Banks, et al. (2014) summarized individual response to challenges as Coping. Behavioral coping by students included actions such as increase in proactive communication to help self such as asking a teacher for explanation or other type of help for academics. Cognitive coping focused on use of "an internal mental process for discernment of an appropriate response to a challenge" (p. 205). An example of this was a student who wrote thoughts

down in a step-by-step fashion to support challenge resolution. Emotional coping was a person's emotional response to a challenge. A positive response that was shared by one student was release of feeling of anger through expenditure of energy in doing household chores. Spiritual coping was integration of faith or religious beliefs in response to challenges. A student response that exemplified this was reflection on his particular religion's belief in the importance of health minds, bodies, and souls.

The component of family is most prominent in the Ecological theory Microsystem, but also presents a role of influence across other systems with prevention of crisis impact via growth of protective factors as well as with efficacy in survival during crisis, and thriving past a crisis. Lamb (2920) shared multiple ways that families have met the challenges of the pandemic and grown stronger as a unit in the process. One example was family members reading together as parent/child or sibling/sibling. Other examples were watching positive television programs together, making things together from meals to make-do items for use at home, and playing together in both traditional board games or games accessed via the internet. Lamb (2020) indicated the benefit of families continuing this support of each other even as life moved past the confinements of the pandemic.

Over time, Trauma Informed Practice (TIP) has been developed to help students who are victims of complex trauma that may be initiated with an early adverse childhood experience and sustained through presence of multiple risk factors in the students' lives. Marquez (2020) discussed TIP strategies that could prove beneficial in support of students during the pandemic who already had presence of complex trauma. Marquez (2020) noted that while all students likely have experienced some life setbacks, these have been magnified where disadvantage was already present. Strategies were shared that could be advantageous if used even post-pandemic as part of an ongoing practice. Some of the strategies were establishment of consistency in school routines and communication methods, presentation of instructional material in smaller increments of information in the distance learning formats, and provision of frequent opportunity for students, teachers, and families to engage with each other virtually such as the use with videoconferencing.

The experience of both life and of the educational process has produced inequities across individuals and cultures – before Covid-19, during the pandemic, and in the future after the pandemic fades away. Mogaji (2020) reflected on inequities present in Nigeria with school closures and resolution efforts that could be initiated from national levels down. These efforts included the common alternative response of remote learning via computer technology as well as offering educational venues on other forms of media such as television and radio. An example of this in the United States is teacher use of education programs offered by Public Broadcasting networks. This

diversity of venues provided greater opportunity for teaching to reach learners across the country.

Just as inequities are present for natural born citizens of an area, there has been increased opportunity for increased attention to needs of students and families living in an area that is not of their native culture. An example is with Latino immigrants living in rural settings of the United States. Raffaelli et al (2012) examined risks and resilience building with some of these families. Study results offer potential for help within the current response to the Covid-19 pandemic as well as potential for building a foundation of operation in a new normal. One risk factor that was noted was the lack of capacity for rural communities to adequately support needs of immigrants. Due to cultural differences across the world, this risk factor could be globally common. An effective response to working with the "new" has always been to learn more about the new and the needs of the new to support planning for the needed support. Three indicators of individual and family well-being in this study have been present within the pandemic – "life-satisfaction, financial well-being, and food security." (p.571). While these three facets of life are not the responsibility of schools and educators, assuming a stance of work with the whole child frames a child and family relationship with a school in which school personnel strive to help guide and support in getting needs met. An example is the use of service learning in classrooms where students may engage in a project such as establishment of an in-school food pantry where members of the school community contribute food to be available to students and families when a real need is present.

Intersection with Education and Schools:

Higher Education has grown exponentially in use of learning modalities that are just now receiving serious attention from the P12 sector on education. Covid-19 has prompted this sector to embrace the alternative of school online in order to continue school in a world of mandatory social distancing. Brass and Lynch (2020) discussed the rise of Personalized Learning even pre-Covi-19 in which online learning platforms have been developed to offer student opportunity for individualized progression through competency-based curriculums aligned with the Common Core standards now in the majority of public schools in the United States. (p. 4.) This discussion mirrored both opportunity and challenge present for schools in current response to education needs per the Covid-19 pandemic and planning for future education frameworks. The greatest challenge and perceived problem with education online is the depersonalization of it for student and teacher participants. Brass and Lynch (2020) noted that proponents of this approach to education of minors provides greater opportunity for learning that better

meets individual student needs and greater capacity for objective tracking of student progress across a curriculum.

Even before the Covid-19 pandemic, the experience of school has contained mixed social and life benefits among students from various backgrounds. Many of these have been magnified during the pandemic in large part due to availability and capability with technology. Friedman, et al. (2020) examined the perceptions on impact from 31 urban Catholic School teachers with their teaching and learning by their students. Study results confirmed the challenge of these particular risk factors as poor students had less time and opportunity for supportive social connection and typical technology tools such as the internet or even a computer at home. Friedman, et al. (2020) also noted the tendency of superiority of hard copy reading material to digital reading material – yet education in the pandemic severely lessened access to hard copy reading sources. This was again a point of inequality across students.

Much of school success or failure rests on the shoulders of the administrative leadership. Gyang (2020) discussed the sense of helplessness felt by many school leaders in Nigeria with the Covid-19 pandemic and response to recovery with implementation of a Community-Based Education Leadership Model. This model foster collaboration between school and community leadership toward successful navigation of the new normal of remote learning to keep the school experience functional. The focus was on integration of three types of leadership. These were "1. Administrative leadership that is hierarchical and controlling; 2. Enabling leadership that encourages creative problem solving, learning, and adaptability; and 3. Adaptive leadership that is dynamic and empowers change." (p. 75). Through focused development and coordination of these facets of leadership, schools were able to better maneuver the challenges of education amidst the pandemic, and also establish precedence for increased efficacy between school and community with support of student progress after the pandemic.

A common experience in the face of challenge, change, or disaster is the need for many people to wear multiple hats and work beyond the "job description." Pollock (2020) shared a two-pronged approach that has become common in the response of some school leaders in Ontario, Canada. These school leaders have led effort to have safe schools with workable contexts for the future. They have also led efforts as instructional leaders toward a framework of digital instruction. Pollock (2020) suggested that school leaders lead integration of preventive practices into curriculum and teacher professional development so that focus could be consistently present. There was also encouragement for school leaders to promote and lead development of protocols and practice for response to potential crises. A final suggestion was for school leaders to promote habitual self-care with the school leader-

self providing the prime example for dong this. In the second prong of leadership with digital instructions, Pollock (2020) addressed need for school leaders to become as expert as possible in the nuances of delivery of remote instruction and to coordinate and monitor this in the same efficacy needed for good leadership of face-to-face instruction.

Hung, et al. (2020) also addressed the role of education leadership in birthing a new normal of learning management during the Covid-19 pandemic. This study, conducted in Singapore, presented quicker movement in a direction of digital education foundation that had already begun. Hung, et al. (2020) noted that the pandemic had presented crisis, there was great opportunity in the midst of that crisis, particularly in the realm of education leadership. Three barriers to successful progression were identified that needed management in a new normal – infrastructure to promote equality in Student Learning space such as promotion of internet access across student communities and homes; development and oversight of appropriate pedagogy for digital learning; and appropriate development and encouragement of ecological sustainability across the environmental systems discussed earlier per the Brofenbrenner developmental model.

Pandemic educational crisis and response has been global with lessons learned share also by educators in Australia. Kidson, et a. (2020) noted that they key focus in the midst of a crises is assuredly that of survival with post-crisis being an opportunity to reevaluate former polices and practices in the light of lessons learned during the crisis. Through the challenges and responses experienced from the local school level to the National Cabinet level, insight was gained on the need to decentralize management to the local level in the heart of crisis and then to integrate local voices in renewed national guidance and oversight through post-crisis recovery.

Foundations for Future Survival and Thriving:

Many schools have instituted a component known as "Alternative School:" which provides for continuing education of students whose behavior has consistently presented disruption for classmates. The Covid-10 pandemic has prevented an alternative to the regular normal of school. While reasoning for the alternative might be different, lessons learned with conduct of alternative school can still be useful in building foundations for future survival and thriving in the education arena for whatever crises may appear. Zolloski, et al. (2016) studied facets of personal resilience that had been developed by students participating in alternative school environments. For many of the participants, the alternative school experience served as a protective factor in and of itself. Examples shared by student participants were greater sense of personal goals and means to achieve these, a more focused view of success as

doing what one wants to do and needs to do versus success as other-defined, and a view of resilience as the basic capacity to keep going and never give up.

Children from Pre-Kindergarten at four years of age to adolescents at 18 years of age spend a considerable percentage of their lives for those years in the context of "school." Chrstiansen and Christainsen (1997) noted that many of the life needs that students bring with them to school are met in the routine experience of school. Examples are socialization with peers, connection with positive and caring adult role models, opportunity to achieve in their respective talents and capacity such as academics, sports, or extra-curricular organizations, and preparation for the independence of adulthood.

Chrstiansen and Christainsen (1997) suggested several supportive components that schools can initiate or strengthen development of protective factors for students as they move past the current pandemic and toward a viable and successful life in adulthood. They noted the key in provision of benefit from these is a mindset of purposeful pro-activity on the part of the school. One example was re-integration of adjunct skills building to the academic curriculum, A pendulum swing has already begun on this as schools lessen focus on just academic subjects covered in the annual "state test" to include more opportunity for students to participate in sports, special interest clubs, or creative endeavors such as art, music, or drama training and performance within the context of school. Two other important supports were key investment of family into students and mentoring by school personnel such as teachers or extra-curricular sponsors.

Family involvement has been a desired support for developmental success of students and has typically been a marker for positive student progression through their P12 career. Lack of family involvement and support has tended to correlate with unsuccessful progression in school. Garbacz, et al. (2016) noted positive association between family involvement with schools about their students and both participation with school and achievement at school. They also noted negative association between family involvement and behavior problems and student dropout. Typical interaction between school and family has been provision of school initiated information to families about students, conduct of some learning activities at home such as monitoring of student homework, and some cases of care-giver volunteering with school activities or parent-teacher associations to support the work of learning and school. The pandemic-inspired exodus of students from the school building to the home has increased family involvement in their education whether a welcome increase of not.

Future school intervention to help students survive and thrive through the remainder of the pandemic and afterwards would benefit from purposeful strengthening of family involvement. Garbacz et al. (2016) encouraged specific planning for a core of family involvement with school that included

integration of family representatives in problem-solving response by the school, clarification of expectations for student school work in the context of home such as completion of homework or reading time by younger students with adults at home, creation and maintenance of school physical space that is family-friendly, and strengthening bid-directional family-school communication.

The Covid-19 pandemic has been unprecedented in its specific nuances. However, large-impact crises have occurred throughout history and will continue to occur in the future. Examples are natural disasters and terrorism. This pandemic can serve as a reminder to build and maintain a foundation of prevention, intervention, and postvention. Pfefferbaum, et al (2014) addressed the need for the construct of coping to be core in planning for future disaster responses. Promotion of coping can be framed with building protective factors and reduction of risk factors. As risk factors are often external to the individual, community or even culture, a more efficient approach would be to work on building protective factors. Pfefferbaum, et a. (2014) noted the benefit of strengthening social support with families, communities and in-school as well as strengthening access to routine community resources for daily living needs and access to spiritual support.

Methodology:

A qualitative, action-research study was integrated into a graduate course on human growth and development in which 74 students interviewed acquaintance volunteers from childhood to adulthood about impact of the Covid-19 pandemic on their personal resilience with a focus on the role of the school experience in this. Volunteers answered questions on reactions to the experience of Covid-19, negative and positive life factors before Covid-19 that may have contributed to their management of the pandemic experience, negative and positive life factors during Covid-19 that may have contributed to their management of the pandemic experience and sources of strength and support during the pandemic. Two questions were answered on what local schools were doing to help the education process through the pandemic and what the volunteer would like to see local schools do additionally to further help the education process during this time. Students in the graduate course where asked to reflect on what they could do as future educators to help students to build pre-crisis resilience and what they could also do as response intervention in the midst of a future crisis with similarities to the pandemic.

Participants:

The study included two sets of participants The first set were 84 students enrolled in a graduate level course on human growth and development with most students being current educators training to be future

school counselors. The second set of participants were the volunteers who were interviewed on their Covid-19 experience. This study was conducted during terms for summer and fall of 2020. Volunteer participants consisted of family, friends, or colleagues known by student participants in their local communities. Table 1 depicts the age range, gender, and any other pertinent characteristics about participants.

Table 1 - Study Participant Characteristics.

Study Factor	**Frequency**
Childhood: 6 to 11 years of age	13
Adolescence: 12 to 18 years of age	21
Early Adulthood: 20 to 39 years of age	18
Middle Adulthood: 40 to 59 years of age	15
Senior Adulthood: 60 years of age or older	7
Male	21
Female	53
Elementary – High School Students	34
Profession as an educator	7
Parent of Elementary – High School Student	8
Other	25

Procedure:

In their research, students first selected a volunteer whom they knew from their circle of family, friends, or coworkers with whom they could safely interview within the paremeters of Covid-19 pandemic precautions. They obtained agreement of the person for a confidential interview about the experience, and then interviewed the person with a set of questions from the instructor as shared below. The second part of the research was to share peresonal reflection on what they learned from the research that they could use in their future work as counselors. This was framed in a Summary and Reflection paper to include a section on Pathway of Prevention in which the student shared insight on pro-activity that he or she could do to help students build resilience prior to the ocurrence of a crisis. A section was also included on Pathway of Successful Management in which the student shared insight on potential responsive interventions to help students survive and thrive in the midst of a crisis.

Table 2 - Interview Questions

1. Describe the impact of Covid-19 on this person – this is an initial statement given by the person.
2. Describe the immediate reaction to the experience – days and several weeks afterwards.
3. Describe the current reaction to the experience – now at the time of your course.

4. Negative Life factors before the experience that may have contributed to management of the experience.
5. Negative Life factors during the experience that may have hindered ability to manage the experience.
6. Positive Life factors before the experience that may have positively influenced ability to manage the experience.
7. Positive Life factors during the experience that may have helped the ability to manage the experience.
8. What helps the volunteer to stay personally strong now in light of this life challenge?
9. What are local schools doing to help the education process?
10. What else would the person like for the schools to do to help the education process?

Data Analysis and Findings:

Volunteer responses to interview questions and graduate course students reflections were analyzed for themes related to the experience of school in the pandemic and the preferred school response to help create a better school experience while moving forward in and out of the pandemic. These were grouped by the categories of Student, Educator, Parent, and Other. All persons in the category of Other represented a variety of professional backgrounds and were all adults. They still responded to the interview questions about school.

Themes present in Student Responses

As the focus of the study was toward students and the pandemic, student responses were examined for both individual response as well as thoughts about the role of school. Most students indicated a sense of joy at getting out of school for some early spring break, which soon turned into sadness and frustration at being physically separated from friends and even from their teachers. Many students expressed frustration at use of distance learning, and indicated a preference for face-to-face time in the classroom and increased appreciation for their teachers. Adolescent students reported building some habits they considered to be bad, such as overeating or under-exercising. All ages of students reported frustration at limitations for sports activities. Many indicated development of boredom over the months of the pandemic. Students who were high school seniors reported negative feelings about missing a traditional prom or traditional graduation ceremony.

Common responses by students on what schools were doing in the midst of the pandemic included health precautions such as sanitization, social distancing, wearing masks, and increased reliance on technology. Rigor of school work was mixed as some students reported increased amounts of work and some reported more leniency in submission deadlines of work. Several students suggested increased availability of tutoring service per the challenges of learning online. Many students expressed a desire for schools to “move

back to normal" as soon as they could, with a desire to get away from learning online.

Themes present in Educator Responses

Educator responses were examined for themes regarding the role of schools in prevention and future directions. Educator responses on what schools were doing in the pandemic tended to mirror student responses with some additional details on interventions such as use of emergency grant funding to purchase laptops or chrome books for student households and hiring cleaning services with capacity above that of the routine school housekeeping capacity. Educator reflections on additional school action moving forward included attention to organization for more virtual operation and school attention to more support of teachers in this new normal of operation.

Themes present in Parent Responses

Parental responses presented a theme of satisfaction with what schools were doing to support students such as technology support and some increased parental communication via technology modalities. Suggestions were for more information blasts from the school to families on a regular schedule, such as biweekly. Suggestions for additional intervention included more helps for students who might be struggling at the elementary levels versus families having to generate their own supports for these students. Many parents also indicated desire for support training for them from schools in how to work with their children on the school learning management systems, logging-in, etc.

Themes present in Responses of Other

Responses by volunteers who did not have direct interaction with schools tended to reflect common information shared on media news sources. These varied from local newspapers to national news television programs. Some thoughtful insight from volunteers in the Other category included consideration for school Hot Lines for families and community as well as a more universal learning platform across districts.

Themes in Graduate Student Reflection on Prevention

The most common insight shared by students was to focus on the building of positive habits in self-care for themselves and for promotion with their students and student families. Student insight on this included promotion of time for relaxation and recreation to help people de-stress. Common student reflections for helping students was to promote the building of good skills for academic achievement which could later translate to good

adult work skills such as self-regulation, goal-setting and monitoring, and regular attention to core academic skills such as math and reading.

Themes in Graduate Student Reflection on Intervention

Student insight on intervention amidst a crisis tended to be to also promote effective self-care during a crisis. Other common reflections were to maintain routine and rigor as well as effective two-way communication with all stakeholders such as students, families, and community members.

Conclusion

This student research supported insight presented from literature reviewed on facets of building resilience pre-pandemic, survival and thriving during the pandemic, and needs for forward movement of people and schools past the pandemic. The role of schools as an integral player in daily student, family, and community life was supported both outside and within crisis situations, such as the Covid-19 pandemic. Students gained practical insight on what would be important focus for them as future educational counselors both in helping students to build resilience and protective factors to assist with getting through any future crises. They also gained insight on possible best practices while in the midst of a crisis.

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Facilitating Social Emotional Learning in Rural Schools: A Systematic Review of Strategies

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Abstract

Educators no longer have the luxury of exclusively focusing on academic standards while neglecting the necessity to intertwine social and emotional competencies into to the curriculum. An examination of existing literature uncovered favorable academic outcomes associated with integrating social emotional learning (SEL) into the educational infrastructure. SEL assists children with developing skills to manage personal emotions, establish prosocial ideals, regulate relationships, build friendships, resolve conflicts and make ethical decisions. Although scholars reported an increased prevalence of social and emotional imbalance among students in rural settings when juxtaposed to urban children, the rural populace hesitate to seek and access assistance due to elevated rates of poverty, limited access to public transportation, difficulty retaining qualified personnel and the cultural stigma associated with receiving mental health support. Thus, school personnel are often tasked with identifying at risk students and dwelling on appropriate measures to assist them with social and emotional problems. Based on a systematic review of selected literature, the following strategies were found to facilitate SEL in rural schools: (1) an evidenced based SEL curriculum, (2) a methodical process to train staff, (3) an intentional partnership with parents and (4) a coalition with wrap around teams. Future research utilizing the outlined strategies to facilitate SEL in rural settings, support the necessity of exploratory research studies to assess the efficacy of the findings.

Keywords: Rural Education, Social Emotional Learning

Introduction

Educators do not naively expect students to enter the classroom with the inherent ability to consistently make sound decisions. Because previous researchers denoted that nearly 20% of students experience issues with mental health, the prevalence of social and emotional unrest with school-aged children is not a secret (Nichols, Goforth, Sacra, & Ahlers, 2017). A further examination of research exposed an unfavorable relationship between academic preparedness and emotional instability. Kress and Elias (2006) noted that the genesis of student discipline issues is often linked to an inability to

manage personal emotions or an ineptitude to appropriately interact with others. Based on the aforementioned findings, SEL instruction is needed to enhance the ability of students to appropriately co-exist with peers and adults in the academic setting. Furthermore, interventions to target social and emotional awareness can vastly assist with developing a commitment to learning, managing relationships and increasing self-awareness for students. As a result, educators are routinely tasked with fostering SEL competence during the school day. Unfortunately, additional findings in the literature revealed unique challenges related to providing mental health resources in rural communities (Zins et al., 2007).

Huscroft-D'Angelo, January and Duppong Hurley (2018) noted that nearly 9 million students receive an education in American, rural schools. The rural, student population exceeds the combined number of students in New York City, Los Angeles Unified, City of Chicago and the subsequent 85 metropolitan school districts (Hesbol, 2020). Although the collective number of rural students constitute the vast majority of the student population in the United States, rural districts often operate with less resources to recruit and retain qualified personnel, experience heightened rates of poverty among inhabitants and encounter a communal stigma regarding mental health services. Because of the distinctive challenges and greater risk for social and emotional concerns among rural students, school personnel are integral in cultivating social and emotional development. As such, schools play a vital role in identifying students at risk of battling complex issues and collaborating with specialized support personnel (SSP), such as nurses, counselors, speech language pathologists and psychologists to present a united response to this epidemic (Bright, 2018; Nichols et al, 2017).

Literature Review:

SEL can be characterized as the process of teaching students to appropriately manage relationships and make ethical decisions while simultaneously being socially cognizant, self-aware individuals. The execution of SEL competencies requires a concerted effort to enhance the awareness, attitudes, skills and behaviors to assist students with making sound decisions. When SEL interventions are implemented with fidelity, students learn to effectively manage personal emotions and problem solve interpersonal disputes during times of despair (Yoder, 2014). Based on a review of existing literature related to SEL, the following strategies: (1) an evidenced based SEL curriculum, (2) a methodical process to train staff, (3) an intentional partnership with parents and (4) a coalition with wrap around teams were found to facilitate SEL in rural schools.

Social Emotional Learning Curriculum:

Educators are encouraged to be prudent when reviewing the hodgepodge of available SEL programs on the market. Although the best intentions are often associated with beginning a new program, the process used for implementing the curriculum is equally vital as examining the content of material. Kress and Elias (2006) determined that taking shortcuts, excluding professionals and implementing decisions in isolation thwarts the desired outcome of obtaining multiple viewpoints and staff commitment. Thus, rural administrators must do their due diligence before adopting a school protocol to avoid inadequately structured SEL curricula by collaborating with a multidisciplinary team, rather than making unilateral decisions sent in a memo, to select appropriate resources and a process to train staff. Furthermore, school counselors are well versed to undertake leadership roles during the implementation process and selection of curriculum to ensure that a coordinated approach is rooted in SEL competencies (Kress & Elias, 2006).

As it relates to the content of SEL curricula, scholars suggested a concise, evidenced-based curriculum that can be implemented annually with comprehensive steps as a proactive tactic to enhance student development (Payton, Wardlaw, Graczyk, Bloodworth, Tompsett, & Weissberg, 2000). When deconstructing social and emotional curricula, the content should include resources to identify at risk behaviors, methods to communicate with students in crisis and interventions to address the most prevalent issues. Accordingly, SEL instruction should include data driven, interventions utilized to develop the ability to identify and manage personal emotions, value the opinions of others, promote interdependent goals regarding the best interests for the group and resolve issues with ethical solutions. Genuine outcomes as a result of the implementation process and content selection should both facilitate the development of a supportive, school environment and include resources to transfer SEL competence to staff via professional development (Nichols et al, 2017; Payton et al, 2000; Zins et al, 2007).

Professional Development for Educators:

Educators should be privy of universal strategies to employ when assisting students with social and emotional needs. Because previous literature indicated that practitioners feel underprepared to provide social and emotional assistance to students, a crucial step to proactively address social and emotional needs of students entails providing professional development to all staff. Staff readiness empowers teachers, paraprofessionals, librarians, etc. to serve on the first line of defense as it relates to identifying students experiencing social and emotional concerns. Because SSP often have limited availability throughout rural districts, properly trained educators are ultimately the best advocates to create a positive, scholastic environment. Thus,

professional development should be guided by an objective curriculum that adequately addresses SEL standards. Staff benefit from resources that denounce biased stereotypes, facilitate positive relationships and educate students about mental wellness (Nichols et al, 2017; Roy, 2015).

Furthermore, Semke and Sheridan (2012) suggested additional professional development focused on building relationships with parents as a worthy effort based on a shared interest in student achievement among both parties, educators and parents. Thus, deliberate attempts to enhance the home-school relationship provide opportunities for parents to participate in prescribed and active roles. Because parents often require guidance to build the home-school partnership, educators are tasked with promoting and sharing interventions to influence parental involvement (Payton et al, 2000; Semke & Sheridan, 2012; Vahedi & Nikdel, 2011).

Parental Involvement:

Educators recognize the need to nurture the home-school relationship. A concomitant review of research related to parents and educators, together and separate, revealed that both are the foundation for student development and learning. Previous researchers depicted that children involved in a secure parent-child relationship exhibit increased academic performance and self-regulatory proficiency while synchronously demonstrating decreased discipline challenges. Thus, an intentional partnership between school personnel and parents positively benefits academic and social skill development among students (Semke & Sheridan, 2012; Sheridan et al., 2010; Roy & Giraldo-García, 2018; Vahedi & Nikdel, 2011).

A sustained partnership with parents includes having open lines of communication with the goal of strengthening the relationship between both parties. Parental involvement can be developed and advanced by educators providing clear methods for parents to communicate needs, volunteer resources and collaborate ideas. Although formal conferences are an inevitable part of the educational process, parental relationships are better built on frequent interactions (e.g. in person, web based, phone, app, written) for academic and social instances. In addition to providing academic progress reports, consistent feedback to parents regarding social and emotional development gives parents the opportunity to assist with reiterating the importance of managing personal emotions, interacting appropriately with others and making ethical decisions. Furthermore, a concerted effort to include a complex faction between family-school-community provides even more opportunities to address the academic and nonacademic needs of students. A coordinated collaboration between educators, parents and local resources reinforces the likelihood that strategies will be implemented across multiple settings and eventually breakdown communal illogical beliefs related to

mental health services (Payton et al, 2000; Roy & Giraldo-García, 2018; Semke & Sheridan, 2012).

Wrap Around Services:

An evaluation of relevant literature identified wrap around services as substantial resources in the community. The wrap around process is a team-based approach that extends beyond educators and include an assortment of services that are available to youth and families with complex needs. As such, wrap around services that address the nonacademic needs of students (e.g. medical, mental health, dental, after school programming, etc.) have been found to lessen social and emotional concerns and increase the likelihood of academic success. Since wrap around services are guided by the needs of the family without regard to the accessibility or cost of the services, educators are encouraged to seek services when nonacademic challenges have been identified. Because many residents in rural areas lack access to public food distribution, health care and after-school programs due to geographical barriers and limited access to resources, Ayers (2011) declared wrap around services as essential to address mental and physical health, adult education and after school needs for students and families. Thus, a deliberate attempt to form a coalition with a combination of local, state and federal groups and organizations requires a collaborative effort to develop procedures to readily access services is needed (Ayers, 2011; VanDenBerg et al., 2003). Based on a review of the research, a memorandum of understanding (MOU) between all parties to provide information regarding the nature of services provided and the method to attain services is warranted. The key constructs of the interconnected (e.g. school-home-community) strategies to facilitate SEL in rural schools are outlined in Table 1.

Table 1 - Key Constructs of Selected Literature

Construct	Method to Implement
Social Emotional Learning Curriculum	Facilitated by a multidisciplinary team (e.g. administrators, parents, teachers, librarians, paraprofessionals, nurses, counselors, speech language pathologists, psychologists, etc.) with the goal of selecting appropriate resources and a process to systematically implement a concise, evidenced-based curriculum with comprehensive steps to implement and review annually

Professional Development for Educators	Guided by an objective, curriculum that adequately addresses SEL standards with the goal of creating a positive, school climate to facilitate ongoing student development and influence parental involvement
Parental Involvement	Enhanced by providing frequent communication related to social and academic progress with clear methods for parents to communicate needs, volunteer resources and collaborate ideas as means to build and sustain a positive home-school relationship
Wrap Around Services	Coordinated by coalescing with wrap around teams (e.g. government, non profit, private organizations) to address nonacademic needs (e.g. mental and physical health, adult education for parents, after school programming, etc.) for youth and families with complex needs

Methodology:

For the purpose of this research, a multistep process was implemented to select appropriate literature to systematically review. A comprehensive search of three databases, Google Scholar, ERIC and ProQuest were thoroughly browsed using an amalgam of the following key words: social and emotional learning, parents, resources, rural education, professional development, implementation, multidisciplinary approach, mental health, parental involvement, wrap around services, curriculum, school administrators, educator, school counselors, support personnel, competency and standards. Additional literature was included after reviewing works cited of selected articles and searching education related websites with a preference given to peer reviewed, journal articles. Selected articles focused on a combination of the following: SEL, SEL implementation, SEL strategies, SEL curriculum, SEL competencies, rural educators or rural schools. Articles specifically related to the urban populace, failed to provide strategies to implement SEL or published prior to the year 2000 were deliberately excluded from this research. A total of 50 referred articles were identified, of which 15 articles were selected to be a part of this systematic review. Limitations utilizing this approach revealed a gap in the existing research as it relates to defining rural communities and schools. Due to the ambiguous description of the rural population in the selected research, the generalizability of the recommendations is lessened, and suburban areas maybe inadvertently included in the findings. However, the systematic review of literature was

intended to examine existing research related to this topic and provide strategies to facilitate SEL in rural schools.

Conclusion

An examination of the selected literature revealed that children benefit from deliberate interrelations between educators, SEL curricula, parents and local resources as constructs to enhance the cognitive, social and emotional development across multiple settings.

Discussion

Detailed analysis of the selected literature revealed that a lack of resources and irrational beliefs regarding mental health assistance contribute to elevated social and emotional concerns in rural communities. As such, rural educators are tasked with supporting students despite widespread barriers among the rural population. Further review of the research uncovered that it is difficult to recruit and retain an appropriate quantity of mental health personnel in rural areas, and many educators often feel unprepared to assist students with social and emotional issues due to lack of professional development. Based on the review, a collaborative process for implementing and selecting an evidence based SEL program and a methodical process to train staff is warranted. As such, authentic outcomes of program implementation create a positive, school climate conducive for students to establish prosocial goals, develop interpersonal skills and make ethical decisions. Researchers further noted that educators, parents and community members are encouraged to make a deliberate effort to encourage and foster social development in children. A summarization of the literature findings revealed complex interrelations between home-school-community as necessary for the development of a wholesome child (Payton et al, 2000; Roy & Giraldo-García, 2018; Zins et al, 2007).

Recommendations

Based on the multiple challenges in rural areas and dearth of research related to this topic, additional inquiry related to building SEL competence in rural schools is recommended. Future research utilizing the outlined strategies to facilitate SEL in rural settings, support the necessity of exploratory research studies to assess the efficacy of the findings. Since the research also revealed unique challenges in rural communities, future inquiry should also seek interventions to address barriers. Lastly, a gap in the selected research revealed an inconsistent definition of rural communities. Additional research is needed to provide a clear description of rural settings. As such, the following areas are ripe for additional study: studies to determine the efficacy of SEL

strategies and research to provide interventions to decrease the barriers to mental health access in rural settings.

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SESSION THREE:
Undergraduate Nursing Education with Transition to Nursing

Community Engagement: Moving from the Classroom to Interprofessional Education Collaboration

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Abstract

In a dynamic, rapidly evolving global health care environment, it is vital that educators create arenas of learning that give students opportunities to put into action health concepts they have learned in the classroom and to actively engage in their communities. With limited clinical sites, it has become necessary to think outside the box for potential community opportunities. One baccalaureate nursing program has moved students from planning mock health fairs to collaborating with community partners to host large public health fairs with wide reach. Community outreach efforts have expanded to include interprofessional collaborations with students of other health care disciplines to host round table discussions and co-sponsor health care projects and community events that empower citizens to become active participants in improving their own health and well-being. This paper will discuss the evolution of a community health care nursing course from didactic coursework to building interprofessional education collaborations. New and seasoned educators will be able to incorporate aspects of this dynamic process to take their students to the next level in community engagement.

Keywords: Community Health, Interprofessional Education, Community Engagement, Education Curriculum

Introduction

Communities across the globe are experiencing unprecedented social and economic changes that threaten the health and well-being of people across the life span (American Association of Colleges of Nursing [AACN], 2008; World Health Organization [WHO], 2010b). Rapid changes in social and economic growth, an increasing population of older adults who are prone to chronic and degenerative illnesses, emerging disease patterns, and the struggle for all people to have access to preventive and affordable health care, necessitate the provision of nurses and other health care providers skilled to meet these complex challenges (WHO, 2020b). The American Association of

Colleges of Nursing (AACN) (2008) has recommended that nursing programs shift emphasis from acute care nursing to community-based nursing in response to these evolving needs. Schools of nursing strive to increase enrollments and adapt curriculums to accommodate increased health care demands. Nurse educators are challenged to create clinical learning environments that allow students to engage in their communities and effectively promote wellness concepts in collaboration with community partners and other health care disciplines.

One school of nursing, located in the southwestern United States, provides an example of nurse educators formalizing an effective approach to create such a learning environment. The university has taken on the challenge of preparing nursing students to be effective providers of care within community health care settings and to expand their reach in accessing vulnerable populations. Innovative learning strategies have been incorporated into this school's curriculum to advance public health nursing skills. Curricular planning has been guided by three aims: 1) Development of a nursing-focused community engagement activity, 2) Collaboration of community organizations, and 3) Incorporation of interprofessional collaborations. The purpose of this paper is to describe how one community health nursing course offered by a university located on the US/Mexican border evolved to more actively engage students in promoting health within their communities and to provide ideas to other community health educators exploring ways to increase student community engagement.

Evolution of a Baccalaureate Community Health Nursing Program:

Community health education is a key component of traditional baccalaureate nursing programs in the United States (American Association of Colleges of Nursing [AACN], 2008). Community nursing curriculums include several components that promote development of public health competencies as outlined by the Essentials of Baccalaureate Education for Professional Nursing Practice (2008) and the Quad Council of Public Health Nursing Organizations (Quad Council Coalition Competency Review Task Force, 2018). The community-health nursing course offered by the School of Nursing includes both didactic and clinical practice components to develop nursing skills in public health.

Several years ago, assignments in this course focused on stimulating students' critical thinking by having them make observations at the health care facilities to which they were assigned. They were to note organizational problems or challenges with the purpose of writing a community teaching paper. Clinical assignments ranged from settings in hospitals, to clinics, to schools, as well as other public health organizations. Students were required to identify and describe the facility, determine a fixable problem, and assign

an appropriate wellness nursing diagnosis. They would then find research articles that would expand their knowledge base and devise teaching strategies based on Erikson's Growth and Development Theory and informed by the Domains of Learning and Principles of Teaching and Learning. They were to set short term and long-term goals for their identified populations and to include in the paper how a change theory or model such as Pender's Health Promotion Model, Becker's Health Belief Model, or Prochaska's Transtheoretical Model, could be applied. Students were to describe how they would implement and then evaluate the outcomes of a hypothetical teaching activity.

This course assignment enabled students to gather evidence-based information and devise a plausible teaching plan. While useful, this assignment was limited in that students only had a written plan without actual execution. Students came up with great ideas, but lacked the means to actually implement them, as there was no process in place for them to carry out their plans. Community faculty then decided it was time to take this project to the next level and have the students bring their teaching projects to fruition. The course managers, in an effort to follow the school of nursing's mission to prepare students to be change agents in their communities, decided it was important to provide students with active learning opportunities in which they could engage with their communities face-to-face and be inspired to make a difference in their communities. Faculty, along with their partner health care organizations, created a process to enable students to present their projects at their assigned facilities under the guidance of their nurse preceptors. This worked well for the staff, as often, nurses would have projects they wanted to see put into motion, but did not have the resources or time to do so. This is where the students provided a valuable service. In fact, many of the projects initiated by students at some of the clinical sites during these early stages remain in effect today. Thus, the community patient/staff teaching practicum project was launched as a key assignment in the community health course.

Aim 1 - Development of Nursing Focused Community Engagement Activities:

After a few semesters of having students write the community teaching paper, they were challenged to put their plans into action through real-life presentations of their teaching plans to patients and staff members at their chosen health care facilities. The community teaching papers were still required but would now guide a community engagement health-teaching project. To ensure alignment with the Quad Council Coalition of Public Health Nursing Organizations competency 5A1a which calls for "assessments, plan development, implementation, and intervention evaluation of public health

services for individuals, families, and groups"(2018, p.23), students followed this process while putting together their teaching presentations.

Community Patient/Staff Teaching Practicum Project

Students commenced by completing community assessments including windshield and environmental risk surveys. To prepare for their presentations, they had to create a document in which they described the population served by the facility and discuss characteristics of the health care providers working within the organization. They had to identify the organization's mission and goals, key leaders, and organizational structure. Observations of external and internal politics and legal or ethical issues were also to be addressed. They then had to identify a community-focused topic of concern or problem in their selected health care facility that would serve as the basis of their teaching project. This involved the students physically going to a site such as a hospital or community clinic, evaluating the site, and then determining what needed to be changed. They would discuss this with their preceptor nurse, who was the nurse they were assigned to work with, to focus on one appropriate topic. The clinical faculty would then approve this topic. Afterword, the students would decide who the audience would be for their presentations, and this could include either staff members, patients, or both.

Typical topics included child-safety and school health issues such as sports' injuries, nutrition, immunizations, drug abuse, obesity, asthma, and diabetes. Adult and family health topics included various disease processes, wound care, pain management, fall-prevention, mental health, Alzheimer's disease and other dementia, and drug abuse. Issues impacting health care providers were also popular topics and included work stress, healthy behaviors, health screenings, emergency preparedness, and facilitation of SBAR (situation, background, assessment, response) reports. The SBAR system is used when communicating patient information nurse-to-nurse, nurse-to-doctor, student nurse-to-nurse, and so forth. Some facility personnel had concerns on how well this kind of information was being exchanged.

Once a plan was set in place for the teaching project, students had to describe it and discuss their decision-making process for determining an appropriate intervention to the identified concern or problem. They would then review the literature for evidence-based solutions and discuss current research related to the selected topic. Information from *Healthy People 2020* was to be included in addition to public health guidelines. Available resources and possible community collaborations were to be explored. As a requirement of the teaching paper, Erikson's Theory and the behavioral change theories were to be considered in regard to project development. Short term and long-term goals were to be set. The students would then actually present their teaching project to health care staff or designated patient populations at their facilities.

A self-critique of the teaching was to be completed and attendee evaluations would be collected after the presentation. Student are still required to present these teaching projects as part of the current curriculum.

Mock Health Fairs

The course then evolved to having students apply their community health skills to public events such as community health fairs. Health fairs provide a mechanism for the dissemination of health information and access to health screenings and are crucial to reaching underserved populations (Murray et al., 2014, Salerno et al., 2017). They have been described as one of the greatest tools of outreach to provide accurate information about health problems and to prompt health actions or changes in behavior (Ezeonwu & Berkowitz, 2014; Goldman & Schmalz, 2004). Health fairs provide a mechanism by which health problems may be detected through screenings, risk factors may be identified, and participants can be connected to health resources, promoting healthy lifestyles (Ezeonwu & Berkowitz, 2014; Dillon & Sternas, 1997). As this community health-nursing course is offered by a university that serves a region that has been traditionally underserved (Health Resources and Services Administration [HRSA], 2020), faculty believed it was important to get students ready to become involved in community events. To engage students in service to their community, nurse faculty instituted a mock health fair to prepare students for planning and participation in a public health fair. Students were asked to identify the top ten concerns of the community through windshield and environmental assessments. Priority concerns included vaccination, diabetes, hypertension, and stroke education. The class was divided into groups and each group was to take on a topic and create a "practice" health booth in which they would engage in primary, secondary, and tertiary intervention teaching strategies.

Each group was tasked to find health resources for their target population based on their selected topic. Community windshield and environmental assessments were done. In addition, secondary statistical data and zip code analysis was completed using census and Food and Drug Administration (FDA) data. Students sought community input through partnerships with community organizations. To find out the priority points that needed to be emphasized, students would interview key stakeholders belonging to organizations associated with the students' topics of interest. For example, if one of the selected topics was domestic violence, the students would interview the manager of a local domestic violence shelter to determine the most important points to teach at a health fair. The students would then hold a mock health fair at the School of Nursing and present their information to their peers. The mock health fair remains in the curriculum to prepare students for community health fair participation.

Aim 2 - Collaboration of Community Organizations:

Community Health Fair Events

The Quad Council Coalition of Public Health Nursing Organizations calls for the "use of community assets and resources including the government, private, and non-profit sectors to promote health and deliver services to individuals, families and groups" (2018, p. 24). After establishing the mock health fair as a major assignment in the course, the course manager connected with community partners to involve the nursing students in a large community fair sponsored by Telemundo, an American Spanish-language television network. Telemundo initially asked the School of Nursing for assistance to help them with their community fair, as they did not have anyone to present health information at this event. Because the mock health fairs were so successful, faculty felt confident that the students would be able to rise to the challenge and present health information at an actual community fair. This was a thrilling opportunity, as this would enable the students to truly make a big impact on their community, and see in real time the difference they were making. In the fall of 2013, sixty nursing students hosted health care booths on topics including diabetes, stroke, heart disease, women's health, mental health, and CPR at the 7th annual "Feria de la Familia" health fair at the Judson F. Williams Convention Center. To determine priority-teaching topics, clinical faculty worked with students to select key areas of interest based on the needs of the El Paso community. More than 9000 people attended this event. Approximately 400 to 500 participants attended the screening booths and at least 100 participants attended the educational sessions.

Planning done by the students for their booths was a major part of their final grade in the course. In a four -week period, nursing students selected their topics, gathered supplies, developed and collected materials in both English and Spanish, and prepared their presentations. They prepared a tool called the "Pasaporte de Salud" or Health Passport in which health fair participants navigated 11 booths. Participants had their blood pressures and body mass indexes (BMI) checked under the supervision of nursing faculty. Students indicated on the passports whether a participant was within normal ranges or if they needed to seek medical attention. They were encouraged to take their passports to their next visit with a health care provider. Because many of the participants spoke only Spanish, many of the nursing students who were bilingual in Spanish and English conducted their teaching in Spanish. One of the students reported that the health fair was "a great opportunity to bring together everything we have learned in the course and put it out into the community to see what we can do to help". The students participated in this particular event for another three years until the community fair format changed under new leadership at this television station. This event brought to light the enormous impact the students had on interacting with and educating

their communities through these venues. It provided a tangible way for the students to go beyond just training for their future careers and empowered them to give back to their communities. Upon this realization, faculty pursued other opportunities for the students to do public health fairs and facilitate other community events. Because of the success with Telemundo, the students were invited to participate in several other health fairs throughout the community.

Another American Spanish language television station, Univision, involved the nursing students in the Univision Health Fair in the spring of 2014 that attracted 350 to 400 participants at the screening booths, and over 700 participants at the education booths. Local area primary and secondary schools also petitioned the nursing students for assistance with their school health fair events. Students assigned to certain schools worked with their preceptors to design and develop health care activities and recruited help from other nursing students enrolled in the community health course. Several school health fairs within the community had wide reach to the neighborhoods in which they were located and allowed students to interact with the community and provide public health teaching.

The community health-nursing students went on to participate in another citywide health fair sponsored by the City of El Paso Public Health Department. The students hosted several education booths at the Emergency Preparedness Expo at the El Paso Convention Center.
The students taught about emergency-preparedness, first aid, and provided stroke education.

Smoking Cessation Initiative

At that point, other opportunities for involvement in other community health events arose. In the summer of 2014, the Housing Authority of the City of El Paso (HACEP) asked the nursing students to present information on smoking cessation at monthly health fairs held at different public housing complexes throughout the city. This was done as part of a collaboration between HACEP and the University of Texas at El Paso (UTEP) who conducted research on smoking preferences in public housing that was funded by a grant from the Paso del Norte Health Foundation. The aim of HACEP was to make all of the public housing units smoke-free. The nursing students received online training on how to educate people about smoking cessation. The students provided teaching to public housing residents and passed out brochures outlining smoking cessation programs offered by the City of El Paso's Department of Public Health's Fresh Start program and the StopLite Initiative at UTEP. Nursing students did presentations at six housing units attended by 30-50 participants per housing unit.

Military Bataan Death March Marathon

The nursing students expanded their community activity repertoire and served as medical volunteers in the 25th annual Bataan Memorial Death March at White Sands Missile Range in White Sands, New Mexico. The 26.2-mile march (walk or run marathon) is done in honor of service members who defended the Philippine Islands during World War II and is open to military and civilian participants. Thirty-three of the community health-nursing students completed a first-aid review session in which they brushed up on knowledge about heart attacks, wounds, thermal burns, joint and muscle injuries, diabetic emergencies, snakebites, seizures, and heat related injuries.

The students worked with members of their nursing faculty and RNs from William Beaumont Army Medical Center in acute medical tents and provided foot (blister) care and other first aid care for march participants. Some students worked in non-acute medical tents and provided hydration. The students practiced their assessment and vital sign-taking skills on the marathoners. Students reported this was very rewarding and gave them an opportunity to support military service members. This activity served as an example of how a partnership between a military base and community nursing students is mutually beneficial in that the nursing students were able to apply community health nursing principles and see first-hand how they improved the well-being of the march participants.

Mock Active Shooter Exercise

In 2015, the University of Texas at El Paso collaborated with the Border Regional Advisory Council (BorderRac), an organization dedicated to readying communities for disaster preparedness, to test university protocols for managing an active shooter situation. The community health-nursing students along with the graduate nurse practitioner students, nurse faculty, and local RNs participated in a mock active shooter scenario at the university library. BorderRac personnel along with university and city police department, fire department, and emergency medical services also participated in the event. Fire department personnel brought simulated shooting victims from the library to the School of Nursing patio across from the library. The community nursing students were separated into teams representing triage, ICU units, and medical surgical units, etc. The community nursing students went through the maneuvers of caring for shooting disaster victims and honed their knowledge and skills of helping their community during a disaster situation. The BorderRac hosted a debriefing for the participants afterward and their evaluation document was shared with the nursing students.

Aim 3 - Incorporation of Interprofessional Collaborations:

One of the main objectives of nursing community health courses is the promotion of interprofessional collaborations. The Quad Council Coalition of Public Health Nursing Organizations stipulates in Domain 5 of public health competencies that "developing relationships within a community, maintaining and advancing partnerships and community involvement, negotiating for the use of community assets, defending public health policies and programs, and evaluating and improving effectiveness of community engagement" is critical to the advancement of public health (2018, p. 23). Communication and collaboration among health care professionals has been regarded as critical to delivering high quality and safe patient care (AACN, 2008). As the community health-nursing course has evolved, nursing students now have opportunities to develop relationships with community stakeholders and fellow students of other health care disciplines who are also completing their courses of study in the pursuit of bettering the health of their communities. Participation in the HOPE (Health, Opportunity, Prevention, and Education) Clinic and health fair initiative and interprofessional education Tabletop exercises have enabled students to build crucial relationships that will carry forward as they begin their careers as health care professionals after graduation.

HOPE Health Fair

In the spring of 2016, community health nursing students along with students from the college of health sciences, school of social work, and school of pharmacy, and other community partners including the El Paso Health department, the El Paso County Hospital District, and private hospital systems, hosted a large health fair in a neighborhood near the location of the Opportunity Center, a shelter that houses homeless citizens. The HOPE fair event drew hundreds of El Pasoans. Nursing students hosted several booths and provided education on topics such as diabetes, domestic violence, breast cancer, and mental health. Education about health care resources in the community was provided. Health screenings were done under the supervision of nurse faculty and area RNs and referrals were made to a clinic that had set up a temporary onsite clinic to provide health care services. Community nursing students worked in pairs under the
supervision of a family nurse practitioner and performed foot care on Opportunity Center residents.

Health fair participants completed surveys regarding their experiences and provided feedback to the nursing students. Many expressed gratitude for the services and education they received. In terms of the students, one nurse practitioner reported students expressed some unfamiliarity and apprehension with working with this population of citizens, but that after caring for these

clients, they learned that all people are similar in wanting to have a greater state of well-being. She stated, "The students taught the patients about how to care for their feet, and the patients taught the students about humanity". One student reported being amazed at the vast amount of screenings, resources, and information that are available, and was surprised at how many people just want to talk about their medical histories and share personal stories. Students and nursing faculty reported that this was an immensely rewarding experience and really brought home to the students the essence of what community health nursing is all about. This event is still part of the activities the students engage in as part of their community-health course.

Tabletop Exercise

During the fall of 2018, the community health-nursing students began participating in the interprofessional education (IPE) "Tabletop Exercises" activity, a university initiative that brings students from the various health care professions together to review a case study and formulate an interdisciplinary plan of action for a simulated patient. Over 180 students from nursing, pharmacy, social work, physical therapy, speech-language pathology, occupational therapy, rehabilitation counseling, and thirty medical students, worked in groups to develop care plans for a complex simulated patient case. This exercise was developed based on the call for increasing interprofessional education opportunities for students enrolled in health sciences and other social care disciplines.

Interprofessional education (IPE) has been a pedagogical model used for several years in which students from two or more health care disciplines engage completely or partially in training activities to enable them to become highly skilled at collaboration (Buring et al., 2009; World Health Organization [WHO], 2010). Proficiency in intercollaborative communication is crucial to providing a high caliber of holistic, safe, patient-centered care in the increasingly complex health care environment (Buring et al., 2009; Frenk et al., 2010; Institute of Health [IOM], 2003; Steketee & O'Keefe, 2020). For this reason, inclusion of the nursing students in the Tabletop exercises was determined to be invaluable to their professional preparation.

Faculty members from the College of Health Sciences and the Schools of Nursing and Pharmacy organize this exercise each semester. Students from various health care disciplines, including medical students from other universities, are invited to the Tabletop event in which students come together in one location to review and discuss a fictional patient case study reflective of real-world situations, and provide their input in how they can work together to help this patient.

The patient is often representative of a vulnerable patient population. Past case studies have included simulated individuals struggling with health

issues who identify as homeless, refugees or transgender. Through this activity, students gain new perspectives on patient care approaches and learn about the unique challenges faced by members of each discipline. This forum allows them to refine their communication skills and engage in the kind of conversations they will have once they are in professional practice. It also enables them to begin building congenial relationships with people they will be working with in the future.

Virtual Tabletop Exercises in the Time of COVID-19

The community health nursing course at this university has always been taught on campus in a large classroom and in a simulated lab. Due to the COVID-19 pandemic, the university campus closed and all of the nursing courses were transformed into virtual formats to accommodate online learning. Like many nursing programs throughout the country, courses needed to be adapted to facilitate skills training through virtual platforms. Faculty from the different health care disciplines came together as a team to make a virtual tabletop exercise a reality. During the fall 2020 semester, the exercise was delivered through a virtual meeting platform and students were divided into "virtual rooms" to engage in their case study discussions. Case studies were given to the students prior to the virtual meeting so they could prepare their questions ahead of time.

As with any learning activity, the online environment had its benefits and challenges. An advantage was that the virtual format allowed for many more participants as there were no travel requirements or room reservations that were necessary for this type of meeting. Challenges included accessing technological assistance to troubleshoot any issues with connectivity and dividing the students into breakout rooms. However, the community nursing course manager reported that there were no more problems with online delivery than in-person delivery. As the Tabletop exercise activity has been fully developed, some faculty members stated it was very easy to put it online for the students. The community nursing course manager reported that students readily used the "chat" feature in the virtual meeting format. In her opinion, "they seemed more comfortable responding this way than in person". As virtual modalities are increasingly used in response to the current pandemic, community health faculty are challenged to adapt and engage in creative problem solving to make the virtual world conducive to the development of public health skills.

Program Outcomes - Student Perspectives:

Students have expressed satisfaction with the community activities they have participated in in pursuit of meeting their community health nursing course objectives. Students are asked to provide feedback after participating

in their various learning activities. In response to the community health fairs, one student reported, "It was amazing to see how many people came to the health fair to get screened for blood pressure, height, weight, and BMI." Another student stated, "It's amazing how much people don't know about seizures. We really are helping." Another expressed, "The people who came by seemed so grateful with all the services provided to them. I felt like I gave back to the community in a way I had never done before."

Student comments regarding the most recent Tabletop IPE activity have been positive. One student expressed, "At first, I felt shy when we broke out in groups because I was with people who I didn't know or have not met in person but after introducing ourselves I adjusted and felt comfortable to speak up and discuss what nursing has to offer for this patient. I realized that Zoom is the new normal and adjusting to change is necessary in order to carry out goals for our patients. I realized how important it is to work together as a team because different professions can offer many valuable resources to the plan of care of the patient that other members are not familiar with or do not specialize in." Another student reported, "Although I did not have any communication conflict with other members of the team, I did notice that every individual had different perspectives and tried to control others with their opinions. During this conflict, I demonstrated active listening and connected every member's ideas so we could develop a broader care plan for the patient and focus on priority interventions. With the help with other nursing students, I also managed to create a teaching plan that we could provide to the patient to ensure medication and follow up adherence."

Faculty Challenges of Community Engagement:

Course managers and faculty strive to find rich and diverse opportunities for students to practice their skills of health promotion. Community engagement activities are time consuming and can be difficult at times to juggle. Initially in the program, community practicum was conducted by preceptor nurses in the clinical setting and clinical faculty only provided oversight. As things evolved, faculty members had to become more actively involved with the students and their surrounding communities. They had to be willing to prepare for programming asked for by community agencies so that they could in turn train the students in specific activities. This presented a mild learning curve, as faculty had to adjust their mindset from traditional teaching methodologies and try new innovative active teaching strategies. One helpful strategy that made the work less burdensome among instructors was rotating who would be in charge of the different events, or "changing hands" to lighten the load of responsibility. Student evaluation feedback, which is overwhelmingly positive, is also a means of motivation to keeping the passion alive for continuing the hard work to make student experiences productive and

meaningful. Student reflection activities at the end of each semester allow faculty insight into how students perceive their learning experiences and provide direction needed to inform program improvement processes. Although the course is taught during the summer semesters, the big health fairs do not occur until the long fall and spring semesters, so students engage in the mock health fair activity along with IPE activities. This provides some rest time for faculty to regroup and prepare for the long semesters. One key to success is that this program has always had strong leadership from highly organized course managers with expertise in community health nursing. Course managers and administrators must have a willingness to think outside of the box and strongly support their faculty. This, coupled with a strong enthusiasm to help students appreciate and embrace community service, eased the transition into becoming a comprehensive, dynamic community health course.

Implications for Future Practice:

In addition to continuing health fairs, IPE activities, and participation in other various community events, the community health-nursing program aims to reach underserved populations in the rural areas of El Paso County through community health fair events held in these locations called "colonias". Populations in these areas consist of the some of the most impoverished and underserved citizens in this community. There is an extreme scarcity of health care resources in this area. Another anticipated outreach project includes implementing a program of phone and other virtual communication with older adults who are living in long-term care facilities and who remain isolated from their families due to the current pandemic. The next step is to involve community health nursing students in research projects in which they can work alongside students from other health care disciplines as well as graduate nursing students. In light of the current challenges brought about by the COVID 19 pandemic, expanded use of virtual platforms for education delivery will be explored in terms of reaching citizens with limited access to health care services. Development of relationships through use of virtual meeting applications in which students of various health care disciplines as well as other community stakeholders gather to brainstorm ideas will be a new area of focus. It will take a team effort to generate the creativity needed to adapt to the changing health care climate in the time of COVID 19 to meet the expanding needs of communities.

Discussion:

The evolution of the community health course described here came about as a result of nursing educators who wanted to make community health principles come alive for their students in a way that would empower them to

give back to their communities. It is not clear how many schools of nursing in the US offer such comprehensive community health care courses; however, the intent of this paper is to share ideas about possible activities that can be used to achieve the objectives of community health nursing curriculum across the globe. Faculty have observed that this course's innovations have enabled nursing students to become more comfortable in connecting with citizens, community stakeholders, and students of other disciplines as a result of their active community engagement.

The course managers who initiated the course's evolution envisioned a class that would inspire their students to immerse themselves in community service, and to feel empowered to do so. The feedback provided by students throughout the years have demonstrated that they have achieved this. Benefits of the evolved community health course include the students developing a sense of being intricately connected to their communities and gaining a better understanding of the populations, they serve. They are able to see first-hand the living conditions of citizens, and can speak to them on a more personal level in the places they live and receive health care. This can be a revelation for some students who may not have been exposed to certain disease processes or social conditions that adversely impact the quality of life. Students have learned to adjust their thinking to look at the big picture and to adjust the care they are providing in consideration to every individual's unique needs and to be guided by the community health principles of primary, secondary, and tertiary levels of care and disease prevention strategies.

Problems encountered was having enough faculty guidance for large class groups. When the total enrollment of students reaches 80 or above, it can prove challenging to find enough faculty to oversee the vast activities required in this course. At times, faculty buy-in can be a challenge as typically nursing faculty have large workloads. However, upon seeing how this work benefits the students to the degree that they express their excitement and report how much they find their community participation to be such a rewarding experience, most faculty have been motivated to stay the course. Specific guidelines and templates to support and guide all clinical projects have also helped clinical faculty manage the work.

The next steps for this community health course is to continue with strong leadership and to expand student activities into the surrounding rural areas. The incorporation of virtual technologies to reach different populations with online formats for health education and interprofessional discussions will be pursued. Hardships brought on by the COVID 19 pandemic that have isolated people and affected mental health will be addressed and students will be guided to brainstorm and implement strategies that will promote connection to the communities to advance health promotion. The involvement of students from the graduate nurse practitioner and nurse educator programs will be

sought to assist the undergraduate nursing students with their community activities in the current health care climate.

Conclusion

Adapting education curricula to prepare students in health care disciplines to become astute and competent providers of care will be imperative to meeting the expanding health care needs of citizens and communities. Global crises such as the current COVID 19 pandemic call for community health educators to become innovators who design learning activities that maximize students' problem-solving abilities. Ensuring students have rich opportunities to enhance public-health competencies who can skillfully engage in meaningful community partnerships and interprofessional collaborations will set the stage for improving the health and well-being of individuals, families, and communities everywhere.

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A Simulated Reality for Patient Care: An Alternative to the Social Distancing Barriers of COVID-19

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Abstract

At present, the conditions brought about by the COVID-19 pandemic affect the consistency, quality, and amount of exposure pre-licensing nursing students have to hands-on clinical experiences. Hospitals and other health care organizations are limiting or prohibiting student nurse clinical participation within their environments to comply with communicable disease policies and protect student and patient health. This contributes to an atmosphere in which entry-level nursing students may come into the workforce lacking a sound experiential base obtained in a clinical setting due to social distancing and other pandemic restrictions. Due to decreasing hands-on clinical experiences, it is important to fashion a new environment for nursing students to practice skills. Simulated Hospital Day (SHD) activities in a laboratory setting can contribute to meeting this need. A study was done to evaluate the effect of a SHD on the awareness and competency of pre-licensing nursing students regarding specific nursing interventions and critical thinking performed throughout the SHD. Findings showed a substantial rise in both core awareness and perceived skill competency. It is proposed that these findings may extend to SHD activities modified in response to COVID-19 guidelines. Innovative teaching strategies driven by such modifications may prove useful across educational disciplines for creating environments that promote student achievement of learning outcomes during a global pandemic.

Keywords: Undergraduate Curriculum, Nursing academia, Simulation, Patient Care, Healthcare Providers

Introduction

It takes time and practice to learn concepts within a new field of study and show competence. In certain situations, prior to the end of a single course or program, exposure to all facets of a field of study is unlikely. The body of information needed for nursing students to assimilate before their licensure exam is overwhelming. Students are often required to adapt what they have learned in a classroom to a clinical environment. Often in the clinical

environment, the opportunity to exercise concepts learned in didactic is not readily accessible, or the amount of clinical space for hands-on skills learning is severely limited. Simulation creates a bridge between didactic and clinical encounters while ensuring a healthy learning atmosphere for the student—creating an environment that closely parallels reality (Olaussen, Heggdal, & Tvedt, 2019).

As an innovative teaching/learning strategy, Simulated Hospital Day (SHD) has the ability to have a significant effect on undergraduate nursing education. The simulation activity may also be adapted to particular activities that educators want their students to attend, in addition to offering an alternate hospital experience. Outside academia, hospital education departments may use the SHD to (a) assess new nurse graduates, (b) facilitate continued education for seasoned nurses, and (c) teach new protocols.

History of Simulation:

Simulation is a pedagogy that integrates different styles/equipment of educational learning to transfer the knowledge of a student from beginner to expert (INACSL Board of Directors, 2011). In various professions, simulation has been around for years. One example includes flight simulators that have been developed in aviation to enable pilots to experience various scenarios and become familiar with the controls of the aircraft before flying a real plane (Stamper, Jones, & Thompson, 2008).

In medicine, simulation enables participants during clinical rotations to perform procedures, when real patients are not available. Simulation has been available in nursing for many years; however, the form has evolved over time. Throughout nursing history, simulation has continued to develop, beginning with the use of oranges to practice injections (Sanford, 2010) to the first high-fidelity simulator (SimOne) used for anesthesiology in 1969 (Nehring, 2008), to SimMan 30 (Laerdal, 2012).

Simulation in Nursing Education:

In supplying the nursing student with sufficient immersive learning possibilities, several outside powers operate against the completion. Within the hospital environment, the availability of hands-on training can be limited. In addition to the faculty shortage and lack of appropriate clinical sites, the drive to increase graduation numbers of entry-level nurse graduates (Nehring, 2008) has led to the urgent need to pursue alternative learning opportunities.

The use of simulation is one alternative learning experience. Simulation offers an avenue that enables students to exercise key skill sets in a hospital setting that closely resembles the world. Simulation will introduce students to scenarios that are unique to their field through a versatile learning setting and teach lessons that will help achieve positive patient outcomes.

Students are better able to maintain information after using simulation, and to associate ideas with experience (Curtis et.al, 2016). They are also more equipped for real-life experiences inside a clinical patient care environment as compared to conventional classroom skills laboratories (Bruce, Levett-Jones, Courtney-Pratt, 2019). In addition, simulation helps a member of the faculty to educate a greater number of students when conducting major nursing interventions.

Although the ideal method of combining information with practice is a real patient environment, there are two key limitations that could build barriers to learning. Increased acuity of patient situations and concerns with patient safety do not allow students to practice enough times in order to obtain experience in the action (Curtis et al, 2016).

There are a wide variety of possibilities for simulation learning that are able to instill theory into practical life and assist the student in implementing the concepts learned in the classroom (Ramm, Thomason, & Jackson, 2015). Knowing that simulation can help the student apply previously learned information to the clinical context and narrow the distance between "know" and do" (Cant & Cooper, 2017), each nursing program has to customize its simulation activity to better suit its needs while adhering to guidelines for best practice.

Advantages of Simulation:

The potential for simulation exercises to give nursing students exposure to patient conditions that may or may not be present in the hospital setting is one of the most advantageous aspects of simulation. These circumstances can be as easy as basic communication, to complicated, vital nursing care about patient teaching (Olaussen, Heggdal, & Tvedt, 2019). Some additional simulation benefits include skill enhancement and the elimination of nursing care errors by routine practice (Hustad, Johannesen, Fossum, & Hovland, 2019).

It is necessary to use active learning in the nursing profession, both in training and in assessing the competency of nursing interventions (Sportsman et al., 2009). A novel, supplementary approach to teaching and testing is high-fidelity simulation (Zapko et al, 2018). By improving self-confidence and competence in clinical nursing treatments, it will benefit the client. It also requires repetitive training/practice to learn skills that a pupil has trouble with and prepares students for their first clinical encounter (Zapko et al, 2018); however a problem with the outcomes is that there has been insufficient psychometric information in the researcher-developed instruments. Regardless of the type of simulation, the exercise must be carefully planned by nursing educators to ensure validation of all components (Smith & Roehrs, 2009).

Simulated Hospital Day:

Simulated Hospital Day (SHD) is an activity that places the participant into a simulated hospital environment with the clinical instructor (Image 1). The simulation room contains five patient beds (complete with functioning headwall systems), bedside tables and cabinets, a supply closet, a sink, audio-visual equipment, and table and chairs arranged to resemble a nurse's station. If the patient profile requires additional equipment (IV pumps, ventilators, Kangaroo pumps, etc.), they are placed at the bedside.

This activity was developed with four main aims in mind. The first aim is the opportunity to conduct patient care procedures with a scripted student-patient in a healthy, real-time learning environment. The student nurse conducts nursing procedures in real time, as he/she does in an actual clinical setting.

The second aim is to observe how students respond to urgent circumstances that involve critical thought, prioritizing, and implementing strategies in patient care. The patient has a sentinel event during the four-hour SHD, which helps the student nurse identify an issue, evaluate the situation, and react appropriately.

The third aim addresses the placement of the activity within nursing courses. Prior to the students' clinical experiences for each course, the SHD is strategically scheduled. This opportunity enables clinical faculty to assess the expertise, performance, therapeutic communication, and professional conduct of their students before entering the hospital setting. It also introduces students to an environment that is conceptually close to the real setting prior to their rotations in the hospital.

The fourth aim of the SHD provides opportunities for inter-professional collaboration with other professional groups: Physical Therapy, Occupational Therapy, Pharmacy, Social Work, Clinical Lab, Speech Language Pathology, and Nurse Practitioner students. Each of these disciplines interacts with the scripted student-patient and the nurse to develop a care plan that addresses (a) the patient's cultural beliefs/practices, (b) health disparities, (c) polypharmacy concerns, (d) death/dying, (e) legal/ethical issues, and (f) mind/body/spirit perspectives.

Invitations to participate in the SHD are also extended to area physicians, hospitals, and technical colleges. Participating physicians' round and request an update on their patients from the student nurse. Registered nurses from area hospitals engage in the roles of nurse managers, infection control nurses, nursing supervisors, etc. Students from technical colleges practice their respective roles and communicate their findings with the student nurse. This partnership helps to improve the competence of nursing students to work together as a team.

Simulated Hospital Day Agenda:

The timeline for the simulation actually started the night before the SHD operation, when the patient charts were accessed by all students. This allowed students to review and plan for their simulation activity on various aspects of the chart (laboratory observations, patient histories, and admission orders). Prep work was unique to their clinical faculty and included sheets, concept charts, and nursing care plans for medication analysis.

Students began the day by listening to the morning report. Student nurses welcomed their patients after getting the morning report. The simulated day lasted four hours and it was expected that student nurses would complete all of their patients' basic treatment. Basic treatment included: (a) an initial examination, (b) administration of medicine, (c) oral/hygiene care, and (d) any other care required. Patients were transferred out of the unit for diagnostic tests during the four-hour session, which forced the student nurses to modify their care plans. Sentinel events (i.e., hypoglycemia, acute respiratory distress) could also occur, creating an environment where the students needed to think objectively and intervene properly.

The scripted student-patient was given cues on how to perform certain actions, such as language difficulties and modified range of motion. To add to the realism of the virtual environment, equipment (i.e., simulated wounds, saline locks, and drains) was attached to the patient. A detailed script which changed every 30 minutes was given to all patients. This comprehensive script concerned patient actions and maintained consistency through the numerous rooms by its use. The scripts included (a) important assessment information, (b) detailed questions to ask the nurse, and (c) actions that needed to be played out throughout the day. In addition, a list of nurse action questions was given to patients, which they answered based on the actions of their nurse. These questions were sent electronically, and the answers were available to be used for debriefing by the clinical faculty. A nursing student was the scripted student-patient, able to peer review the behavior of their nurse during the "four-hour shift." The peer assessment therefore provides the nurse with direct peer-to-peer input. The cues allowed the scripted student-patient to know what was occurring, and the tasks that should be completed, while providing an opportunity to learn through observation.

The NLN Jeffries Simulation Theory:

There was one nursing simulation theory at the time of this research that encompassed all the key elements of a simulation operation. This theory was the NLN Jeffries Simulation Theory (Jeffries et. al., 2015). Based on the

NLN Jeffries Simulation Framework (Jeffries, 2005, 2007, 2012; Jeffries & Rodgers, 2012), this theory was used primarily to help direct the creation and subsequent evaluation of simulation activities used in nursing school academia (Jeffries et al, 2015). This theory was originally developed using the following three learning theories:

1. Learner-centered theory,
2. Constructivist (cognitive and social) theory, and
3. Socio-cultural perspectives on collaborative technology.

The simulation theory explored virtual nursing education design, implementation, and assessment (Jeffries, 2015). Successful simulation-type teaching and learning practices focused on the experiences of both the faculty and the student with the ultimate aim of developing a well-rounded, active learning approach for students. The learning results were based on aspects of the theory of nursing simulation. For instance, during the simulation exercise, faculty and student roles were just as important as the goals and the environment's fidelity. Depending on whether the simulation activity had a learning or assessment emphasis, faculty roles differed. For the most part, student responsibilities were self-directed. Failure in any of these two positions could result in adverse effects (Jeffries, 2015).

Innovation:

Nursing programs are charged with developing creative teaching modalities, with a growing demand for qualified graduates and a lack of clinical opportunities during nursing school. In order to supplement hands-on hospital experience, several initiatives are turning to simulation by enabling three separate learning modalities: interaction, observation, and debriefing (Hustad, Johannesen, Fossum, & Hovland, 2019).

The number of students who participated simultaneously during a SHD could range from 100 in the fundamental course to 70 in the capstone course. The activity was usually scheduled on two consecutive days for each participating clinical course. All activities during the SHD occurred in real time. There was no verbalization by a student stating how he/she would complete a procedure within a specified time. The student was expected to:

1. Explain the procedure to the patient;
2. Collect the necessary supplies, equipment, and trainers; and
3. Perform the procedure as their clinical instructor provided guidance.

The SHD was a four-hour project (not including debriefing) that had a plethora of teaching opportunities covering a range of topics, unlike many scenario-driven simulation activities that could be done in 30 minutes or less. The students themselves offered spontaneous teaching opportunities in

addition to the scheduled teaching moments, as they thought about exercises and conducted interventions. Although several nursing programs looked at mannequin-based simulation, there were many advantages of using learners as patients on such a wide scale:

1. It was economical.
2. This permitted spontaneous changes in the operation.
3. Human contact was provided.
4. It helped students to understand the constraints faced by patients while hospitalized.

The bonus for the scripted student-patient was the learning that occurred while observing everything transpiring within the room and at their own bedside. Another unique characteristic of the SHD was the way collaboration with other disciplines and members of the community occurred. Not only did students from the College of Health Sciences (CHS) participate in SHD, but they come in large numbers. It was not unusual to have 20 students from PT, OT, or Clinical Lab participate in a SHD or to have more than one discipline at a time. Collaboration was not limited to CHS students but was extended to students from other academic institutions and health care members within the El Paso community.

Methodology:

The design of the study was a comparative descriptive design comparing the pre-test and post-test scores of students on core knowledge and perceived skill competency. This design identified patterns/trends related to the behavior of simulation and created hypotheses on which further study could be focused. This project looked at the core baseline knowledge/perceived skill competence of each student and compared it to core knowledge/perceived skill competence after simulation. In the study, all participants completed a pre-SHD evaluation and then participated in the SHD activity. Immediately following the SHD activity, the participants completed a post-SHD evaluation. In this design, the participants were their own controls.

Research Questions:

This research study was guided by the following research questions:

R_1: Pre-licensure nursing students will have higher self-assessed competency scores of specific nursing interventions after participating in SHD.

R_2: Pre-licensure nursing students' knowledge of selected patient care concepts will increase after participating in SHD.

R_3: Self-assessed competence and knowledge of selected patient core concepts/interventions will differ, depending on whether the student was in the nurse role day 1 or day 2 during the SHD activity.

Setting:

Previous to the simulation exercise, all students received the same didactic content. The setting of the study was the Center for Simulation located at the School of Nursing. The simulation labs were configured to closely replicate a hospital environment, including patient charts and equipment (i.e., intravenous pumps, oxygen regulators, and suction kits). The role of the scripted student patients was played by nursing students. Using real-patient data/trends, patient charts were created. Medication charts followed the same format as the hospital arena. The atmosphere of the hospital resembled the traditional surgical medical floor. All participating nursing students were given a brief description of the hospital equipment prior to the simulation exercise to ensure they were familiar with the mechanics.

Sample:

The sampling method was convenience sampling. The participants who consented to the study completed the pre-SHD Survey/Core Knowledge Quiz, the SHD activity, and the post-SHD survey/Core Knowledge Quiz. After finishing the pre-SHD criteria, the participants were allocated their places for the SHD.

First-semester nursing students from the UTEP BSN program were the participants. In order to provide a baseline look at nursing students and their ability to process basic nursing tasks during a SHD, this unique group of students was selected for the research. This unique group of students had certain characteristics for this study that made them ideal. Those characteristics include:

1. Completion of a course in health assessment;
2. Testing on basic nursing abilities is completed; and
3. Not having started clinical rotations in a hospital setting.

To assess the suitable number of participants, a power analysis was performed. In this specific simulation operation, minimal published research offered guidance to determine the sample size needed; thus the following was used to determine the number of participants. The desired power was 0.80, the effect size was 0.50 (moderate), and the significance level was 0.05 using a paired sample t test. Those factors put the minimum number of participants at 64 per category. The total minimum number of participants was 64 since the participants acted as their own controls (making this a within subjects design).

Inclusion/Exclusion Criteria:

Inclusion criteria included first-semester nursing students from a traditional BSN program. Previous experience as a vocational nurse, nursing student, or other healthcare professional was included within the demographic

information however such experience did not preclude student nurses from participating. Exclusion criteria included student nurses who were not currently in the first semester of the BSN program. Other exclusion criteria included students who were taking the first-semester course for the second time due to a previous course drop or failure, and any student under the age of 18.

Instrumentation:

The tools used for this study were the Participant Demographics Survey, Simulated Hospital Self-Assessment (Student as a Nurse) Survey, and the Core Knowledge Quiz. The Participant Demographics Survey was a list of questions that determined the population's characteristics (i.e., age, gender, primary language, and level of experience). The Simulated Hospital Self-Assessment (Student as a Nurse) Survey was created by the Primary Investigator at the School of Nursing. This survey asked participants to respond to their perceived competence in specific nursing skill sets (self-assessment) skills. 10 questions encompassed the skill sets:

1. gathering data from the patient assessment;
2. modifying a plan of care;
3. utilizing therapeutic communication;
4. administering medications;
5. prioritizing interventions;
6. intervening when a patient's condition changes;
7. documenting pertinent information;
8. managing time;
9. interacting with healthcare providers; and
10. promoting patient safety.

The students rated their perceived level of skill using a five-point Likert scale (I = strongly disagree, 2 = disagree, 3 = somewhat agree, 4 = agree, and 5 = strongly agree). This survey was used as both a pre- and post-survey. All questions were cross-referenced with the Texas BON direct competencies and with the Core Knowledge Quiz categories. The third tool was the Core Knowledge Quiz, consisting of multiple-choice nursing action questions related to activities the student nurse completed during the SHD. Content validity of the core knowledge questions was completed prior to the onset of the study.

Preliminary Work (Student as a Nurse Survey):

Instrument content validity was established for this newly developed nine- item instrument, Simulated Hospital Self-Assessment (Student as a Nurse) Survey. These items were nursing actions related to the BON Direct

Competencies. Seven experts in simulation were asked to score each item for content relevance. A Content Validity Index (CVI) was calculated for each item and for the total scale.

The CVI for the items resulted in item Q3 (CVI = 71.4%) and Q9 (CVI =85.7%) needing revision. The total scale CVI was 95.24%. The two items were reworded, based on the results of the CVI. It was also noted that there were no items directed towards safety for the patient. As this is a major component of nursing, an additional nursing action item was added regarding the nurse ensuring patient safety. A second instrument content validity was conducted using this revised 10-item instrument. Eleven experts in simulation were asked to score each item for content relevance. A CVI was calculated for each item of the survey and for the total scale. For the Simulated Hospital Self-Assessment (Student as a Nurse) Survey, the CVI for items 1-5 and 7-10 was at 100%. The CVI for items 2 and 6 was at 90.9%. The CVI for the total scale was 97.27%.

As a measure of internal consistency reliability, Cronbach's alpha was performed and resulted in an alpha of 0.96 for the total scale. This indicated a high internal consistency. To test for stability, a split-half coefficient test was run. This test was chosen since it negates the potential biases that can occur with a test-retest approach. The items on the survey were divided in two, with items 1-5 indicated as 5a and items 6-10 indicated as 5p. The results indicated a high internal consistency for both groups 5a and 5p (alpha= 0.891, alpha= 0.934, respectively). In addition, the correlation between forms was 0.910.

Preliminary Work (Core Knowledge Quiz)

Instrument content validity was established for the newly developed 20-item knowledge instrument Core Knowledge Quiz. This quiz used categorical data to measure different types of concepts/skills. These items were basic core nursing actions related to the BON Direct Competencies and to the Simulation Hospital Self- Assessment (Student as a Nurse) Survey. Six simulation experts were asked to rate each item for content relevancy. A CVI was calculated for each item and for the total scale. For the Core Knowledge Quiz, the CVI for all items was at 100%. The CVI for the total scale was 100%.

Data Analysis:

Data analysis included descriptive demographic information statistics, which included a general population overview and a comparison of mean core knowledge and perceived competency scores from pre-test to post-test, using a design within the subjects. Specifically, the analysis was as follows:

- Hypothesis 1: "Pre-licensure nursing students will have higher self-assessed competency scores of specific nursing interventions after participating in SHD." To test this hypothesis, mean scores on the

Simulated Hospital Self-Assessment (Student as a Nurse) Survey self-competency subscale (items 1-10) were compared between pre- and post-test using a within subjects paired samples t test. It was hypothesized that these students would score higher after participating in SHD.

- Hypothesis 2: "Pre-licensure nursing students' knowledge of selected patient care concepts will increase after participating in SHD." To test this hypothesis, mean scores on the Core Knowledge Quiz subscale (items 1-20) were compared between pre- and post-test using a within subjects paired samples t test. It was hypothesized that these students would score higher on the items after participating in SHD.
- Hypothesis 3: "Self-assessed competence and knowledge of selected patient core concepts/interventions will differ, depending on whether the student was in the nurse role day 1 or day 2 during the SHD activity." To test this hypothesis, mean scores on both the Simulated Hospital Self-Assessment (Student as a Nurse) Survey and the Core Knowledge Quiz were compared between day 1 and day 2, using a between subjects independent samples t test. It was hypothesized that there would not be any difference between self-assessed competence and core knowledge between day 1 and day 2.

Results:

Participant Demographics

In the pre-licensure baccalaureate nursing program, a total of 75 participants were enrolled. Both the pre- and post-evaluation instruments were completed by all students who participated in the research. In order to determine the demographics of the participants completing the SHD exercise, questions were asked. This population's demographics is diverse in age, prior experience in healthcare, and race/ethnicity.

The majority of participants (87 percent) were female. Ages ranged from under 20 years of age to over 51 years of age, with distinct degrees of experience in health care. The highest percentage (52 percent) of participants reported having less than one year of healthcare experience. More than half of the students (77 percent) did not have a previous college degree. Half of the participants spoke their primary language at home in English (51 percent), and one-third of the participants spoke their primary language in Spanish (33 percent). The predominant race and ethnicity listed was Spanish/Hispanic/Latino(a) at 85.3 percent. (See Table 1)

Perceived Skill Competence (Hypothesis 1)

The hypothesis notes that after engaging in SHD, pre-licensing nursing

students would have higher self-evaluated skill competency scores for particular nursing interventions. Before the SHD activity and immediately after the end of day 2 activity, all students completed the SHD "Student as a Nurse" Survey. The survey instrument was a compilation of 10 items that asked questions about the perceived level of competence of the nursing student with core nursing behavior.

The survey responses ranged from 1-5, with "1" representing "Strongly Disagree" and "5" representing "Strongly Agree." A paired sample/-test was performed to compare the self-assessed skill competency scores of pre-licensure nursing students prior to and after the SHD exercise was completed. This test was selected because the nursing students acted as their own controls (n = 75) before and after completing the SHD operation, responding to survey objects. Participants had significantly higher perceived skill competence scores after attending the SHD activity (M = 4.18, SD = 0.69) then before participation (M = 4.45, SD= 0.55), t (74) = 3.48, p = 0.001.

Core Knowledge (Hypothesis 2)

The hypothesis notes that after engaging in SHD, the awareness of selected patient care principles by pre-licensure nursing students would increase. Prior to the SHD activity and immediately after, both students completed the Core Knowledge quiz. 20 multiple choice questions representing the key nursing interventions covered in the SHD were included in this awareness quiz. There were four responses to the multiple-choice questions: one answer was correct and the other three answers were incorrect. A paired sample t test was performed to compare the core awareness of nursing interventions before and after the SHD task was completed by pre-licensing nursing student.

This test was chosen because the nursing students acted as their own monitors (n = 75) as they replied both before and after completing the SHD activity to the multiple-choice quiz questions. If there was a substantial difference in mean scores comparing the post-test scores to the pre-test scores would be calculated by this test. Participants had significantly higher core patient care concepts knowledge scores after attending the SHD activity (M = 65.40, SD= 13.7) then before participating (M = 69.20, SD= 13.1), t (74) = 2.51, p = 0.014.

Day 1 Nurses vs. Day 2 Nurses (Hypothesis 3)

The final hypothesis assessed whether there was a difference with respect to their placement as a nurse on day 1 or day 2 of the SHD operation in either core expertise (pre/post) or perceived ability competence (pre/post). The nurse assignment variable was evaluated for this study query. For one day each, each nursing student worked as a nurse" and a "scripted student-patient"

Students of nursing were allocated to be nurses for day 1 and patients for day 2 vs. patients for day 1 and nurses for day 2 (n=75). The investigator examined whether the location of the position made a difference in the results of learning. An independent t-test study was performed to assess the nurse's assignment (day 1 vs. day 2) in relation to core experience and perceived abilities prior to and after completion of simulated hospital experience.

In relation to their placement in the nursing role (day 1 vs. day 2), this test was chosen to assess if there was a substantial difference between the core knowledge of the nursing student and perceived skill level. This test compared the means of each sample—pre/post core information quiz and scores of pre/post survey—and calculated if the results were statistically relevant. Results of the Levine test showed that there was no breach of the homogeneity of the statement of variances.

There was not a significant difference in the pre-scores for core knowledge for day 1 nurses (M = 65.57, SD= 13.97) and day 2 nurses (M = 65.25, SD= 13.68); t (73) = 0.10, p = 0.92. There was not a significant difference in the post-scores for core knowledge for day 1 nurses (M = 70.14, SD = 11.34) and day 2 nurses (M = 68.38, SD= 14.56); t (73) = 0.580, p = 0.563. These findings embrace the null hypothesis and indicate that the nurse's placement (day 1 vs. day 2) does not have an effect on the acquisition of the substance of core information.

There was not a significant difference in the pre-scores for perceived skill competency for day 1 nurses (M = 4.09, SD= 0.77) and day 2 nurses (M = 4.26, SD= 0.61); t (73) = -1.05, p = 0.30. There was not a significant difference in the post-scores for perceived skill competency for day 1 nurses (M = 4.41, SD= 0.55) and day 2 nurses (M = 4.48, SD= 0.55); t (73) = -0.58, p = 0.56. These findings accept the null hypothesis and show that the nurse's placement (day 1 vs. day 2) does not have an effect on the acquisition of perceived skills.

Discussion:

The first research question asks if the SHD operation had any effect on the self-assessed skill competency of particular nursing interventions of the nursing student. This research question raised the concern that, due to the limited availability of particular patient conditions, clinical rotations do not offer students the opportunity to "practice" their skills (Hustad, Johannesen, Fossum, & Hovland, 2019). Study findings showed that after completing the SHD operation, there is an improvement in perceived skill competency. Educators have the ability to encourage nursing students to understand and learn nursing principles that are important for practice by providing an atmosphere that mimics the hospital experience.

The second hypothesis addressed the problem of whether the

nursing student's comprehension of selected core principles of patient care increased after engaging in SHD. Literature demonstrates that simulation has the potential to help and promote the learning process with didactic content (Ramm, Thomason, & Jackson, 2015). Results from this research have shown that after participating in the SHD operation, there is an improvement in core awareness. This could translate into other entities using this form of simulation environment to promote continued education or other levels of nursing education (such as hospital training and development departments and other nursing programs).

The final research question asked whether the timing of the nurse's position made a difference in the core knowledge or perceived competence of the nursing student. The findings of this study showed that, depending on whether the student was the nurse on day 1 or day 2, there was little difference in learning outcomes. In particular, the findings indicated that nursing students have an improvement in core competence and perceived skill capacity as long as both the nurse and the scripted student-patient play a role during the SHD operation.

Results Compared with NLN Jeffries Simulation Theory

The findings were consistent with the results seen in the Simulation System for Nursing Education (Jeffries, 2015). In designing the SHD activity, a hands-on learning experience was developed using the system constructs. The learning outcomes of core knowledge and perceived skills were based on the other key components of the SHD activity: instructor (facilitator), student (participant), used instructional activities (hands-on interaction), and design of simulation (realistic medical surgical hospital unit).

Strengths of the Study

Scripted events that occurred during the SHD were controlled variables. In each of the simulated spaces, unregulated variables were the numerous clinical faculty members who were the lead facilitators. To limit the discrepancies between the clinical classes, all clinical faculty members were given an in-service briefing prior to the SHD. Topics provided critical material during the in-service, such as patient profiles, scheduled activities, and tips for handling five patients in each room.

Furthermore a "playbook" was supplied to all clinical faculty members. This playbook consisted of patient scripts and the timeline of acts during the SHD operation. Along with this knowledge, the rationales of behavior and the course of the day of the patient were given to the clinical faculty members to better understand what happened during the operation of SHD.

Clinical faculty members were given an overview of relevant subjects

to discuss what happened during the SHD activity in order to structure the debriefing session after the SHD activity. The strength of the research was the opportunity to assess whether the SHD had a beneficial influence on the experience and nursing skills of the students. Since this was the first known study to investigate SHD's efficacy, the findings provided a framework on which future research could be focused.

Limitations of the Study

As an aspect of their clinical requirements, all students were expected to complete the activity. While it was optional to engage in the data collection portion of the SHD, students could not opt out of the activity itself. During the SHD operation, as each student participated in two roles (one day as a nurse and one day as a patient), the study examined whether there was learning throughout the two-day period. It was not possible to decide if the learning was from day 1, day 2, or a mixture of both days, for this analysis. Evaluating the participants before the SHD activity, after day 1, and after completion of the SHD activity (day 2) will be a possible improvement for future SHD activities.

The use of clinical faculty as facilitators of their clinical groups was another weakness. While structured files containing comprehensive patient scenario details were given to each teacher, it was impossible to monitor how events were prioritized by individual instructors and the direction student interaction would take. A debriefing blueprint that included the key paths of the patient's hospital day and components of the core information was also provided to facilitators. Since the facilitators were given the same written details and were engaged in training prior to the SHD operation, depending on the experience/knowledge of the facilitator and/or the actions/questions of the nursing student, the facilitator may take the activities down a different direction than originally written.

Contribution to Nursing Knowledge

The SHD practice provides an alternate clinical environment for nursing teachers to use important nursing interventions in teaching nursing students. In developing a virtual environment that allows learning both from an observational and hands-on interactive level, this activity has demonstrated its importance. This practice is also one-of-a-kind, composed of components of simulation practices not currently seen in nursing literature. One of these elements is student-patient learning through observation as scripted. Another aspect is the real-time simulation (not simulated time) for a four-hour time frame in which students conduct all care management tasks for their patients (such as skills, therapeutic communication). This atmosphere also enables facilitators to direct students through the process and provide immediate input

on specific actions of the participant. The final unique aspect is the introduction into the SHD of learners from various inter-professional health care provider programs. Both respondents engage with patients, each other and faculty to develop skills in developing inter-professional relationships that should be translated after graduation into their practice.

Recommendation for Actions

The findings of this research study demonstrated the importance of the SHD operation in the first semester of Nursing Care of the Individual Course for entry-level nursing students. The researcher was able to conclude that this simulation practice was useful as an alternative clinical experience for pre-licensing nursing students by revealing a substantial improvement in core skills and perceived skill competency. SHD should be seen as an essential part of the nursing program by nursing educators.

Recommendations for Further Studies

One recommendation for further research will be to assess whether after day 1 and day 2 there is a difference in core knowledge and perceived skill competency. Students (as patients) should be checked at the end of day 1 and at the end of day 2 prior to the initiation of SHD operation. This would allow the researcher, if the student only played the patient role, to monitor for progress in knowledge and competence.

A further research suggestion will be to assess if individual clinical facilitators have made a difference in the knowledge/competence acquired during SHD. Their clinical teacher directed each clinical party. The researcher will be able to determine whether there were any variations depending on the facilitator by evaluating each group against each other.

A third suggestion would be to assess whether a hospital/community environment could be integrated into the SHD operation. The SHD may be used by nurse educators at various facilities to test the abilities of new graduates to combine expertise with hands-on treatment, run high-impact-low exposure scenarios for seasoned nursing workers, and evaluate staff as an aspect of their annual appraisal. This form of operation may then, if useful, be adapted for hospital training and development departments to educate nurse graduates and/or hold annual training sessions for all employees.

Finally, another suggestion will be to establish unique activities which the Joint Commission and other accrediting bodies consider to be relevant and to assess the level of learning at which the participants are noted. This will give nursing students and/or registered nurses another constructive learning avenue to learn principles and practice interventions associated with the events/conditions.

Conclusion

As nursing educators, the use of active learning to help promote didactic awareness is important. This research concludes that following a SHD, substantive learning occurs. Using a live interactive scripted student-patient, the effectiveness of SHD can be attributed to its specific characteristics, using a four-hour period of time that allows student nurses to coordinate and prioritize various scheduled and unexpected activities that occur throughout the day and to manage and secure a patient chart. Both nursing students and inter-professional collaborators will work through mock scenarios to learn/review critical interventions that will benefit them in the real patient setting by creating a virtual hospital.

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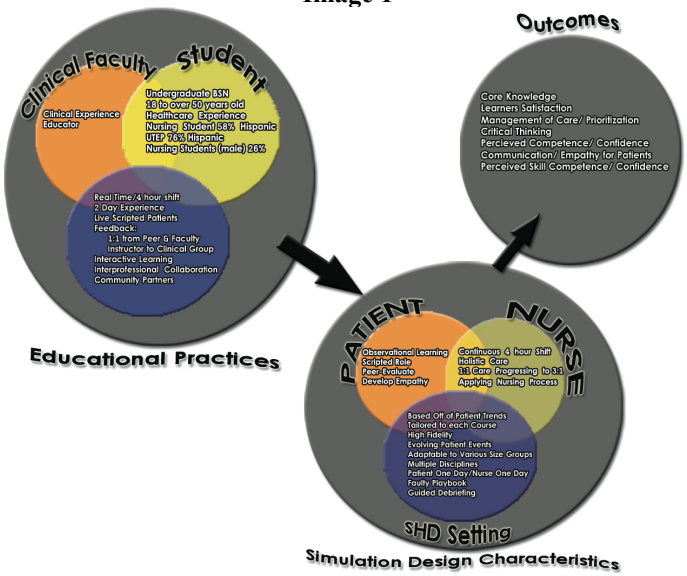
Table 1

Demographic Results of Participants

Categories	Number of Subjects (n)
Gender	
Female	65
Male	10
Age	
<20 yrs	5
21-25 yrs	46
26-30 yrs	10
31-35 yrs	7
36-40 yrs	3
41-45 yrs	2
46-50 yrs	1
>51 yrs	1
Primary Language	
English	39
Spanish	25
Both	16
Race/Ethnicity	
Black/African American	2
Asian/Middle Eastern/Pacific Islander	2
Spanish/Hispanic/Latino (a)	64
White/Caucasian	7
Previous Degree	
Yes	17
No	58
Prior Healthcare Experience	
None	22
<1 yr	39
1-3.9 yrs	8
4-6.9 yrs	3
7-9.9 yrs	2
10-13.9 yrs	0
>14 yrs	1

Image 1



What's in a Name? Defining Nurse Residencies to Design Evidence-based Programs

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Abstract

Nurse residencies are transition programs that support new graduate nurses as they begin their careers in clinical practice. Disparities among transition programs have made it difficult to compare outcomes and identify specific elements that contribute to overall effectiveness. The purpose of this paper is to propose a common nomenclature of nurse residencies to promote standardization across programs and to provide guidelines to assist staff development educators to create and implement comprehensive, cost-effective, evidence-based programs.

Keywords: Nurse Residency, Transition Program, New Graduate Nurses, Evidence-Based Clinical Practice

Introduction

Graduate nurses embarking on their careers can experience a very stressful period as they make the transition from student to professional registered nurse (RN) (Duchscher, 2009; Kramer, 1974). One strategy used by hospitals to facilitate this transition is the implementation of nurse residency programs (NRPs) (Goode, Ponte, & Havens, 2016; Pittman, Herrera, Bass, & Thompson, 2013). These programs provide newly hired and licensed graduate nurses with various combinations of offerings including RN nurse preceptors, didactic classes, structured clinical activities, and opportunities for mentor and peer support, for a designated period in acute care settings (Trepanier, Early, Ulrich, & Cherry, 2012; Van Camp & Chappy, 2017). Nurse residents go through programs in cohort fashion (Crimlisk et al., 2017). The aim of NRPs for new graduate nurses is to promote a successful transition by providing them with the necessary tools to solidify their knowledge base, increase confidence, reduce role stress, increase job satisfaction, promote workplace socialization, develop leadership, and build specialized clinical skills and competencies pertinent to the hospital units into which they are hired to work (Edwards, Hawker, Carrier, & Rees, 2015; Friday, Hollerbach, Zoller, Jones, & Knofczynski, 2015; Rush, Adamack, Gordon, Lilly, & Janke, 2013). Other aims are to increase retention, decrease turnover rates, and enhance patient

safety and quality of care (Institute of Medicine, 2011; Missen, McKenna, & Beauchamp, 2014; Pittman et al., 2013; Van Camp & Chappy, 2017).

Many studies have attempted to measure the effectiveness of NRPs and other transitional support programs on achieving these goals (Al-Dossary, Kitsantas, & Maddox, 2013; Anderson, Hair, & Todero, 2012; Chappell & Richards, 2015; Cochran, 2017; Edwards et al., 2015; Hickerson, Taylor, & Terhaar, 2016; Letourneau & Fater, 2015; Missen et al., 2014; Rush et al., 2013; Van Camp & Chappy, 2017). Wide variability and lack of consistency in program labeling, designs and duration have made it difficult to compare outcomes across programs to determine the most efficient models (Anderson et al., 2012; Chappell & Richards, 2015; Edwards et al., 2015; Rush et al., 2013). Hospitals may use internally developed programs (facility-based) or contract with external NRP vendors (Barnett, Minnick, & Norman, 2014; Goode et al., 2016). Nurse residency programs have often been described as a type of nurse transition program (Barnett et al., 2014; Rush et al., 2013). The term "transition program" has been used to identify any kind of program offered by a hospital organization to support graduate nurse transition into the professional role (Anderson et al., 2012).

Transition programs have been described as "nurse orientation programs", "nurse internships", "nurse externships", "nurse mentorships", nurse preceptorships", "transition support programs", "new graduate programs", and as "nurse residency programs (NRPs)" (Anderson et al., 2012; Barnett et al., 2014; Edwards et al., 2015; Newhouse, Hoffman, Suflita, & Hairston, 2007; Rush et al., 2013). As a result, the term "nurse residency" evokes multiple meanings. To promote effective communication and enhance understanding, it is important to clarify what "nurse residency" means. Consensus on how transition programs are defined is necessary to construct and promote a standardized nurse residency model that facilitates evaluation for best practices. The purpose of this paper is to propose a common nomenclature for nurse residencies to promote standardization across programs and to provide guidelines to assist staff development educators to create and implement comprehensive, cost-effective, evidence-based programs.

Program Descriptions:

Nurse transition programs were first discussed in the literature in the 1980s (Altier & Krsek, 2006). In 1983, NRPs were defined by the National League of Nursing (NLN) as "formal contracts between the new graduate nurse and the employer that defined and described activities" (Al-Dossary et al., 2014, p.1025). Al-Dossary et al. (2014) then described NRPs as programs that provide the novice nurse with a supportive and protective environment to develop critical thinking and problem-solving skills. Letourneau & Fater

(2015) defined NRPs as "postgraduate training programs structured to expand professional competencies for nurses and provide opportunities to build skills in real clinical settings thereby facilitating transition into professional practice" (p. 96). Van Camp and Chappy (2017) recently defined NRPs as "structured post-licensure programs that are adopted by health care organizations that incorporate didactic education, clinical support by an RN nurse preceptor, and mentorship to bridge the practice gap with goals to decrease turnover rates and augment patient safety and care quality" (p.130).

Professional healthcare organizations have also provided their descriptions of NRPs. The Institute of Medicine (IOM) stated that NRPs are "planned, comprehensive periods of time in which nursing graduates can acquire the knowledge and skills to deliver safe, quality care that meets defined standards of practice" (IOM, 2011, p.120-121). The Joint Commission on Accreditation of Healthcare Organizations in its *Health Care at the Cross Roads: Strategies for Addressing the Evolving Nursing Crisis* report, described NRPs as structured post-graduate training programs that provide new nurses with the opportunity for skill-building in real clinical settings similar to residencies for physicians (Fitzpatrick, 2003). Two organizations that accredit NRPs are the Commission on Collegiate Nursing Education (CCNE) and the American Nurses Credentialing Center (ANCC). The CCNE (2015) defines NRPs as entry-to-practice programs that provide additional education and support to new nursing graduates. The ANCC (2016) defines them as "planned, comprehensive programs through which currently licensed RNs with less than twelve months of experience can acquire knowledge, skills, and professional behaviors necessary to deliver quality care that meets standards of practice defined by a professional society, association, or the applicant organization" (p.5). Although there is consensus on the objectives of NRPs, programs are as varied as the terms used to describe them.

Transitional programs including NRPs have been referred to by many names. Program
duration and content designs also lack consistency across hospital organizations (Anderson et al., 2012; Barnett et al., 2014; Chappell & Richards, 2015; Edwards et al., 2015; Missen et al., 2014; Rush et al., 2013; Smith, Rubinson, Echtencamp, Brostoff, & McCarthy, 2016; Van Camp & Chappy, 2017). They may consist of brief hospital orientations followed by brief clinical orientations, or they may provide well-rounded experiences that take place over six months or longer (Chappell & Richards, 2015). Hospitals usually have an orientation program, but not all have a NRP (Smith et al., 2016). Organizations may use the terms "residency program", "orientation", and other terms to describe the programs they are implementing, however, these programs often may differ in scope (Chappell & Richards, 2015). Barnett et al. (2015) in their description of U.S. post-graduation NRPs found

transitional programs identified as nurse internships (Eigsti, 2009; Newhouse et al., 2007), nurse mentorships (Halfer, Graf, & Sullivan, 2008; Hays & Scott, 2007; Santucci, 2004; Persaud, 2008; Sherrod, Roberts, & Little, 2008), and nurse preceptorships (Beecroft, McClure-Hernandez, & Reid, 2008; Olson et al., 2001; Sorenson & Yankech, 2008). They also examined NRPs (Anderson, Linden, Allen, & Gibbs, 2009; Beyea, von Reyn, & Slattery, 2007; Bratt, 2009; Krugman et al., 2008). Other NRPs that have been discussed in the literature include the UHC/AACN model (currently known as UHC/Vizient/AACN) and the Versant RN Residency model (Barnett et al., 2015; Goode et al., 2016; Van Camp & Chappy, 2017; Ulrich et al., 2010).

Length of NRPs have varied spanning anywhere from three months to one year (Pittman & Herrera, 2013). Barnett et al. (2015) conducted a study to measure program attributes to assess treatment fidelity across NRPs. A twenty-four item survey was sent to NRP directors and CNOs at 1,011 hospitals with 250 or more inpatient beds. There was a 20% response rate (203 surveys were returned) in which 48% of hospitals reported having an NRP. Twenty-two percent administered the AACN/UHC model, 54% offered a facility-based model, and 24% provided "other" models of NRPs. Almost one third of the ninety-two respondents reported lengths less than or equal to 12 weeks. The majority (40%) reported NRP lengths of 52 weeks; 27% reported lengths between 14 to 50 weeks, 16% reported lengths of less than or equal to 10 weeks, 13% offered 12-week NRPs. The lengths of twenty-two NRPs in the studies in the systematic review by Van Camp & Chappy (2017) ranged from three to eighteen months.

The integrative review by Rush et al. (2013) looked at transitional programs with a duration of three to greater than six months. An integrative review of seventeen orientation programs by Park and Jones (2010) that consisted of internships, residencies, and structured orientation programs found that programs ranged from six weeks to one year. It was reported in the ten-year longitudinal study of Versant NRPs that program participants completed an average of 716 hours in their NRPs (Ulrich et al., 2010). Goode et al. (2013) also examined ten year of data on nurse residents who completed AACN/UHC NRPs. Those NRPs were one year in length. One year NRPs are recommended by the CCNE (2015) and evidence suggests that better outcomes are associated with longer programs that last between six and twelve months (Goode et al., 2016). Cochran (2017) concluded that the most effective programs are 12 months and focus on mentor/preceptor support with structured didactic content.

Vast differences also exist in program components and quality. Hospital organizations may identify brief hospital and clinical orientations as NRPs (Chappell & Richards, 2015), or they may have facility-based NRPs that include one or more of the following components that are used by the

UHC/Vizient/AACN and Versant models: dedicated nurse preceptorships, specialty classes, mentorships, peer support sessions, and evidence-based practice projects, over the course of six months to one year (Chappell & Richards, 2015; Goode et al., 2013; Van Camp & Chappy, 2017; Ulrich et al., 2010).

Anderson et al. (2012) found in their systematic review of NRPs that there were two models; a standard model of a three to four month orientation, and a comprehensive model 12-24 months in length. Many programs included a reduced clinical workload, classroom content of four to eight hours each month, and preceptorships ranging from 12 weeks to 12 months. Some programs scheduled socialization sessions for sharing experiences within a cohort to promote socialization and organizational commitment. The integrative review by Rush et al. (2013) looked at programs that had a combination of classes, formal or informal preceptorships, mentorships, and unit-specific training. Missen et al. (2014) found in their systematic review that the curriculum topics of most NRPs covered orientation, research-based practice, patient safety, and professional and leadership development. Barnett et al. (2014) recommended that nursing organizations such as the American Organization of Nurse Executives (AONE) standardize their NRP components and develop a common operational definition of NRPs to avoid confusion for new graduates and those who employ graduates of NRPs.

Exploration of the definition of "residency" as it applies to other disciplines may enhance understanding of its implications in nursing. The word "residency" is defined by Merriam Webster (n.d) as "a usually official place of residence; a state or period of residency" and as "a territory in a protected state in which the powers of the protecting state are executed by a resident agent". It is also defined as "a period of advanced training in a medical specialty that normally follows graduation from medical school and licensing to practice medicine" and "a period as an artist in residence". Medicine, pharmacy, pastoral care, and the arts, have used residency programs to transition their residents successfully and guide career development (Van Camp & Chappy, 2017). The way residencies are defined in these disciplines may provide insight to how it can be defined in nursing.

Residencies of Other Disciplines:

Medicine. Graduate medical education (GME) occurs during the period of training that follows medical school and is called a "residency", or "fellowship". State licensure and board certification require that a physician participate in an accredited residency program for three to eleven years, depending on the specialty. Residents provide patient care but work under the supervision of attending physicians (Goodman & Robertson, 2013).

Pharmacy. According to the American College of Clinical Pharmacy (ACCP), the term "residency" is defined as a postgraduate training program that allows the resident to perform as a licensed practitioner but have supervised training by a skilled preceptor. The resident develops skills and competence in providing care to a variety of patients in a variety of settings (2017). The ACCP and the American Society of Health-System Pharmacists (ASHP) advocate that all pharmacists in direct patient care roles have residency training by 2020. Residents are to gain clinical skills and experience in teaching, research, and leadership. Training is divided into two postgraduate years, with the first year focused on more generalized training (ACCP, 2017).

Pastoral Care. The Association for Clinical Pastoral Education (ACPE) accredits residency programs that meet curriculum standards for clinical pastoral care education (CPE). Students who have received a chaplain or pastoral care certification in their respective religions are eligible to complete the program offered as Level I, Level II, and Supervisory CPE. Programs are divided into units that may extend to one year. Under the guidance of a CPE certified supervisor (faculty), residents focus on achieving competency in pastoral function in the areas of theology and behavioral sciences (ACPE, n.d.).

Arts. Artist residencies are also known as artists' communities, colonies, retreats, workspaces, and studio collectives, and are places that provide a dedicated amount of time and space for creative work. Residents may be provided room and board, and are given access to a community of artists who provide creative support. Sponsored by various host organizations, some residencies are offered as public programs; others are offered which provide solitude to the artist, and vary in time frames offered. Visual artists, writers, composers, choreographers, as well as other artists, and also scholars, may partake in art residencies, or in art and science residencies, and produce an artistic work (Alliance of Artist Communities, 2017).

Background:

It has been well-documented that graduate nurses initially experience the phenomenon of transition shock (Duchscher, 2009; Rush et al., 2013; Smith et al., 2016; Van Camp & Chappy, 2017). Transition shock refers to high levels of anxiety, fear, and frustration that new graduate nurses struggle with during their first year of clinical practice (Chappell, Richards, & Barnett, 2014). Some studies since the publication of Dr. Marlene Kramer's 1974 seminal work, "Reality Shock: Why Nurses Leave Nursing" have examined the factors that contribute to transition shock (Duchscher, 2009; Rush et al., 2013). Aspects of transition that have been explored have included new graduate nurse perceptions of the transition experience, support, competence, jobs satisfaction and retention, workplace environment, and infrastructure of

the organization (Anderson et al., 2012; Casey, Fink, Krugman, & Propst, 2004; Edwards et al., 2015; Rush et al.,2013).

Increasingly complex technologies and rising patient acuities demand that graduate nurses possess a higher degree of critical thinking and specialized clinical skills than ever before to deliver safe and competent care (Chappell et al., 2014). Many nurse executives have expressed that schools of nursing in the United States (US) provide a solid foundation to prepare future nurses however, higher acuities and the complexity of care hospitals must provide create intense challenges for graduate nurses (Goode, Lynn, Krsek, & Bednash, 2009). An education-to-practice gap has been identified in the literature and is often referred to as a "theory-practice gap" or "preparation-to-practice" gap between student preparation and clinical competency (Hickerson, et al., 2016). Due to the high level of complexity in typical hospital settings, it is impossible for even the best baccalaureate school of nursing to prepare nurses to possess the proficiency and expertise needed in today's health care environment (Goode et al., 2009; Hickerson et al., 2016).

Many studies have illustrated this preparation-to-practice gap. Researchers Benner, Sutphen, Leonard, and Day (2010) concluded that many graduate nurses are undereducated and lack the expertise, experience, and confidence to meet current practice demands, and called for the implementation of 1-year residency programs during a graduate nurse's first year of practice (Goode, et al., 2016). Del Bueno (2005) concluded from a study of critical thinking in new graduates within the US that these new nurses lacked critical thinking skills, with 65-76% not meeting entry-level clinical judgment expectations. A study published in 2008 by the Advisory Board, which surveyed the largest sample of combined administrators and educators reported that in their opinions, novice nurses were less than competent with respect to 36 competencies. Other studies have also shown similar discrepancies between nurse managers' expectations and novice nurses' abilities (Hickerson et al., 2016; Ulrich et al., 2010).

Graduate nurses reeling from transition shock lack proficiency in critical thought and clinical skills that places them at high risk of quitting their first job or completely leaving the profession within their first year of practice (Edwards et al., 2015). Between 35% and 65% of nurses change jobs within the first year of employment (Pittman et al., 2013). Other statistics show that one in three graduate nurses leaves their first job within two years (Kovner, Brewer, Fatehi, & Jun, 2014). Employment of RNs is expected to grow by 15% from 2016 to 2026 due to increased healthcare demands of an aging population that will require more nurses to educate and care for patients with various chronic illnesses (Bureau of Labor Statistics, 2017). Graduate nurse turnover adds to the mounting challenges created by the looming nursing shortage that is predicted to spread until 2030 (Juraschek, Zhang,

Ranganathan, & Lin, 2012). This shortage threatens the safety and quality of health care delivery. To remedy this situation, the literature suggests that graduate nurses need support to alleviate transitional stressors, close the preparation-to-practice gap, decrease turnover, and increase retention (Anderson et al., 2012; Edwards et al., 2015; Letourneau & Fater, 2015; Rush et al., 2013).

Search Methods:

To explore the current literature on NRPs, a search of the literature was conducted in the CINAHL, Medline, PubMed, Web of Science, and Cochrane Llibrary (Wiley) databases. Key terms used were *nurse residency program, RN Residency program, new graduate nurses, residency, transition*, and *nurse transition program*. The first priority was to find systematic and integrative reviews to see what researchers have already determined based on a thorough analysis and synthesis of the literature, and then individual studies were examined. Systematic reviews look at the highest level of evidence gathered through experimental designs, reveal gaps in the literature, and show the best clinical evidence for guiding evidence-based practice (Forward & Hobby, 2002). Integrative review includes non-experimental research designs such as observational studies and include relevant theory and guidelines (Whittemore & Knafl, 2005). These reviews provide an efficient way to summarize study findings and reach the conclusions that guide further research efforts and practice changes.

The CINAHL and MEDLINE combined search using *nurse residency programs* yielded 128 articles when restricted to academic journals. This restriction was placed to find actual research studies that had been published. The term *nurse residency program* yielded 155 articles. Eighty-six articles were found using the term *nurse transition program*, and 81 articles were found using *nurse transition programs*. The terms *RN residency* and *RN residencies* both generated only 9 articles. Using PubMed, with the restriction to reviews and a ten-year time frame, 18 articles were found using *nurse residency programs*. With the term *nurse transition programs*, 55 articles were generated. The Web of Science database yielded 162 articles with the term *nurse residency programs*, and 76 articles with the term *nurse transition programs* with searches restricted to "nursing" and "education of scientific disciplines". Few articles were located in the Cochrane Library (Wiley) database, with only 1 review article by Anderson et al. (2013) found with the search term *nurse residency programs*, and 0 relevant articles with the term *nurse transition programs.*

Inclusion and Exclusion Criteria

Hundreds of articles were found related to the search terms. To narrow the search, inclusion criteria that were applied included English language and studies of RN residency programs for new graduate nurses. For the CINAHL and MEDLINE combined search, the years of inclusion were set from 1978 to 2017. Twenty-one journal articles including three systematic reviews, four integrative reviews, and fourteen individual studies were retained for this report. Focus was placed on studies showing the impact of NRPs on retention, nurse job satisfaction, and quality of patient care. Articles about residencies or internship programs other than nursing were excluded.

Benefits of Nurse Residency Programs

Evidence suggests that NRPs provide many benefits to health care organizations, graduate nurses, and patients (Rush et al., 2013; Van Camp & Chappy, 2017). Although program variability has made it difficult to rigorously evaluate program quality (Chappell et al., 2014; Goode et al. 2016), many studies' findings suggest that there are positive outcomes attributed to NRPs when they are used as an educational intervention to enhance nursing satisfaction and performance (Al-Dossary et al., 2013; Anderson et al., 2012; Chappell & Richards, 2015; Cochran, 2017; Crimlisk et al., 2017; Edwards et al., 2015; Hickerson et al., 2016; Letourneau & Fater, 2015; Missen et al., 2014; Rush et al., 2013; Olson-Sitki et al., 2012; Van Chappy, 2017). It is important for administrators and educators to use the findings of these studies to serve as a basis for allocating the resources necessary within their organizations to meet program objectives.

Healthcare Organizations:

Nurse retention and turnover rates

Many studies have shown that the implementation of NRPs increased new nurse retention rates and decreased turnover rates (Anderson et al., 2012; Edwards et al., 2015; Goode et al., 2013; Goode et al., 2016; Kramer et al., 2012; Newhouse et al., 2007; Park & Jones, 2010; Pine & Tart, 2007; Rush et al., 2012; Spector et al., 2015; Kramer; Trepanier et al., 2012; Ulrich et al., 2010). Retention rates describe the percentage of nurses who stay employed at an organization and turnover rates refer to the number of nurses who leave an organization at the end of a twelve-month period (Missen et al., 2014). To justify program costs, retention, turnover, and return on investment (ROI) are the most widely used outcome measures (Goode et al., 2016). Anderson et al. (2012) reported that replacement costs might be 75% to 125% of a nurse's salary. In a study by Pine and Tart (2007) of one UHC/AACN NRP, $2,024 was the cost to hire one new nurse and turnover costs ranged from $82,032 to

$88,006 to replace one nurse. These costs are important to consider when evaluating the value of an NRP on an organization's bottom line.

Regarding retention, a study of participants in UHC/AACN NRPs showed an increase in retention of 88% to 94.6% and lower rates of new nurse turnover that provided a significant savings over a ten-year period (Goode et al., 2016). Fifteen studies in the review by Park and Jones (2010) showed improved retention. Thirteen studies in the review by Rush et al., (2012) had retention rates of 90.1% and articles related to turnover had a rate of 10.5%. In the Versant study, which included ten years of data, pre-Versant twelve-month turnover was 27% and twenty-four month turnover was 49%. In one study examining a Versant administered NRP, twelve-month turnover was calculated at 7.1% and twenty-four month turnover was 19.6% (Goode et al., 2016; Ulrich et al., 2010).

The results from a longitudinal, randomized multi-site design in which three groups were compared (sites with the NCSBN's TTP program, sites with their own established programs, and sites with programs that provided very limited transitional support) showed that the turnover in the limited sites was twice as high as the turnover of the other two groups (Spector et al., 2015). These studies suggest that there are long-term financial advantages and increased return-on-investment when the effort is made to provide maximum transitional support to graduate nurses.

Graduate Nurses:

Job satisfaction, confidence, and competence

In the studies reviewed, benefits for new graduate nurses included increased levels of job satisfaction, confidence, and competence (Anderson et al., 2012; Edwards et al., 2015; Goode et al., 2013; Kowalski & Cross, 2010; Letourneau & Fater, 2015; Missen et al., 2014; Olson-Sitki, Wendler, & Forbes, 2012; Rush et al., 2012; Ulrich et al., 2010). Authors of descriptive longitudinal studies spanning ten years of the UHC/AACN NRP (Goode et al., 2013) and the Versant NRP (Ulrich et al., 2010), reported increases in nurse satisfaction (Van Camp & Chappy, 2017). The Casey-Fink Graduate Nurse Experience Scale, the McCloskey Mueller Satisfaction Scale (MMSS), Gerber's Control Over Nursing Practice Scale (CONP) and the Graduate Nurse Residency Program Evaluation (GNRPE) tools were used to measure satisfaction among 31,000 post baccalaureate nurses from 86 organizations who completed the UHC/AACN NRP (Goode et al., 2013). There were significant increases in residents' self-assessment of overall confidence and competence, ability to organize and prioritize work, and skills to communicate and provide clinical leadership throughout ten years (Goode et al., 2013). In the Versant NRP study (Ulrich et al., 2010) that had a sample of over 6,000 new graduates, the Organizational Job Satisfaction, Organization

Commitment (turnover intent), and Nurse Satisfaction scales were used. Higher satisfaction levels were correlated with lower intent to leave (Ulrich et al., 2010).

The integrative review of 47 articles done by Rush et al. (2012) found that new graduate satisfaction from six to nine months was associated with the highest stress levels, supporting the recommendation to extend elements of an NRP beyond six months. Out of thirty studies examined by Edwards et al. (2015) in their systematic review, five studies showed increased satisfaction scores on the McCloskey Mueller RN Job Satisfaction Survey (MMSS) tool among their graduate nurses. Interestingly, scores dropped at the six-month mark, and then increased by twelve months, supporting the recommendation to extend NRPs to one year (CCNE, 2015). The integrative review of the literature by Letourneau and Fater (2015) that included 25 articles, found in five of the studies that nurse residents reported increased confidence in their skills and abilities over time. The Casey-Fink survey was the most predominately used instrument for the assessment of nurse satisfaction in ten of these studies.

Quality of Patient Care:

Some of the reviewed studies included information about the possible impact of NRPs on patient outcomes. Kramer et al. (2012) reported that integration-phase NRPs that are well structured and based in theory may lead to improvements in practice which positively affects patient outcomes. In the Spector et al. (2015) study, patient errors and negative safety practices were highest in the sites that had limited transitional support. Anderson et al. (2012) found in their evidence-based review of NRP theory, processes, and outcomes, that retention and turnover rates were the most commonly used measures of NRP impact on healthcare organizations. Newhouse et al. (2007) determined that turnover increases health care costs and reduces the quality of patient care. Poor patient care and outcomes are more likely to be reported with high nursing and staff turnover (Shin, S., Park, J., Bae, S. (2018). In the literature review by Hickerson et al. (2016), findings indicated an increase in errors and poor patient outcomes when care was delivered by nurses inadequately prepared to deliver care. This determination was based on a study by Smith and Crawford (2003) in which 75% of medication errors and 40% of patient falls were associated with novice nurses. No research so far has examined a direct association between NRP participation and patient outcomes that are considered nursing-sensitive, like pressure ulcers, fall, and IV infiltrations (Letourneau & Fater, 2015). Recommendations for further research include examining patient care quality indicators and exploring their relationships to NRP outcomes (Barnett et al., 2014; Chappell & Richards, 2015; Goode et al., 2016; Letourneau & Fater, 2015; Smith et al., 2016).

Challenges to NRP Implementation:

Study findings to date show that there are positive outcomes associated with NRPs and new graduate nurses benefit from the support provided by them (Van Camp & Chappy, 2017). As discussed, NRPs promote cost savings to health care organizations by reducing turnover and increasing retention, improve the transition experience and promote the professional development of graduate nurses, and some studies suggest they positively impact patient care. The evidence of these benefits is so substantial that the IOM, the Joint Commission (TJC), the NCSBN, the American Association of Nurse Executives (AANE), the Robert Wood Johnson Foundation (RWJF), and many other professional nursing organizations have called for all hospitals to use nurse transition programs (Edwards et al., 2015). Despite these recommendations, not all acute care organizations offer NRPs and programs offered lack standardization (Goode et al., 2016).

Hospitals that lack formal programs may cite lack of resources and budgetary constraints as barriers to implementing a NRP (Trepanier, et al., 2012). For example, Goode et al., (2013) expressed that the enormous investment of time, energy, and resources that went into the AACN/UHC NRP collaborative model was viewed by some as unnecessary and some employers and for-profit companies began to provide modified NRP versions that included exclusive online formats, shortened programs of 3-to-6 months, or extended basic hospital orientations. As hospitals fund their own residencies or other transitional programs (Goode et al., 2009), they may seek outside funding sources, such as grants. Program administration is expensive (Garrison, Dearmon, & Graves, 2017; Goode et al., 2009). Costs vary based on length of the program and include resource costs that cover purchase of curriculum, competency management, and preceptor training materials, evaluation systems to track program outcomes, and recruitment tools. Salaries must be paid to the NRP coordinator and compensation must be provided to class instructors (Hansen, 2015). Initially, graduate nurses receive a nursing salary in what has been termed “non-productive” time, which is the cost of hourly wages and benefits for the nurse resident during the residency (Trepanier, et al., 2012). Hospital administrators use this term to describe the situation in which two nurses (graduate nurse and preceptor) are counted as “one” nurse for staffing purposes since they share a patient assignment and reflects the value of the program and its outcomes (Goode et al., 2009; Trepanier et al., 2012). The duration of time a resident works with a preceptor and engages in other program activities adds to the cost of time spent not at the bedside. These are factors that must be considered when creating a residency budget.

Employers invest substantial money and time in providing graduate nurses a residency (Goode et al., 2009). One study of a Versant NRP showed

a hospital's investment range of $21,571 to $36,960 per resident for an 18-22 week residency period respectively (Trepanier et al., 2012). If a graduate nurse quits within the first year, the organization incurs a loss on investment. To minimize this risk, many hospitals require a graduate nurse to sign a contract agreeing to work at the organization for a specified period of time, typically a minimum of one to two years (Ulrich et al., 2010; Van Camp & Chappy, 2017). When analyzing return on investment, a hospital must consider the costs of maintaining the program in relation to cost-savings as a result of nurse retention (Hansen, 2014).

At this time, nurse residencies are not eligible for pass-through dollars from the Centers of Medicare and Medicaid Services (CMS) that fund programs for medical, pharmacy, and pastoral care residents (Goode et al., 2009). To qualify for these funds, the hospital must control the administration of the residency to include curriculum management and instruction, clinical training, must employ the teaching staff, and the residency must be accredited by an accrediting body. As nurse residencies are not a requirement for graduate nurse employment, CMS considers them to be continuing education, and as such, they are not eligible for reimbursement (CMS, 2010; Goode et al., 2009).

The recent economic downturn and changes brought about by the Affordable Care Act (ACA) have affected reimbursement rates by the CMS and have challenged hospital administrators to tighten budgets and prioritize the allocation of resources (Hansen, 2014; Trepanier et al., 2012). As a result, NRPs may be vulnerable to being modified by decreasing the orientation or on-boarding period (Trepanier et al., 2012). Modifications may impact program quality and is a concern as NRPs have been established as a best practice (Anderson et al., 2012; CCNE, 2015; IOM, 2011; Rush et al., 2012).

Recommendations to Support a Cost Efficient Evidence-based NRP:

The value of NRPs is clear and advocated for by professional healthcare organizations. Nurse educators and staff development professional are tasked with finding ways to administer NRPs that have solid base that also makes prudent use of resources. The literature is replete with both quantitative and qualitative studies throughout the last three decades to support NRP implementation (Al-Dossary et al., 2013; Anderson, et al., 2012; Bratt, 2013; Chappell & Richards, 2015; Cochran, 2017; Edwards et al., 2015; Hickerson, et al., 2016; Letourneau & Fater, 2015; Missen et al., 2014; Rush et al., 2013; Van Camp & Chappy, 2017). The wide variability in designs makes it difficult to compare outcomes across programs (Chappell et al., 2014) and necessitates a move toward standardization of program lengths and content.

Standardization would allow for more rigorous studies to identify evolving best practices, promote use of current evidence-based practices, and a basis upon which nursing programs could accountably demonstrate that they

met their identified mission and goals (Anderson et al., 2012; Edwards et al., Goode et al., 2016; 2012; Rush et al., 2015). One way to increase standardization of programs is to promote accreditation. The process of accreditation promotes standardization by requiring programs to meet certain criteria based on the current science (CCNE, 2015). While building a program that may be eligible for accreditation, hospital educators and administrators must use accreditation standards to guide the process. They should ensure consistency in the designs, outcomes, curricula, and length of NRPs (Van Camp & Chappy, 2017). Critical evaluation of outcomes is imperative to show return-on-investment. Program designers must identify metrics to be used to evaluate program effectiveness (see Table 2 for NRP metrics).

Academic Partnerships:

Collaborative academic partnerships that support transition programs such as NRPs are recommended by the IOM (2011) and the CCNE (2015) and may help alleviate costs. These partnerships involve the sharing of resources and knowledge to meet mutual goals (Beal et al., 2012). Partnerships can be facilitated through contractual agreements, clinical affiliations, task forces, joint appointments, and researcher initiatives. Decisions about activity management and funding of instructor salaries and other program offerings are decided during partnership meetings by both hospital and academic partners (Trepanier, Mainous, Africa, & Shiner, 2017). Such collaborations can allow for streamlining of resources. For example, faculty may teach specialty classes in the residency (Beal et al., 2012). Involvement of faculty in the hospital setting also provides familiarity with current clinical challenges and practices that they can present to nursing students in the academic setting.

An "early" residency program in which nursing students are hired by hospitals to spend their last semester of nursing school as nurse technicians assigned to designated preceptors is also a type of residency program that may yield cost-savings (Harrison, Steward, Ball, & Bratt, 2007; Stout, Short, Aldrich, Cintron, & Provencio-Vasquez, 2015). One study published in 2007 described the Clinical Focus Program partnership between the University of Wisconsin-Oshkosh College of Nursing and two tertiary care institutions (Harrison et al., 2007). Nursing students completed 360 hours of precepted clinicals during a nine-month period before graduation and were financially compensated as nurse technicians, and then completed six weeks of a residency after graduation. A cost savings of $21,500 for ten students was reported in this study (Harrison et al., 2007).

Another study on a partnership between a university and a medical center in El Paso, Texas, called a modified nurse residency and internship program, was published in 2015 that reported a cost savings of $599,040 with a total FTE (full time equivalent) savings of 23.4 FTEs per week over a ten-

week period for twenty-six interns/residents (Stout et al., 2015). Outcome goals for this program included increasing the proportion of BSN prepared nurses, decreasing orientation FTEs, salaries, benefits, and recruitment costs, and producing competent nurses (Stout et al., 2015). This partnership consisted of nursing students participating in the program as nurse interns during their last semester of nursing school who completed 260 hours of internship time in addition to completing 315 clinical hours that were required by the school. They were paid a stipend, and then after graduating and earning RN licensure, completed 61.5 hours of RN residency time before taking their own assignments without a preceptor. The typical orientation time for a new nurse was 12-16 weeks, and through the internship, there was a reduced orientation time to 61.5 hours that resulted in a savings of $257,400 (Stout et al., 2015).

The interns completed a modified Casey-Fink Graduate Nurse Experience survey, and results indicated an overall high satisfaction score of nurse interns. Interestingly, interns were asked "What could be done to help you feel more supported or integrated into the unit?" and the highest responses were related to improved orientation (53.8%) which included preceptor support, consistency, orientation extension, and unit-specific skills practice. No information was provided on specific program components and retention data beyond ten weeks were not included in this study. When considering implementation of a partnership that on-boards nursing students with the intention of transferring into a NRP, it is important to consider not only cost-savings in terms of reduced orientation time, but to consider program quality factors that impact long-term job satisfaction and retention beyond one year.

Standardization and Accreditation of Evidence-based Nurse Residencies:

There is a need to standardize programs to determine best practices regarding program designs and enhance rigorous evaluation of outcomes (Anderson et al., 2012; Goode et al., 2016). Determination of the most efficacious practices is difficult due to inconsistency in curricula and varying qualifications of preceptors and educators (Anderson et al., 2012). To address this situation, some professional nursing organizations have developed evidence-based models and have called for all NRPs to be accredited (Goode, et al., 2016). Guided by the recommendations set forth by the IOM's report, *The Future of Nursing: Leading Change, Advancing Health*, which called for widespread implementation of nurse residency programs, the National Council of State Boards of Nursing (NCSBN) created a program to transition new graduates to the workforce called the *Transition to Practice Model* (TTP) in 2002. The AACN also partnered with University Health System Consortium (UHC), now known as the UHC/Vizient/AACN model, to create a 1-year post-baccalaureate NRP (CCNE, 2015). Versant Holdings, LLC is a

corporate entity that offers the Versant RN Residency Program and was developed in 2004 by nurses at the Children's Hospital of Los Angeles (Ulrich et al., 2010). Both Vizient and Versant participants engage in continuous data collection and these programs are modified based on outcomes measurements. These two corporate programs contract their services to hospital organizations and both program structures are designed to meet accreditation standards (CCNE, 2015; Goode et al., 2016; Ulrich et al., 2010; Van Camp & Chappy, 2017).

All NRPs are eligible for accreditation, a process that ensures standardization of programs to reflect best practices. Hospital organizations may elect to apply for accreditation through the CCNE (2015), or through the American Nurses Credentialing Center (ANCC) (2018). Very few NRPs have been accredited. As of January 1, 2018, there were a total of sixteen nurse residency programs accredited by the CCNE (AACN, 2018), and a total of twenty nurse residencies accredited through the ANCC's Practice Transition Accreditation Program (PTAP) (2018). The ANCC also accredits advanced practice nurse residency programs and fellowships (ANCC, 2018). Goode et al., (2016) urged that "all NRPs be accredited by national regulatory agencies to ensure consistency in program components, standards, processes, and outcomes achievement" (p.85) (see Table 1 for a list of standards set forth by the accrediting bodies of CCNE and ANCC).

Support of a Common Nomenclature for Residency Programs:

A solid first step to increasing standardization of NRP designs is to come to a consensus on how to label and classify the various programs. Although several terms describing graduate nurse transition programs have been used interchangeably, the evidence suggests that these programs are not interchangeable. Varying lengths and content offerings differ across programs and hinder the effort to find the most efficacious designs through rigorous research. There is a need to have a standardized definition of what a residency program actually is (Al-Dossary et al., 2014; Barnett et al., 2014). This paper proposes that the term "orientation program" apply to the basic employee orientation provided by hospitals to all new employees. Programs created to facilitate new graduate nurse transition such as NRPs encompass many activities that support their integration into professional roles and practice that extend beyond a basic orientation (CCNE, 2015).

Furthermore, health care organizations should use the definitions developed by the ANCC and CCNE to guide classification of their NRPs and ensure their programs meet the comprehensive criteria set forth by these accrediting bodies that distinguish NRPs from other programs. The term "nurse residency" is defined by the ANCC (2016) as "a planned, comprehensive program through which currently licensed registered nurses

with less than 12 months of experience can acquire the knowledge, skills, and professional behaviors necessary to deliver quality care that meets standards of practice defined by a professional society or association or the applicant organization. The program must be at least 6 months in length, encompassing organizational orientation, practice-based experience, and supplemental activities to promote nursing professional development. All registered nurses (or international equivalent) who have graduated from an accredited school of nursing are eligible (associate degree, diploma, bachelor's degree, or master's degree)" (p. 5). The CCNE (2015) states that nurse residencies must offer learning session content, clinical, and other learning experiences that serve newly licensed RNs and are structured to recognize different educational and experiential preparations and competencies they enter the program with, and promote professional role transition and integration. Classification of programs strictly directed to newly licensed RNs that are comprehensively designed and structured based on the recommendations of the ANCC and CCNE as "nurse residencies" will decrease confusion associated with ambiguous use of this term.

Considerations for Creating a Facility-based NRP:

There are different options hospitals have for providing an NRP. They may develop their own facility-based NRP or contract with vendors to use existing NRPs such as UHC/AACN/Vizient or Versant. Both pre-set programs provide comprehensive evidence-based nurse residencies that include trained preceptorships, mentorships, competency and skill-building, peer support, self-care, evidence-based project activities, and software programs for tracking program outcomes. Patricia Benner's Novice to Expert Theory serves as a theoretical basis for both of these programs (AACN, 2017; Anderson et al., 2012; Goode et al., 2016; Ulrich et al., 2010). Participation in these programs requires substantial financial commitment from the hospital to provide resources and cover contract costs.

Hospitals who choose to develop facility-based programs must weigh the cost-benefit ratio for designing their own programs with the cost-benefit of using commercial vendors (Van Camp & Chappy, 2017). It is important to note that if a hospital is applying for Magnet status, it must demonstrate that a 12-month residency for new graduates is provided (Hickerson et al., 2016). Prior to initiating an NRP, it is critical to ensure that the anticipated program design meets the criteria outlined in the definitions provided by the ANCC and the CCNE for the term "nurse residency". It is imperative to review accreditation standards so that accreditation can be sought when the organization is financially ready. Accreditation promotes standardization and ensures quality through adherence to evidence-based practices (ANCC, 2016; Bratt, 2013; CCNE, 2015; Goode et al., 2016).

It is important to ensure a system is in place to support outcomes measurements with appropriate metrics such use of validated survey tools. A plan for tracking turnover and retention is necessary to present a strong case for program sustainability to administrators (Hanson, 2014; Trepanier et al., 2012). Alternative funding such as grants may be available from philanthropic organizations. Accredited programs that are made mandatory by an employer may be eligible for CMS dollars (Goode et al., 2009). In addition, academic partnerships should be sought to share resources and enrich program quality (Bratt, 2013; CCNE, 2015). Table 3 summarizes the recommendations for nurse and staff development educators who are considering building their own facility-based program.

Recommendations for Further Research:

The evidence supporting NRPs is growing however, more rigorous comparative quantitative studies will help evaluate outcomes from different types of programs. Specifically, studies should include identifying the most effective program durations and curriculum content (Al-Dossary et al., 2014; Chappell & Richards, 2015; Edwards et al., 2015) as well as impact of NRPs on the quality of care, such as nurse sensitive indicators (e.g., medication error rates) (Chappell & Richards, 2015; Goode et al., 2016; Letourneau & Fater, 2015; Missen et al., 2014). Longitudinal studies focused on return-on-investment of NRPs are also needed (Rush et al., 2013). Additional research is needed to determine which program attributes or models have the most impact on human resource management, costs, and patient outcomes (Barnett et al., 2014; Rush et al., 2013). Adaptation of a common nomenclature and application of accreditation standards will enable researchers to identify the most effective program elements and enhance the rigor of future investigations.

Conclusion

Research shows that the implementation of successful NRPs has the potential to significantly improve health care delivery and build a strong nursing workforce. Nurse and staff development educators are well positioned to take an active role in facilitating evidentially sound, cost-effective NRPs by becoming familiar with accreditation criteria, tracking outcomes, demonstrating return-on-investment, and engaging in academic partnerships. Use of an official nomenclature to identify transition programs and distinguish NRPs will decrease confusion caused by various program labels, promote standardization across programs, and support the robust studies needed to advance evidence-based practice. By providing graduate nurses with comprehensive NRP designs, the stage will be set to further develop excellent nurse leaders who are prepared to deliver the highest levels of care to meet the

soaring challenges and complexities of an ever-evolving health care environment.

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SESSION FOUR:
Education

The Treatment of African-American Female Students in an Urban School District in the Midwestern United States

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Abstract

This research project examined the unfair treatment and disciplinary actions for African-American female students in an urban school district. The authors studied students in grades nine through 12 in both an early college high school and a traditional high school. Results indicated that African-American female students are often treated as older than they were and sexually more mature than female Caucasian students. In addition, the suspension and disciplinary rates were abnormally high in our African American population.

Keywords: African-American, female students, school suspension, school disciplinary rates.

Introduction

There has been much discussion in the literature that African-American female students (AAFS) often have to face unfair treatment and disciplinary actions due to bias. Many AAFS believe that they are treated differently than Caucasian female students (CFS) particularly for detrimental behaviors such as disrespect, excessive noise and profanity. AAFS high schools are six times more likely to receive out of school suspensions or in school suspensions. In many urban schools, nearly 45% of suspended students are AAFS. In fact AAFS are the highest group of suspended students of all racial ethnic backgrounds (Losen, 2015; Inniss-Thompson, 2018; Annamma, et al., 2019).

There are several studies indicating that AAFS receive more teacher disapproval and punishment for being assertive. Sometimes teachers even express hostility towards these students. When teachers expressed disapproval and punishment for being assertive, often AAFS become defensive and disengage (Blake, et al., 2010).

It is more likely that AAFS receive harsher punishments than CFS. In fact, there appears to be a need for specific training for teachers, counselors and

administrators to understand the inherent bias towards AAFS. In recent years, alternative approaches have been used towards helping AAFS. These include zero-tolerance policies, preparing personnel to face bias and other racial issues, building teacher-student relationships, having school counselors teach students how to tell their stories, and using positive behavior supports. Of all these essential interventions, it seems most important that teachers and students have positive relationships. This increase in engagement and classroom management often decreases discipline problems and office referrals. Teaching can be enhanced by learning cultural competence and clear student behavioral standards. In addition, parental involvement has also been found to change the outcomes and perceptions of AAFS. Although many parents of AAFS do not go to college, these parents can provide moral and physical support for their students. Unfortunately AAFS who don't have parental support are generally less successful both in academics and within the school environment (Skiba, et al., 2002; Smith & Harper, 2015).

Materials and Methods:

The purpose of this study was to understand how AAFS were treated in two different urban school environments. The goal of this study was to help these students and create a more positive school environment where teachers and administrators can be less biased in treatment and discipline.

The high schools in the study were from a high poverty school district where 100% of the students participated in the national school lunch program. The Youngstown area school District has one of the highest poverty rates among cities in the United States. The median income in the city is below $23,000 per family. Unemployment rates even in the best of times are often between 10 and 13%. In fact, in previous years, the school district was determined to be a failing district by the state of Ohio. A CEO was appointed by the governor to lead the school district and the school board was absolved of most of its responsibilities. When listing state school report cards, the district has often received an F grade in annual ratings.

For our study, AAFS participants were randomly chosen and completed a 13-question survey. The survey was developed from a thorough review of the research literature with a particular emphasis on the recent studies of Annamma et al (2016) and Epstein, Blake and Gonzalez (2017).The surveys were distributed in the school counselor's office over a period of several weeks. School records were examined regarding school suspension and expulsion rates. The intent of the study was to examine the student high school experience.

Results of the Study:

Early College and Traditional High School survey results

	Early College %	N=45	Traditional %	N=25
Questions	**Yes**	**No**	**Yes**	**No**
1. Do you think adults treat you as if you are older than you are?	**82**	18	**76**	24
2. Do you think adults in your school know you?	**80**	20	**56**	44
3. Do you think teachers treat you unfairly because you are African American/Hispanic?	13	**87**	20	**80**
4. Have you ever been disciplined at school?	**53**	47	40	**60**
5. Have you ever been suspended at school?	26	**74**	**68**	32
6. Do you think you and your friends are treated differently at school than Caucasian girls?	**51**	49	20	**80**
7. Do you think adults in school perceive you to know about sex at your age than Caucasian girls?	**80**	20	**72**	28
8. Do you think adults in school see you as too loud or too aggressive than Caucasian girls?	**53**	47	44	**56**
9. Do you think adults in the school understand your culture and your neighborhood?	**64**	36	28	**72**
10. Do you think your neighborhood has more problems than a Caucasian neighborhood?	**87**	13	**76**	24
11. Do you trust the security or police in your school to treat you fairly?	**91**	9	**68**	32

12. When things go wrong in your life, can you talk to someone at school?	**58**	42	**56**	44
13. Do you think the school targets you for your hair or how you dress?	49	**51**	44	**56**

Early College and Traditional HS Majority Responses

	Early College	Traditional School
Questions		
1. Do you think adults treat you as if you are older than you are?	**Yes**	**Yes**
2. Do you think adults in your school know you?	**Yes**	**Yes**
3. Do you think teachers treat you unfairly because you are African American/Hispanic?	**No**	**No**
4. Have you ever been disciplined at school?	**Yes**	**No**
5. Have you ever been suspended at school?	**No**	**Yes**
6. Do you think you and your friends are treated differently at school than Caucasian girls?	**Yes**	**No**
7. Do you think adults in school perceive you to know about sex at your age than Caucasian girls?	**Yes**	**Yes**
8. Do you think adults in school see you as too loud or too aggressive than Caucasian girls?	**Yes**	**No**
9. Do you think adults in the school understand your culture and your neighborhood?	**Yes**	**No**
10. Do you think your neighborhood has more problems than a Caucasian neighborhood?	**Yes**	**Yes**
11. Do you trust the security or police in your school to treat you fairly?	**Yes**	**Yes**
12. When things go wrong in your life, can you talk to someone at school?	**Yes**	**Yes**
13. Do you think the school targets you for your hair or how you dress?	**No**	**No**

Early College and Traditional High School
(Agreed and Disagreed Questions)

	Early College	Traditional School
Questions (Agree)		
1. Do you think adults treat you as if you are older than you are?	**Yes**	**Yes**
2. Do you think adults in your school know you?	**Yes**	**Yes**
3. Do you think teachers treat you unfairly because you are African American/Hispanic?	**No**	**No**
7. Do you think adults in school perceive you to know about sex at your age than Caucasian girls?	**Yes**	**Yes**
10. Do you think your neighborhood has more problems than a Caucasian neighborhood?	**Yes**	**Yes**
11. Do you trust the security or police in your school to treat you fairly?	**Yes**	**Yes**
12. When things go wrong in your life, can you talk to someone at school?	**Yes**	**Yes**
13. Do you think the school targets you for your hair or how you dress?	**No**	**No**
Question (Disagree)		
4. Have you ever been disciplined at school?	**Yes**	**No**
5. Have you ever been suspended at school?	**No**	**Yes**
6. Do you think you and your friends are treated differently at school than Caucasian girls?	**Yes**	**No**
8. Do you think adults in school see you as too loud or too aggressive than Caucasian girls?	**Yes**	**No**
9. Do you think adults in the school understand your culture and your neighborhood?	**Yes**	**No**

Early College and Traditional High School Results

Based upon our results between two schools, the following was noted that the AAFS agreed with each other on the following thought:

1. That the adults (SP) treat you as if you are older than you are.
2. That the adults (SP) in your school know you.
3. That the teachers treat you fairly because you are AAFS.
7. That the adults (SP) in school perceive you to know about sex at your age than CFS?
10. That your neighborhood has more problems than a CFS neighborhood?
11. That your neighborhood has more problems than a CFS neighborhood?
12. That when things go wrong in your life, can you talk to someone at school?
13. That the school targets you for your hair or how you dress?

Based upon our results between two schools, the following was noted that the AAFS disagreed with each other on the following thoughts:

1. That you have been disciplined at school. (Early College: Yes; Traditional HS: No)
2. That you have been suspended at school. (Early College: No; Traditional HS: Yes)
3. That your friends are treated differently at school than CFS. (Early College: Yes; Traditional HS: No)
4. That the adults (SP) in school see you as too loud or too aggressive than CFS. (Early College: Yes; Traditional HS: No)
5. That adults (SP) in the school understand your culture and your neighborhood? (Early College: Yes; Traditional HS: No)

Discussion:

In many ways, this research study confirmed several basic concepts that had been supported in the literature. Several trends within our research are troubling. Most of our AAFS believed that they are treated as if they are older than their CFS. Faculty see them as more sexually aware and that their neighborhoods are more complicated than their CFS. Suspension rates among the Traditional High School students are especially problematic compared to their Early College students. Although the school district has begun a restorative justice program within all the schools in the district, it appears that suspension is widespread as a discipline response in the district. Unfortunately, this response is typical for many urban districts (Annarella et al., 2020).

In this traditional high school, most of the faculty are Caucasian in the district and it has a “three times you are out rule”. Most of the students in the

traditional high school have been suspended at least once. Although the school district has a restorative justice program, school suspension is seen as a widespread discipline response in the district. This behavior is not atypical for many urban school districts in the United States. Another issue for students is that they do not believe that teachers understand their local neighborhoods. Unfortunately, most of the district has Caucasian school teachers and the majority do not live within city school district boundaries. Therefore, it is not a unusual that administrators or teachers may struggle to understand how AAFS spend their lives in a different culture and environment. Beyond reducing suspension and looking at other alternatives, it appears that it would be helpful to develop a curriculum related to race and culture and have regular discussions with students regarding these issues. AAFS are also expected to be more mature and responsible than CFS high school peers. In many school districts, the students are believed to be more sexually mature and adult like than their peers. This can be very problematic for AAFS. Often times, they are viewed as louder and aggressive than CFS. In a more inclusive environment, these issues should be discussed openly, and understood by teachers, peers and administrators.

There are a number of recommendations that the authors would see as valuable from this study. It is our view that African-American female students and their cultural history needs to be better understood by faculty and in particular, Caucasian faculty. We believe there needs to be training regarding excessive suspension and expulsion rates that are a national problem in the United States among African-American children. It appears that many restorative justice programs have been successful in urban schools and their needs to be more dialogue between administrators and African-American students in an effort to create more equity and equality. Lastly, most urban districts in the United States are vastly underfunded and finding African-American teachers is very difficult in most urban districts.

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Moldovan Vocational Education and Training: Student Reports for Online Learning Experiences during the COVID-19 pandemic

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Abstract

The COVID-19 pandemic has caused a global crisis. Many health, food, economic, transportation, and educational systems have been affected. From the most affluent to the least advantaged educational systems, K-16 and beyond are being challenged on how best to move from face-to-face to online teaching and learning. Moldova policymakers and educators are meeting to address existing educational policies needed to continue educating its student population. The purpose of this descriptive study was to assess Vocational Education and Training students' online learning experiences during the COVID-19 pandemic. Of the 303 returned surveys, most of the participants were female (60%), studying in the platform Google Classroom and reported feeling ill-prepared for the transition from face-to-face to online learning. It was concluded that students would benefit best from online resources and adequate teacher feedback for online homework. It is recommended that a collaborative approach is employed to address the needs of students, their teachers, and parents best to navigate the learning experiences during this time of uncertainty.

Keywords: COVID pandemic, online learning, Vocational Education and Training, students, Moldova

Introduction

The COVID-19 pandemic has caused a global crisis for many systems, with one of the most affected being educational systems. Save the Children

(2020) warned, "The Covid-19 pandemic has caused an "unprecedented education emergency," with up to 9.7 million children affected by school closures at risk of never going back to class" (p. 1). The pandemic has severely impacted youth employment across the globe due to disruptions such as job layoffs, income losses, and increased barriers to job market entry. For those youth who are still pursuing education, the pandemic is likely to result in unprecedented new inequalities upon graduation (World Economic Forum, 2020).

Today, there are 1.2 billion young people aged 15 to 24 years, accounting for 16 percent of the global population (United Nations, 2020), the largest cohort ever to transition into adulthood. More than 85% live in developing countries. In many places, they represent 30% of the population – and the numbers keep increasing. Many developing countries have the potential to realize a demographic dividend if the right social and economic policies and investments are in place. Youth are considered as a priority in policy debates as a driver of development, as is the case in Moldova (National Bureau of Statistics of Moldova, year). Its youth aged 14-34 accounted for 27.7 % of the total population as of January 2019 (cite). This generation has great potential to positively contribute to the country's development and self-determination, which will not occur if necessary, learning skills are not provided or in place.

Since the Proclamation of Independence in 1991, Moldova has been in transition, which brings significant economic and social changes, and challenges for its youth's well-being. For instance, the low quality of education fails to provide youth with the necessary skills for successful integration in the labor market. Furthermore, employment vulnerability has increased in rural areas, resulting in an urban exodus to cities and abroad (OECD Development Centre, n.d.).

Literature Review:

Importance of Youth Development

The Moldovan government recognizes the importance of developing its youth population and regulating the profession of youth workers as reported in the 2020 National Strategy for Youth Sector Development (OECD Development Centre, n,d). The implementation of this strategy could benefit from the collaboration between many of its Ministries and local public authorities. With 16% of the population below age 15, and youth (aged 14-35) accounting for one-third of the population, Moldova is considered a youthful country (OECD Development Centre, n.d.).

Overall, education attainment is high. In 2014, 31.6% of youth ages 25-29 obtained a tertiary diploma (OECD Development Centre, n.d.). Moldovan youth enjoy high access to education, but education's quality

continues to face challenges (OECD Development Centre, n.d.). Preparing youth for careers is of the utmost importance. Vocational training is significant for increasing youths' employment outcomes and provides potential career advancement opportunities for individuals (Ramasamy & Pilz, 2020), which necessitates continuing education during the COVID-19 pandemic.

Educational Infrastructure

Moldova's education system has four stages: pre-primary, primary, secondary (lower and upper), and tertiary. Education is compulsory at the pre-primary, primary, and lower secondary (gymnasium) levels (grades 1-9). After compulsory education, students may take an entrance examination for entrance to the general upper secondary schools (vocational) or the lyceums (academic) (grades 10-12). Tertiary education is provided by private and public universities, academies and institutions, and students who have obtained their general upper secondary or lyceum certificate or diploma are eligible to apply (UNESCO, 2011).

The Moldovan VET educational system consists of 44 vocational schools located throughout the country, preparing students for 310 occupations, both agricultural and non-agricultural. In most schools, students study for two or three years, depending on which occupation is being studied. The age of students entering the schools ranges from 16-17-years. All schools are public; there are no private schools. The Moldovan VET system is governed by the Ministry of Education, Research, and Culture (Institute for European Policies and Reforms, 2020).

United Nations Development Programme reports

Before the pandemic COVID-19, Moldovan schools did not practice distance learning, which has resulted in a system lacking practices for how best to respond to a lockdown. As a result, the educational system has worked to provide adequate Internet connections. These attempts address hidden challenges which, up to this point, had been overlooked as in one major challenge being low rates of internet literacy in the country, including teachers – do not have the technical skills required to figure out how to download, install and use tools needed for remote learning. (2020, p. 1).

The researchers of the present study are former secondary teachers and current postsecondary vocational teachers with a vested interest in addressing the needs (i.e., teaching strategies, online learning, pedagogies) for vocational students and students on a global level. Timely interventions directed at youth development are likely to yield a greater return for sustainable development than attempts to fix their problems later in life, such as the Anti-lockdown in this study during the pandemic COVID-19 in Moldova.

Challenges faced due to the pandemic COVID-19

Between March 2020 and April 2020, The Institute for European Policies and Reforms (IPRE), in partnership with Privesc.eu and with the support of the Hanns Seidel Foundation, held online videoconferences to discuss how best to address challenges teachers faced with online teaching and learning due to the COVID-19 pandemic in Moldova (Institute for European Policies and Reforms, 2020).

Additionally, policymakers also met to address the challenges currently faced by Vocational Technical and Education. It was shared that before the pandemic in 2019, a program aimed at empowering vocational education teachers with digital skills occurred, which ironically is now the "new norm" or reality. As a result, the program developed modules to train teachers to use various digital tools. The aim was to examine how teachers assimilate information and develop digital content to provide open educational resources. Another project led by the Chisinau City Hall resulted in "approximately 2,000 online lessons developed for teachers, students, and parents to learn how to access video lessons without having an Internet connection or very sophisticated equipment" (OECD, 2020, p.1).

In 2014, the Educational Code established legal frameworks for the relationship between the educational design, organization, operation, and development of Moldova educational systems (The Parliament of the Republic of Moldova, 2014). However, the Education Code provides no regulations on distance learning for general schools at all levels. Programs have been developed to ensure migration to distance learning, such as training teachers, who rapidly had to change their educational process and become prepared for distance [online] learning. Another need was for how best to connect students to the Internet while offering them the necessary (information technology) IT tools to be successful. For example, 20 million MDL (local Moldovan currency) have been identified from budgetary resources that will be redirected to purchase resources such as laptops for teachers and students, who have limited financial resources.

One meeting attendee offered, "Even though distance learning has a long history, it was never intended to be used for the schooling system. We have found ourselves in the situation when it must be used for everyone, starting with preschool, high school, and university institutions" (Institute for European Policies and Reforms, 2020, p.1). To continue the discussion on how best to approach online teaching, another attendee, self-identified as a current school teacher, shared, "I was one of the first to apply the online teaching process. It was a pretty painful process for me and the students, such as once we solved one problem, another [problem] came along" (p. 1). As a result of the many challenges and concerns shared during the conferences for moving to online learning during the COVID-19 pandemic, the researchers

decided to examine how youth were affected and to give them a “voice" on how best to succeed during the "new norm" for online learning. This population is one of the most affected and needs strategies and resources for adapting to a new learning environment. In this study, students enrolled in vocational and training schools were recruited and selected to participate.

Vocational Education and Training (VET) Schools offer youth a diversity of agricultural trade, and occupation options such as beekeepers, fruit and vegetable producers, and floriculturists, are all recognized as top occupations in Moldova and Romania. During the videoconference, another attendee offered, “In my opinion, the Moldovan education system was not prepared for such transformations to overcome this crisis. Until the pandemic, not enough digital skills for teachers and students were developed” (Institute for European Policies and Reform, 2020, p. 1).

In current educational systems, it is imperative to equip students with the necessary skills for the future. For this study, convenience sampling was used to select the two Moldovan VET Schools. Nisporeni High School and Bubuieci High School enroll students ages 16-18 years of age throughout Moldova. The schools are provided funding by the United States of America (U.S.A.) and the European Union (EU). Both funding sources support a modern didactical infrastructure for theoretical and practical classes (modern classrooms with a conferencing system, heated greenhouses, laboratories for berry production and beekeeping, woodworking, and apiary with vertical hives). To showcase the accomplishments achieved by VET students, teachers develop and maintain websites to post notices and use social media sites such as Facebook and Viber to share photos of students working in laboratories and on farms.

Overview of Participating Schools

Before the COVID-19 pandemic, all Moldovan schools delivered instruction face-to-face. The two participating VET schools participating in this study include The Nisporeni Vocational Education and Training School and The Bubuieci Vocational Education and Training School. The schools were selected for this study based on both being supported by the United States Agency for International Development / High-Value Agriculture Activity (USAID/HVAA), which seeks to cultivate a modern agriculture sector that increases rural prosperity by improving the economic well-being of all Moldovans and increase the quality of the workforce in high values agriculture. In collaboration with agribusinesses, farmers, water user associations, and others, the project helps maximize the profitability of each hectare by improving the quality and quantity of production, increasing sales through local and international markets, and fostering partnerships throughout the agriculture sector to achieve shared goals (USAID, 2020).

Both schools are preparing youth for the workforce by focusing on value chains (i.e., Berry production and Beekeeping), which are both major subjects of interest of the USAIDHVAA in Moldova. Nisporeni School is located 40 miles from Chisinau, the capital city, and has a student enrollment of 280 (150 females; 130 males). Students can select from six occupations related to the agriculture sector: pomiculture, viticulturist and winemaker, berry-producing, and processing.

More details about the school are located on its website: http://spnisporeni.educ.md/. The Bubuieci Vocational Education and Training School is located 10 miles from Chisinau, with a student enrollment of 267 (165 females; 102 males). Students can select from six occupations, including two related to the agriculture sector: florist and beekeeping. More details about the school are located on its website: https://spbubuieci.md/. Table 1 provides a demographic profile of the two VET Schools.

Table 1 - Demographic Profile of Selected VET Schools

Item		*F*			
		Nisporeni		Bubuieci	
Gender	F	150		165	
	M	130		102	
Total		280		267	
		F	M	F	M
Grade levels	I	55	42	80	54
	II	75	80	85	48
	III	20	8	---	---
Total		150	130	165	102

Note: Grade I=10th; Grade II=11th; Grade III=12th; M=Male; F=Female

Purpose of the Study and Objectives:

The purpose of this descriptive study was to assess Moldovan Vocational Education and Training (VET) students' online learning experiences during the COVID-19 pandemic. The objectives developed to guide this study include Objective One: "What is the demographic profile of Moldovan VET students?" Objective Two: "What do students report as challenges faced during online learning?" and Objective Three: "What resources do students self-report as needed during online learning? **Methods**:

The descriptive study was conducted March 2020-July 2020. An online questionnaire was developed with ten, closed-ended questions. The surveys were administered via Facebook accounts to 547 students enrolled in two Moldovan Vocational Education Training Schools. The schools were: Nisporeni; n=280; Bubuieci; n=267. There were 303 returned useable surveys (55% response rate). Students were ages 16-18 years old, enrolled in grades 1, 2, and 3, studying varying occupations such as culinary arts (chef) or

beekeeping. Data was analyzed using Microsoft Excel Google forms to report descriptive statistics (i.e., percentages, frequencies).

Results:

The majority of the participants were female (60%), studying in the platform Google Classroom and reporting enrollment in all occupations offered at each VET school. In Figure 1, student responses are displayed when asked what online learning platforms used in the VET school (based on Bubuieci VET School); most (34%) reported Viber, followed by Messenger (24%), with very few reporting email, phone calls and Messenger (24%) were used.

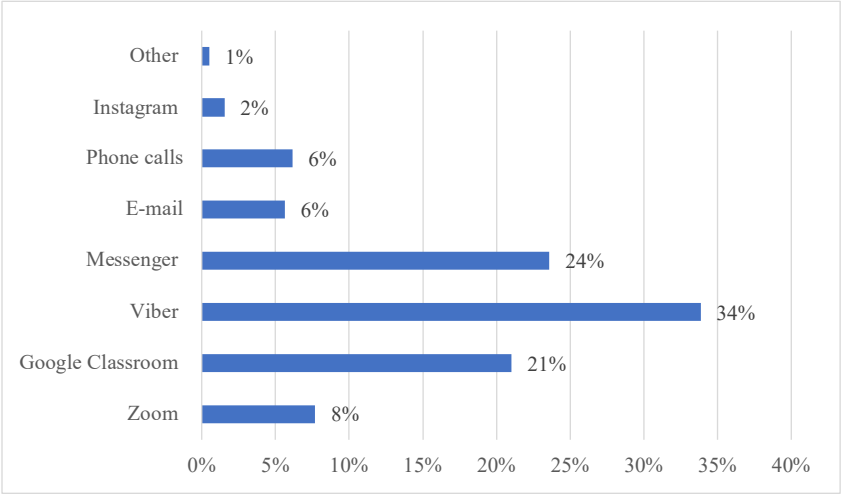
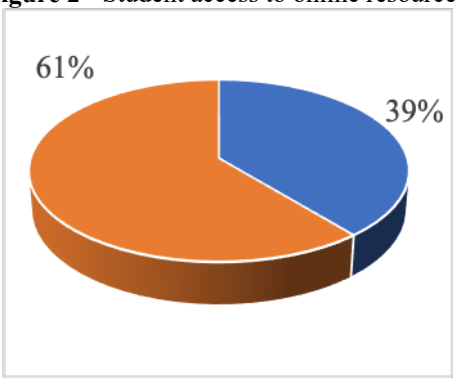


Figure 1 - Student use of online modes of communication

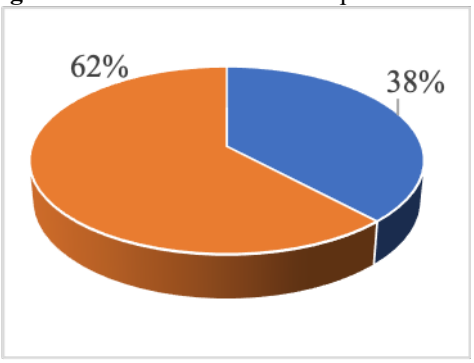
Figure 2 displays student responses regarding access to online resources, with a majority (61%) reporting access, while the remaining 39% reported no access to online resources.

Figure 2 - Student access to online resources



When asked about access to the computer and internet, most (62%) students reported access, while 38% reported no access to a computer or internet in an online setting (Figure 3).

Figure 3 - Student access to computer/internet



Overall, most students (78%) reported experiencing no difficulties when accessing learning platforms and chats in the online course, while few (18%) reported experiencing difficulty with one of the most mentioned difficulties – "teachers are using different learning platforms, even different courses can have a different platform for other courses at the VET school“ (Figure 4).

Figure 4 - Student access to learning platforms and chats

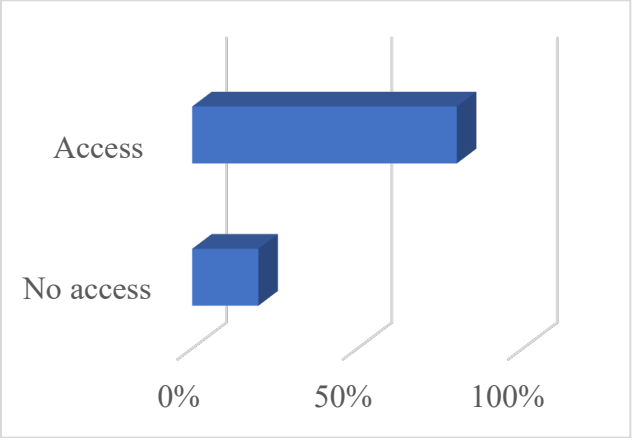
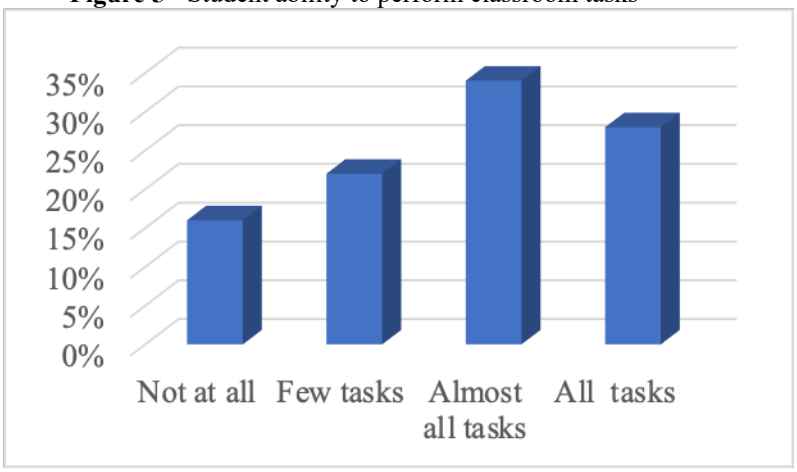


Figure 5 shows that thirty-four percent of the students reported being able to complete most homework, followed by 28% reporting completing all homework in online courses. Sixteen percent reported completing no homework.

Figure 5 - Student ability to perform classroom tasks



When asked to report access to learning space, over half (53%) students reported having highly adequate space, followed by 33% reporting having adequate space and few (14 %) reporting somewhat to no learning space (Figure 6).

Figure 6 - Student access to learning spaces

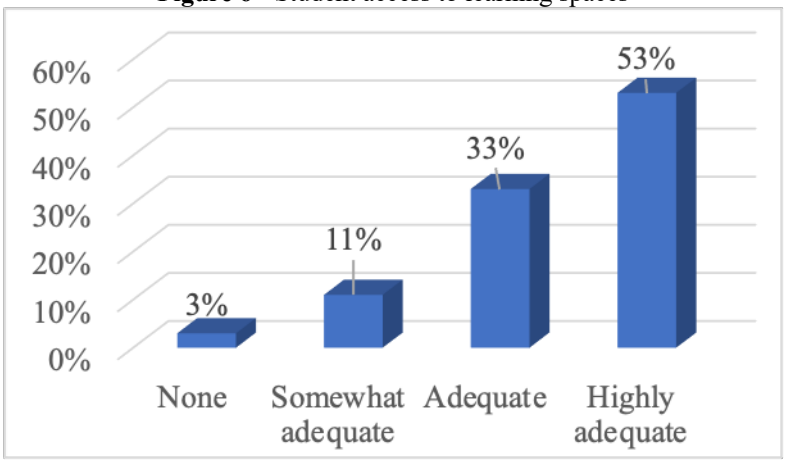


Figure 7 displays student responses regarding access to online learning processes:

Self-study resulted in a majority (54%) of the students reporting always using self-study habits during online learning, followed by 36% with very few (10%) reporting using none to very few self-study habits in online learning.

Taking notes for subjects announced by the teacher resulted in more than half (55%), fifty-five students. Fewer, 35% reported taking notes.

PowerPoint lecture development for online course assignments showed that 42% of students always develop PowerPoint lectures, followed by 30%

reporting often and then fewer (12%) developing PowerPoint lectures for online course assignments.

Figure 7 - Students reported learning processes performed in the online course.

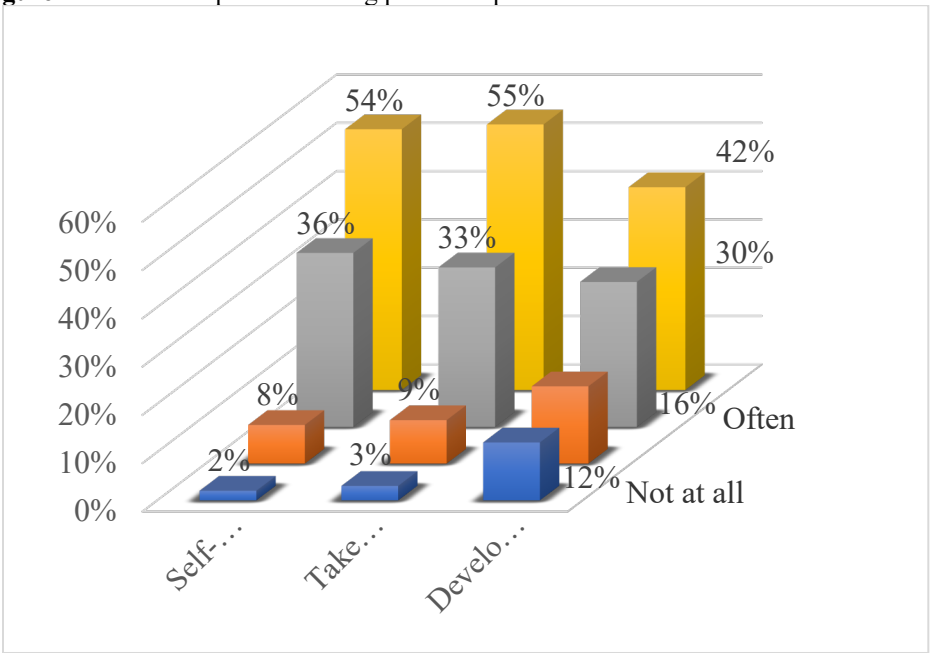
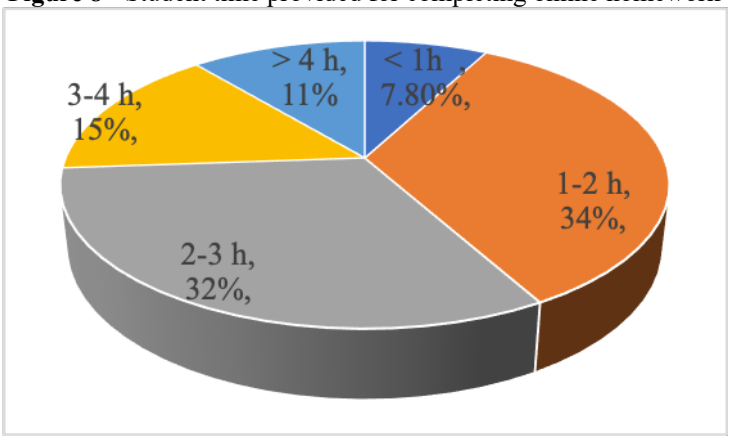


Figure 8 provides the students' responses when asked to report the amount of time teachers provided them for completing online homework; some (34%) reported 1-2 hours, closely (32%) followed by 2-3 hours. Then, fifteen percent reported 3-4 hours, with the fewest (7.8%) reporting less than one hour provided for completing online homework.

Figure 8 - Student time provided for completing online homework



In figure 9, students' responses are provided when asked to report the amount of support received from teachers for performing online assignments.

A majority (51%) always received support, with (32%) reporting receiving some support, with fewer (17%) reporting very few supports to no support for performing online assignments.

Figure 9 - Student online support provided by teachers

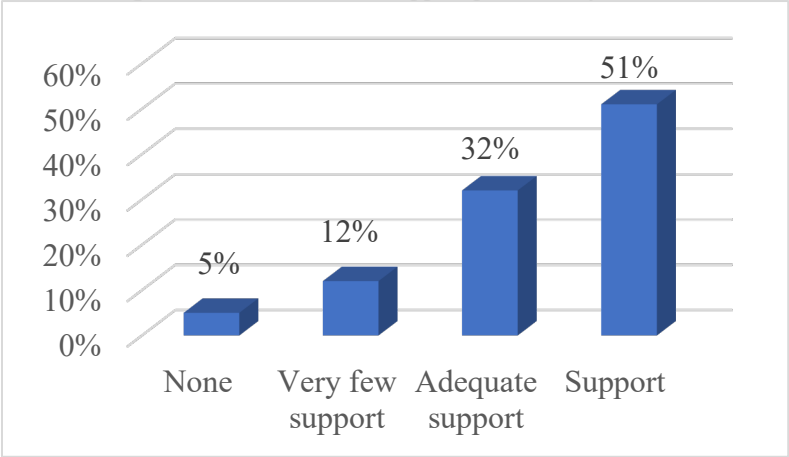
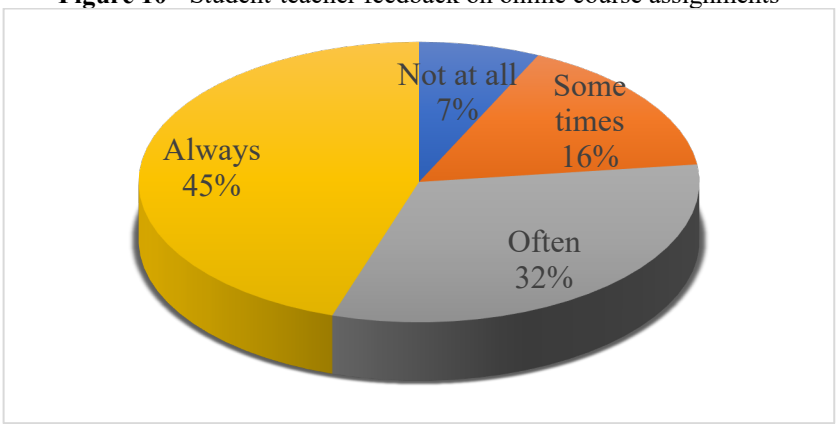


Figure 10 provides student reports on how often they received teacher feedback for online course assignments. Many (45%) students reported always receiving teacher feedback for their online course assignments. Thirty-two percent reported often receiving teacher feedback, followed by 23% reporting sometimes not receiving teacher feedback on course assignments.

Figure 10 - Student-teacher feedback on online course assignments



Conclusion

The study revealed that students generally felt prepared for their rapid transition from face-to-face instruction to online learning during the COVID-19 pandemic. Most reported gaining access to online resources and receiving adequate feedback from their teachers, such as having various communication methods. While most reported experiencing few difficulties with accessing learning platforms, some reported– "teachers are using different learning

platforms, even different courses can have a different platform for other courses at the VET school." This finding aligns with a finding reported by Abramson (2020) on the need for selecting the right technology. It was revealed, "Teachers will be successful in distance learning when selecting the right platforms and assessing individual student needs" (p.1).

Receiving adequate time to complete online homework was a significant challenge reported by participants. Some believed they would benefit from receiving more support from teachers to perform study habits, take notes, and develop PowerPoints for online assignments. Findings from this study are aligned with similar research studies; for instance, Alam (2020) conducted a study on challenges faced by Bangladeshi students who attended online classes. It was revealed that students established positive communication dialogue with teachers, which reduces anxieties during the corona crisis. Both students found students reporting using phones in the online course; a majority of students in this study reporting using Viber while Alam's students preferred using smartphones to access their online class. In a similar study, communication was identified as key, such as in this study, for connecting teachers and students during online teaching and learning. Social media and various group forums can be used to communicate with students. Communication allows teachers to reach out to students via texts, various messaging apps, video calls, to allow student success in learning (Dhawan, 2020).

Limitations of the Study:

There were limitations to the study, such as the findings cannot be further generalized due to participants being students of two Moldovan VET High Schools. Participants were selected using a sample of convenience. Data collection was delimited to one administration of an online survey. The quantitative results were based on self-reports and the reliance on students to report honest information.

Recommendations:

It is apparent that COVID-19 has created a "new normal." As required in face-to-face learning experiences, teachers face learning to apply the best teaching strategies to facilitate learning in the online environment. Students, parents, and teachers need resources, support, skills, and development to navigate experiences in this "novel" learning environment successfully. Change must occur. Dhawan offered, "Many academic institutions that were earlier reluctant to change their traditional pedagogical approach had no option but to shift entirely to online teaching–learning" (p.1).

The inclusion and well-being of youth are recognized as essential pillars of national development, as youth are viewed as Moldova's present and

future (OECD Development Centre, 2018). Based on this study's conclusions, it is recommended that teachers use the following strategies to motivate youth to continue learning during this time. Teachers should receive professional training on the use of learning platforms such as Moodle and Google. In support of this recommendation, Austria's Ministry of Education and the Finnish National Agency for Education promote the use of learning platforms like Moodle (The World Bank, 2020). The incorporation of video streaming (transmitting some real-time video) from the practical classes is another recommendation other countries follow (The World Bank, 2020). For example, teachers should deliver active learning lessons such as feeding, dividing combs, planting strawberry plants via the transmission of videos in real-time or recorded to be watched later (The World Bank, 2020). Products by Google can be beneficial under such conditions and include (a) Gmail, (b) Google Forms, (c) Calendars, (d) G-Drive, (e) Google Meet, (f) Google Jam board and Drawings, and (g) Google Classroom. These digital tools can successfully be used as an alternative for face-to-face classes (Basilaia, et al., 2020).

Once teachers are provided with the best teaching strategies, they will be best educated for:

1. Providing effective and efficient communications, i.e., clarity with instruction assignments and feedback;
2. Addressing the lack of reliable internet access from home versus the school environment;
3. Transforming student thinking for accepting the "new norm" with online learning;
4. Providing the best strategies for developing and delivering learning objectives and motivating student learning behaviors in online classes, such as being flexible with assignment due dates and posting instructions online; and
5. Creating social presence through online discussion boards encourages student-student interaction (gives a student a sense of connection/belonging with others) and collaborations through real time virtual sessions.

Research shows that when teachers exhibit empathy, it allows students to face challenges such as unavailable technology, lack of internet, receiving resources and support, receiving advice and mentoring during challenging assignments, receiving frequent communication:

- Limit the number of platforms while choosing to use the most popular, user-friendly, and known by most students and teachers
- Facilitate access to appropriate workspace in rural areas connected to the internet and equip students with desktops/laptops for those with limited resources; an example would be Novateca's libraries' network.

- Collaborate with international donors to supply the necessary devices (video cameras, drones, tablets) to be available for renting by the schools to provide to students
- Involve national Internet service providers to offer free or discounted Internet access in support of Social Responsibility Programs

In summary, it is hoped this study's findings will provide Moldova with the knowledge needed to continue developing the national youth policy, which is very strong as young people are considered the most valuable human resource and great potential to move the country forward (Buruina, 2011). The findings in our study may be used by policymakers, school administrators, teachers, and parents to prepare its youth for the workforce to live a sustainable life.

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Developing Multimedia-based Learning on Avoiding Imprecise COVID-19 Patients

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Abstract

Since the Covid-19 pandemic, many doctors are not only facing challenging extra works and longer time in the hospitals, but they also encountering obscured patients who would conceal their experience or even telling lies about what they feel and what they have been doing before coming to the hospitals. This paper is intended to describe a proposed design a mobile multimedia-based learning on avoiding those imprecise Covid-19 patients. This tutorial is as a campaign how to make patients and their families not to be afraid to become stigmatized by the community, and rather chose to be risking the illness. This tutorial is created using ADDIE instructional development method, and during the developing stage, it is conducted using Multimedia Development Life Cycle according to Luther. Subjects of the research are experts in education, medical, communication science and information technology in the preliminary testing. This research is still on going and the researchers would like to present the design of the system. Research findings show that this multimedia-based learning is the most feasible model to be implemented.

Keywords: Doctor-patient communication, learning, multimedia, COVID-19

Introduction

Coronavirus disease (COVID-19) pandemic forced most educational institutions around the world to close the learning process temporarily to avoid the spread of the virus. Billions of students the world from pre-primary to higher education, have seen their education disrupted and interrupted. Governments all around the world have closed educational institutions in an attempt to contain the global pandemic. (Unesco, 2020). UN Secretary General Antonio Guterres has warned that school closures because of Covid-

19 “could waste untold human potential, undermine decades of progress, and exacerbate entrenched inequalities.“ Because of the economic consequences of the pandemic, it is estimated that next year almost 24 million children from pre-primary to university level in 180 countries are at risk of dropping out of education altogether (Newey, 2020).

Imprecise Covid-19 patients:

Since the Covid-19 pandemic many doctors are not only facing challenging extra works and longer time in the hospitals, patients and their families are afraid to be stigmatized by the community, and rather chose to be risking the illness which is also known as SARS-CoV-2. There are media reports that showed stigmatizations towards death (victims of Covid-19) often happened in many areas in Indonesia (Assegaff, 2020). This is related to what so called ‘parasite avoidance’ (Sarabian et al. 2018), when creatures avoid or run from dangers or filthy (dirty) things. Apparently, this happens among many chronic diseases such HIV/AIDS, TBC, etc.

The problem is that the given ill signs (by those patients or their families) will obstruct doctors to notify correct signs and symptoms and make proper diagnosis or they will produce wrong diagnosis. Of course, there are tools to help doctors in constructing adequate diagnosis such as laboratory examinations, X-Ray, etc. However, one of the best keys for this, in our opinion, is that doctors must use the most needed tool in the medical encounters, i.e. effective communication between them and their patients. . It is important to make everyone understand to tell the truth when he or she comes to hospital. The awareness can be developed through learning from many resources that can be found in mobile application.

Learning is very important for human life from his/her birth till the end, because of the necessity to adapt the environmental changes, information and knowledge should be gained every time (Semiawan, 2007).

Harrington (2015) cited Babrow and colleagues who identified five sources of patients’ uncertainty which include complexity of the illness, quality of information, and structure of information. That being said, we understand that information, both the quality and its structure, consumed by patients play great roles in dealing with their disease. In many cases, as explained by Harrington (2015), feeling uncertain is an uncomfortable state for humans. We all assume that uncertainty is always a bad thing. Furthermore, Harrington (p.184) maintained that, “effective communication about illness can help patients to feel more certain about their diagnosis, treatment, and social aspects of their disease, which may lead them to better deal with the challenge of their illness.”

The fast development of digital technology impacts the using of mobile applications for variety purposes, including learning, information, campaign,

advertisement, etc. Using together multimedia elements in a mobile application such as images and animations that are provided with sound, video clips, and text, will provide clearer meaning and make people to get easier understanding. Vaughan argued that multimedia change radically in the learning process, how students change from passive to active learning [3]. So multimedia can be used as an instructional tutorial to inform patients telling the truth to doctors through varieties of media.

This study aims to develop a mobile multimedia application particularly to campaign or inform telling the truth is the right to do by patients when they go to hospital, especially during crisis caused by pandemic such as the current COVID-19 outbreak.

Media:

An instructional tutorial as an information is a series of instructional messages that share a single idea and theme which make up an integrated communication. Instructional information utilizes diverse media channels over a particular time frame and are often mandated to be rationally defined. The information theme is the central message that will be conveyed in the important activities and is the main focus of tutorial information as it sets the motif for the series of multifarious individual messages and other tutorial communications that will be used. The tutorial themes are usually produced with the objective of being used for a significant period but many of them are temporal due to factors like being not effective. (Sutopo, et al., 2019)

On a global scale, digital media is very comfortable to be used including to a screen, reading digital media, social networks and other discussion forums (Sutopo, et al., 2019). Although the internet is considered a crucial part of contemporary life, it also represents the state of emergency in risky behavior. Many studies show that people can be addicted to internet, resulting harmful effects on social behavior, habits and abilities (Grajczonek, 2011).

Multimedia:

Information media as a combination variety of multimedia object, and digital multimedia as a combination of text, graphic, animation, sound, and video that is presented to the user using a computer (Sutopo et al., 2019). Many applications use multimedia system for education, presentation, and industry of game. Using allows someone interact with the many objects in the application. The most popular and powerful concept in multimedia is interactivity, that it is as an interesting part of an application.

The previous research was written by Giorgi Basilaia and David Kvavadze (2020) made a case study where the Google Meet platform was implemented for online education in a private school with 950 students. The

results confirmed that the quick transition to the online form of education went successful and gained experience can be used in the future. The experience and studies can be useful for other countries that have not found the ways of transition yet. Another mobile game was a tutorial as a campaign to stop drugs that should encourage people's ability to integrate all information on mobile application. The tutorial focuses on how people understand about drugs and what to do if someone is drugs addicted [4]. The research findings showed that mobile multimedia stop drugs tutorial application could be used with minor revision.

This paper describes a proposed design how to develop multimedia-based application on avoiding imprecise COVID-19 patients. Using this application, handling COVID-19 will gain some advantages, as (1) the patient tells to provide a the history of the disease; (2) the accuracy of patient data facilitates diagnosis by doctors; and (3) the public welcomes people with COVID-19.

Method:

There are two kinds of methods that are used in this research. The first method is developing multimedia instruction or learning and then the second one is developing a mobile multimedia-based application. This research uses a combination of ADDIE model and Multimedia Development Life Cycle (MDLC) (Sutopo et al., 2019) as can be seen in Figure 1.

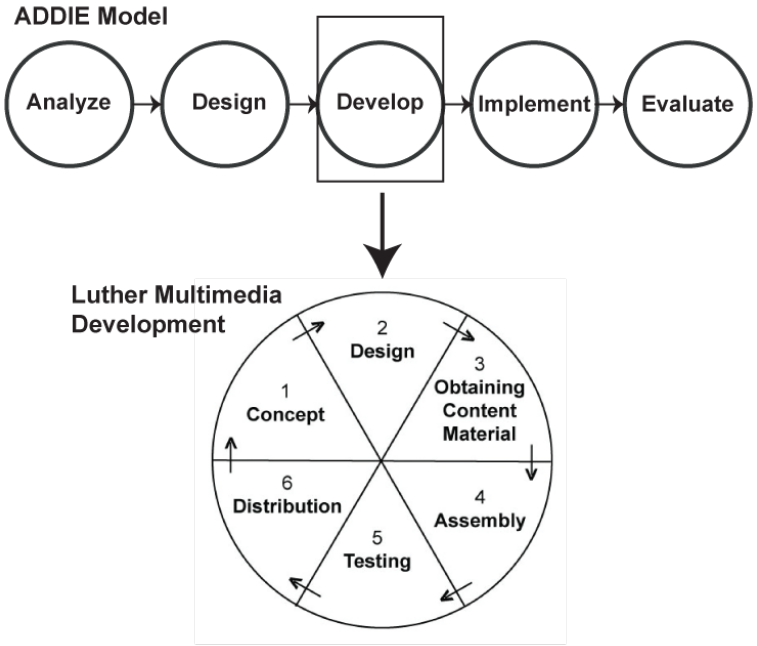

Figure 1 - Research method combining ADDIE model and Luther's Multimedia Development Life Cycle

Developing Stop Fear Covid-19 Instruction

Designing the tutorial was required to gain a good product, so that the learning process became more effective and efficient. There are many models of instructional design including ADDIE, Gustafson, Jerrold Kemp, etc. Some people used different instructional design models, but fife phases were the same. These are analyze, design, develop, implement, and evaluate (Aldoobie, 2015). ADDIE model can be described in Figure 1 as follows: (1) **Analyze**. The objective of this paper is defined introducing COVID-19 information, content of information, audience, and infrastructure; (2) **Design**. The interface design and algorithm that will be used in the tutorial are developed. Storyboard and navigation structure can be used to describe the project; (3) **Develop**. During the Develop step of ADDIE, Multimedia Development Life Cycle is used to guide what the researcher should do make a product. (Sutopo & Pamungkas, 2017). The overall of the project is built, the information is assembled using programming language. The application is run in the Testing phase, and checked to confirm that it is the same as that proposed by the author. The system is tested to fix all the functions of application work well. After the functional testing, the application must be run on variety mobile devices; (4) **Implement**. During this step, the application is reproduced and delivered to audience for their use on their mobile devices. The distributed application file should be run on mobile devices; and (5**) Evaluate**. The application must be evaluated whether it can increase people's knowledge. This section presents method of tutorial and testing development that is used in this research.

This research is done using the 3rd step of ADDIE model that is called Develop, in which the product is built using Multimedia Development Life Cycles (MDLC). Authoring is somewhat like making a feature film, a movie, and there are many steps to the process. Multimedia Development Life Cycle, a typical multimedia systems development, may involve the following six major steps, as follows: (1) **Concept**. The objective for the project is defined, including type of multimedia, audience, and infrastructure; (2) **Design**. This is the process of deciding in detail what will be in the project and how it will be presented, including script writing, storyboarding, making navigation structure; (3) **Obtaining of content material**. During this stage all the data, audio, video, and images for the project are collected in appropriate digital formats; (4) **Assembly**. In this step, the overall of the project is built, multimedia application with interactive feature is assembled; (5) Testing. During testing, the application is run and checked to confirm that it does exactly what the author has intended. The application should be run on varieties devices; (6) **Distribution**. In this step, the application is reproduced and delivered to end users for their use. In this application, this would be the release phase.

Results and Discussion:

During creating a skills and competency learning, ADDIE model was used to analyze and design the learning system.

Analyze

The beginning of the developing multimedia-based application is data collection using questionnaires. The respondents were public and doctors. The data was analyzed using the analytical descriptive method and interpreted in a narrative way based on the research findings. Analyzing and data processing carried out with six stages including data gathering, preparing data for analysis, careful reading, developing the code, presenting the data and analyzing the data [10]. Table 1 shows the list of questions and answers that was used for the public respondents, and Table 2 shows the list of questions and answers that was used for the doctor respondents.

Table 1 - Questionnaires and answers of public respondents

No.	Questionnaires	Answers
1	If you are a patient, will you be open when questioned by your doctor; meaning that you will elaborate on your current condition/symptoms and your medical record (not concealing any disease or complications you've experienced)?	Open
2	By any chance if someone (a patient) not being open to questions, what disease would you assume he/she is are concealing?	• sexually transmitted diseases, like HIV/AIDS, etc. • Heavily stigmatized diseases, like tuberculosis, Covid-19. • Pandemic/plagues, like Covid-19.
3	If a patient covers up their true medical history or condition to a doctor (refuses to be open), what do you think would be the cause? (you can choose more than one option)	• Bring shame upon and fear of being rejected by friends, their family, and neighbors. • Societal and mass media scrutiny on the sick, being rejected by their environment.
4	Receiving more information on the disease will allow the patients to change their behavior and be more open to the attending doctor.	Strongly agree and agree.
5	What is your most used electronic device?	I use my phone more than using PC / laptop

6	There are times when patients would be in a dilemma; knowing that they have a potentially contagious disease, but at the same time doubts whether they should be open about it. What proper actions must they take in response to this?	They should be open about their disease, so that other people can maintain a healthy distance to prevent further transmission.
7	Which social media platform do you use most often. Do rank from used most (number 1) to used least (number 6). For example, if "Facebook" is the one you use most often, type 1 next to "Facebook".	Whatsapp
8	Where do you acquire most health-related informations from (choose one that you source the most)?	• Via mobile devise/gadget: accessing a link that is SHARED by friends on social media (example: through Whatsapp, Telegram, Instagram, etc.) • Via mobile device/gadget: INDIVIDUAL RESEARCH example "Google Search, with the absence of any attached links".
9	Which internet platform do you count on when trying to get information on the Coronavirus pandemic?	• Mobile applications (Smartphone.) • Official websites (from Ministry of Health, CDC, etc).
10	Based on your personal preferences, what kind of format eases audiences in understanding information we're currently accessing (seeing/reading/listening)?	Multimedia (texts, graphics, and audio).
11	As far as you can recollect, have you ever concealed any disease you've experienced to prevent friends, family, or your neighbors from knowing?	I've never concealed my medical history.
12	If someone has hidden their disease from their friends and family, what do you think they are experiencing/thinking? (you can choose more than one)	Ashamed because that person considers that the disease is disgraceful.

13	If you were to experience such sickness you would wish to keep a secret, what would be your reaction at that moment of knowing?	Shocked but still having the faith that I will heal.
14	Based on your knowledge, how have Coronavirus patients been treated by their environment (friends, family, etc.)?	They are supported well.
15	Based on your knowledge, how have hospitals responded to Coronavirus patients?	They have provided good services .

Table 2 - Questionnaires and answers of doctor respondents

No.	Questionnaires	Answers
1	During anamnesis, I have encountered patients who aren't transparent/dishonest about their medical records and their complaints?	Agree.
2	Can you state from every 10 patients you encounter, how many of them do you think aren't open/dishonest.	1-2 patients (55,2 %). 3-5 patients (27,1 % of respondents). 6-8 patients (10,9%)
3	Do closed off/dishonest patients hinder your efforts in diagnosing them?	Strongly agree
4	What are the effects of a patient's dishonesty/lack of transparency to your diagnostic process?	Complicates the diagnostic process and raises the potential of misdiagnosis.
5	Usually patients' lack of transparency (being imprecise) happens because they might be experiencing a certain diseases. What do you think those diseases are (you can choose more than one option)?	• Reproductive/sexual diseases, like HIV/AIDS, etc. • Heavily stigmatized diseases, like tuberculosis, Covid-19.
6	If patients aren't open/dishonest (being imprecise) to their doctors, what do you think might be the cause? (you can choose more than one option):	• The shame and fear of being rejected by friends, their family, and neighbors. • Societal and mass media scrutiny on the sick, being rejected by their environment.
7	We know that the media (including social media) plays a role in extending information to the general public. This results in the risk	• It can cause stigma and discrimination in the face of the public

	misinformation when a news is falsely reported, which in turn harms many. What do you think should be done? (You can choose more than one option).	(example, to the Covid-19 plague). • Doctors should have at least a preliminary understanding in the field of communications & mass media.
8	If a patient receives additional information (from doctors/the hospital) about their diseases, chances of them to change their attitude is raised. In turn, they will be more open to the doctors (and hospitals) who are assessing them.	Agree.
9	How do you think information can be passed on correctly to avoid scaring them? (you can choose more than one option).	• Through a persuasive, patient-centered approach. • Explaining the facts, based on the hospitals' procedures (SOP).
10	There are some assumptions that due to bad communication between doctors and patients, they might doubt the doctors competencies and diagnosis.	Agree.
11	What electronic device do you use most often?	I use my smartphone (mobile gadget) more than I use my PC / laptop
12	Which social media platform do you use most often. Do rank them from 1 (most used) to 6 (least used). (Choices: Whatsapp, Facebook, Twitter, Instagram, Telegram, YouTube).	Whatsapp (WA).
13	What platform do you use most to acquire information about the coronavirus? (Choices: Online newspapers; Digital magazine; Mobile application, Formal websites from Ministry of Health, CDC, WHO, etc; Online seminars such as Zoom meetings, etc.)	Formal Website (from Ministry of Health, CDC, WHO, etc).
14	What format do easily-understood information come in?	Multimedia (texts, graphics and audio).

15	Experts said that doctors-patients communication needs to liberate patients from their uncertainty. In your opinion, which states below will cause uncertainty the most? (you can choose more than one option).	• Misleading information from the media/social media. • The quality of information they received from varied sources.

Based on the research findings and discussion of the researchers and clients, the application would be formed as described in Table 3.

Table 3 - Concept of Multimedia-based Learning on Avoiding Indistinctive COVID-19 Patients

Object	**Description**
User	Public
Topics	- COVID-19 - Complaints - Medical Record - Diagnosis - Hospital - Family - Community
Application	- Mobile multimedia that can be run on mobile devices
Multimedia object	image, animation, text, sound
Interactivity	button, touch screen

Design:

Design of learning content was generated based on the analyzing at the previous phase. The content of learning consists of COVID-19, Complaints, Medical Record, Diagnosis, Hospital, Family, Community, and Informing true medical record to a doctor as displayed in Figure 2.

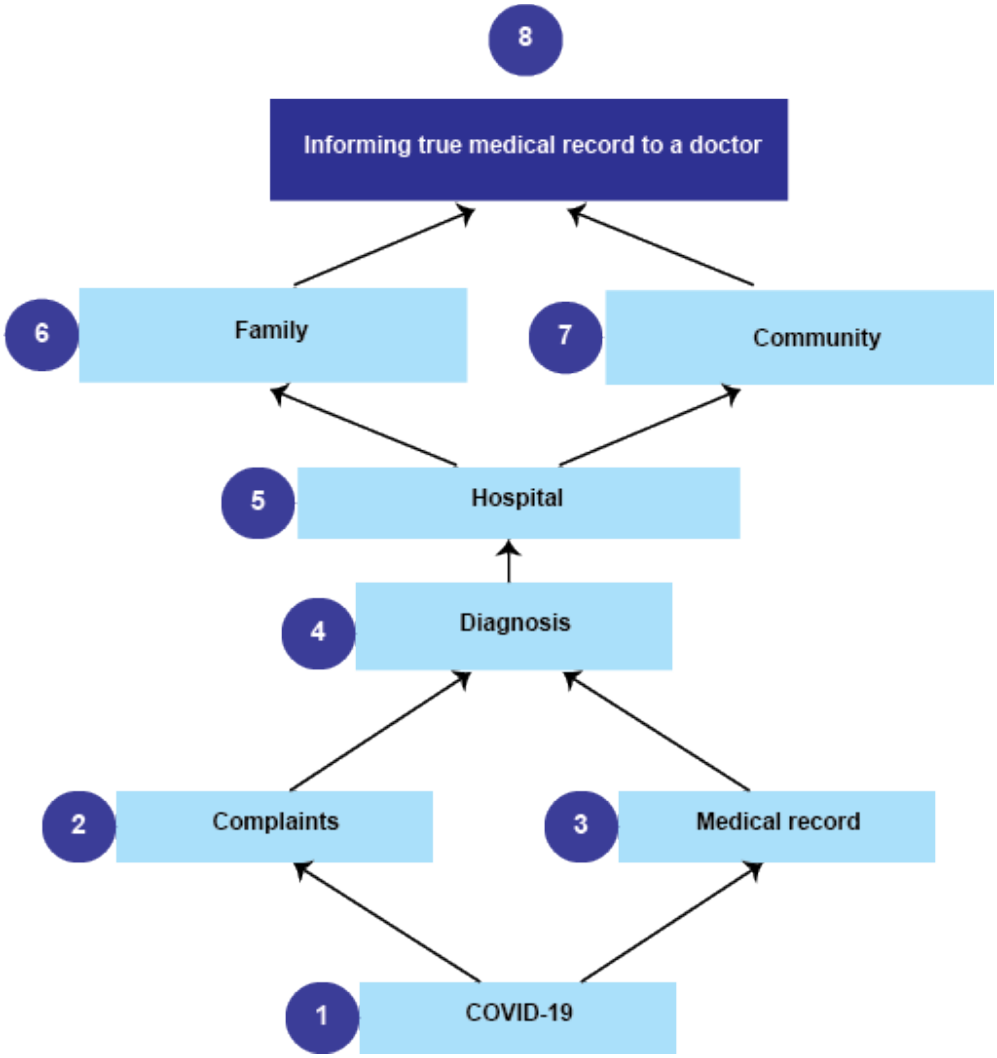

Figure 2 - Competency map of information

After designing the competency map, the next step is creating storyboard and navigation structure that are displayed in Table 4 and Figure 3.

Table 4 - A part of storyboard

Scene	Image	Description
3		Title: **COVID-19** **Background** Image COVID-19 **Text** Introduction about COVID-19 and the affect on economics, social, and education **Image** People wear mask, chart **Animation** Text and image animation **Audio** Music background **Video** - **Interactivity** Button
4		Title: **Complaints** **Background** Hospital **Text** Information about complaint of patients and medical record **Image** Patient and doctor **Animation** Text and image animation **Audio** Music background **Video** - **Interactivity** Button .

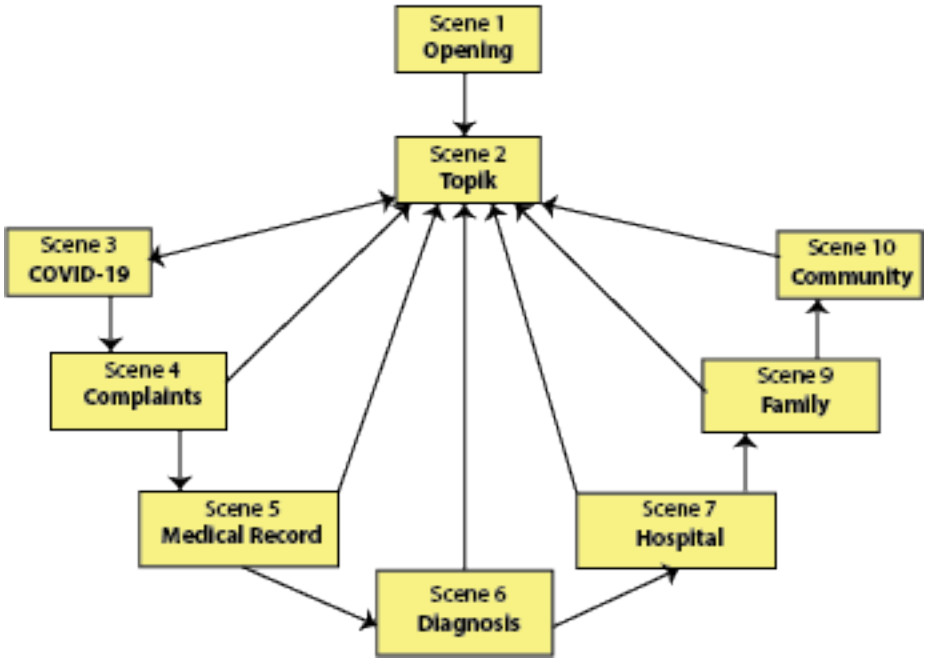

Figure 3 - Navigation Structure

Limitation of Research:

Developing Multimedia-based Learning on Avoiding Indistinctive COVID-19 Patients consists of 5 phases is still in progress. The third phase Develop is starting to be conducted.

Conclusion

Based on this study of Multimedia-based Learning on Avoiding Indistinctive COVID-19 Patients that was described, researchers can conclude: (1) The information derived from the initial research was used as a guideline for developing multimedia application, (2) The developing multimedia-based learning was carried using the ADDIE model and combined with Multimedia Development Life Cycle (MDLC); and (3) multimedia-based learning delivers information about COVID-19 including patients must tell the medical record to doctor. The advantage is reducing uncertain medical record that is not described by patients.

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