

THE IMPACT OF LANGUAGE OF INSTRUCTION ON QUALITY OF SCIENCE AND ENGINEERING EDUCATION IN LIBYA: QUALITATIVE STUDY OF FACULTY MEMBERS

Abdalmonem Tamtam, PhD Researcher

Fiona Gallagher, Lecturer

Dublin City University, Ireland

Sumsun Naher, Senior Lecturer

City University London, UK

Abdul Olabi, Prof.

University of the West of Scotland, UK

Abstract

The qualitative study aimed to investigate teaching staff views on language of instruction impact on the quality of education in two Libyan universities, where faculties of science and engineering at University of Al-Jabal Al-Garbi use Arabic as medium of instruction, and faculties of science and engineering at Nasser International University use English as medium of instruction. The participants in the study were five faculty members from each university teaching different science and engineering fields interviewed regarding their views on using Arabic only, English Only or Arabic-English Bilingualism as medium of education.

The Findings of the interviews revealed that teachers of both the cases have almost similar views with slight variations regarding all the three medium of instructions. According to participants of both cases, English would have bad impact on the students' academic performance for this reason Participants of case 1 think that students do not like English. On other hand respondents of Case 2 students like English despite their poor performance, as they know that, English is the only gateway for going Global. Participants of both cases stated though students like Arabic and it is easy for them to study in Arabic. All participants mentioned that use of Arabic results in lack of the job opportunities. In addition, the lack of academic materials and resources is an issue of Arabic Medium Instruction. Arabic-English Bilingualism seems to be the best solution for taking first step towards globalization. Many participants of both cases suggested Arabic-English Bilingualism as a first step towards globalization.

Keywords: Arabic Medium Instruction, English Medium Instruction (EMI), Arabic-English Bilingualism, Higher Education, Libyan Context

Introduction

Libya was granted its independence by the United Nations on 24 December 1951. It was described as one of the poorest and most backward country of the world, (Wallace and Wilkinson 2004). The Transitional National Council of Libya was established as an Executive Board after the Libyan revolution on Gaddafi regime in February 2011 to act as the political face of the state of Libya, Talmon (2011). Libya is located in the centre of North Africa facing the Mediterranean to the North coastline of close to 2000 kilometres, Libya has an area of 1.8 million square kilometres; it is the third largest among the countries of Africa and seventeenth among the countries of the world. The population of Libya is approximately 6.5 million includes 1.7 million students (The World Factbook 2011), most lives in the North of the state. Arabic is the official language, other languages used as dialects, (Hamdy 2007).



Figure 1: Map of Libya
Source: World Factbook 2011

The Libyan higher education system is very modern if it is compared to other developing countries that there were almost no higher education at all in the last 6 decades, while today education is free for all at all stages and the participation rate is extremely high in undergraduate level (National report presented to UNESCO 2007). Any system growing at that rate faces pressures and challenges. Over the period of 1980s and 1990s, the system

faced many problems, particularly in the use of language of instruction and changes of the education system, (Tamtam et al 2011).

In recent years, Libya opened for investment and businesses over the world, and many foreign companies entered Libya for investments. Today, Libya as a republic country, the higher education students' and teaching staff voice, perceptions and views are very important for the Ministry of Education, the policy and decision makers, especially in relation to the fields of science and engineering education.

Related Works

Study by Stevens (1983) examined Tunisians' ambivalence toward the various different languages used in Tunisia. Classical Arabic is given high status among Tunisians because of its association with Islamic religion and its function as a unifying symbol among Arabs. However, because of its high esteem and sacredness, it is not considered appropriate for use as a living everyday language and creates great difficulties when attempts are made to modernise it and adapt it to current practices. It is not spoken natively by anyone and can only be learned through formal education. The Tunisian Arabic dialect rejected as a corruption of Classical Arabic, is used in third level education. Stevens (1983), on the basis of participant observation, concluded that Tunisian Arabic is accorded high status covertly among Tunisian. It is a modern living language and expresses Tunisian authenticity. Because of the limitations of Classical Arabic, French is the language of the elite and has prestige. It is also a language of social distance. Because of its association with French colonisation, French is the most used and written language among bilinguals. Gradual Arabization in Tunisia was adopted as a social policy in 1958 when Tunisia became independent. However, Arabized high schools were abandoned in favour of bilingual ones. Critics of Arabization have argued that Arabic is not adequate for engineering and scientific concepts. Generally, Tunisians have positive attitudes toward bilingualism because it helps them to enjoy the best of both languages. Among those who are positively disposed to bilingualism, there are two major camps. One group accepts bilingualism because it is a middle ground between two unacceptable extremes. A second group views bilingualism positively, but they reject the Frenchification of the country, which is perceived as a threat.

A study by Taha (1990) reported that the language policy of Arabization in the Republic of Sudan has led to a great deal of controversy. He analysed the process in Khartoum University, in which English was the language of instruction until 1969. Although officially Arabicized, some faculties still teach in English. A study of attitudes toward English and Arabic was administered by Taha at Khartoum University, sampling 250

students and 31 faculty members. 56% of students preferred to use Arabic as the language of instruction, while 40% preferred English as the language of instruction. Thus attitude was stated much more frequently than faculty members, of whom 71% preferred English compared with 29% who preferred Arabic. 81% of the faculty members and 89% of the students preferred to read in Arabic in their free time. Both faculty members and students were critical of the implementation of Arabicization at the university. The participants thought that there was a lack of planning and resources, especially about the availability of references and materials in Arabic. Faculty members were more positively disposed to Arabicization than the students, although both groups were generally positive in their attitudes. However, English was valued for its instrumental use. English was perceived as important for obtaining a good job after graduation and as a means of access to international communication. Implementation of Arabicization has been slowed by lack of resources, problems in standardising scientific terminology, and the lack of staff to engage in Arabicization and translation activities.

A study by Al-Jarf (2004) investigated college students' attitudes towards the teaching and learning of English and Arabic, towards using English and Arabic as a medium of instruction at university level. The participants were two groups, 272 students, male and female from science and engineering faculties at Jordan University, Jordan, and 470 female students from faculty of languages and translation at King Saud University, Saudi Arabia. All were randomly chosen. The question was which language is more suitable for teaching medicine, engineering, science pharmacy and other science fields, Arabic or English? The researchers used two methods for the study: interviews with the Jordan university students and an open questionnaire with the King Saud university students. The data collected in the study was quantitative, as the researcher conducted the main reasons for favouring or not favouring English as a language of instruction. 96% of students from Jordan University and 82% from King Saud University think that the Arabic language is suitable for teaching Arabic literature, religion studies, history and education, but the English language is suitable for teaching science and engineering. Both groups gave reasons for their responses. For favouring English, students agreed (i) that the English language is very important for technology and the development of the country, (ii) and the English language is a global language and the language of scientific research and publications, (iii) and shortage of Arabic translation for science and technology studies, the lack of publication in Arabic language in science and engineering studies, (iv) labour markets prefer people who have studied in English in fields of science and engineering, and English is a prestige language.

English as a Medium of Instruction: EMI

The debate over Arabization and foreign languages revolves around politics and practicality. The Arabs reject French because of specific historical relationship between French domination and colonialism. The Francine (French-educated) accepts French because it is one of the world languages that have economic, scientific, and technological advantages. However, according to Ennaji (1991), a third alternative has presented itself with arrival of English in Maghrib. It has the advantage of not being the language of the coloniser and being the premier language of instruction in science, engineering, technology and international trade. Because of its advantages, English has been spreading rapidly in Arab countries, (Zughoul, 2003; Al-Jarf , 2008; Ahmed, 2010).

English Medium Instruction (EMI) for non-English speakers is known as a bilingual teaching method. It is a recent emergence and is being implemented widely, Jusuf (2001), (Tamtam et al 2010). The main purpose of introducing this method of teaching is to provide the students with a mixture of language learning and other content area subjects. This with such certainty a good approach to making students learns another language, Jusuf (2001). A foreign language is required in order to improve levels of communication. According to (Schützenhöfer and Mathelitsch 2001), the Austrian Ministry of Education supported and promoted this concept of implementing EMI. They concluded that there was a huge need to have foreign language learning in schools and other educational institutes. For this purpose English was chosen, (Tamtam et al 2010). It can be seen that Arab countries are now very much concerned with the developments of communication by using a foreign language. Using a foreign language is an efficient way of improving relations between different states. EMI has encouraged international co-operation and interaction in various education fields, especially, science and engineering, Crystal (2003).

As described above, English has the advantage in Libya of not being a language of the oppressor and the additional benefit of being a language of science and technology. It has the distinct disadvantage of not being widely known or used in the state, because it was suspended for almost ten years by the regime, Al Moghani (2003), Albukbak (2008), (Tamtam et al 2011).

Methodology

This study adopted qualitative approach. Researcher considered interview method appropriate to investigate teaching staff views on the impact of language of instruction in science and engineering teaching on quality of education. Five teachers from first case study, University of Al-Jabal Al-Garbi, and the second case study were five teaching staff from Nasser International University. The total population of the teachers were

faculties of engineering and science. The teachers to be sampled were those to whom the researcher had access and who volunteered to participate.

(Lindzey and Aronson 1968) have defined interview as “a two-person conversation, initiated by the interviewer for the specific purpose of obtaining research-relevant information and focused by him on the content specified by the research objectives of description and explanation”.

Interviews are a tool to collect data which will give meaningful understanding of any individuals’ ideology about any topic of reference. The main purpose of conducting interviews is to get in depth information and understanding of the interviewees’ perception.

Seidman (1998) explains that interviews are a technique to collect qualitative data by understanding experiences of other people. Interviewing is flexible and exploratory method and gives a lot of freedom to the interviewer to get in-depth information and “subjective understanding”. Accordingly, it is desired to know more about the subject which is not possible in providing two or more options in regular questionnaire method of data collection, “At the heart of interviewing research is an interest in other individuals’ stories because they are of worth”. Thus interviewing is most effective verbal questioning.

Description and exploration are the two most effective functions of the interview techniques. In conducting interviews, interviewees get chance to get in touch with the respondents by spending some time and this helps in seeking additional and meaningful information. It explores the personal dimensions which were not possible in any other method of data collection. Personal communication, instant response, personal touch and rapport between interviewer and interviewee, equality of status, flexible format, etc are many characteristics of interviews given by (Black and Champion, 1976; Oppenheim, 1992).

Interviews can be structured or unstructured. Unstructured interviews are flexible and spontaneous. There are no set questions and it goes with the flow. While structured interview is has a set of questions as a guide line but essentially different from questionnaires.

In this study five teachers were selected from each university. Interviews were conducted to benefit from their above mentioned qualities and get greater understanding of the topic of research. Interviews were specially designed to answer research question. What is the impact of language of instruction on quality of science and engineering education in Libya?

Results:

English

Language Proficiency

English's Language proficiency is low for all the students for both the universities.

Case Study 1

According to all the teachers of Case 1 students find English hard and thus do not like to use English in their exams. *“As we don't use English in our college for teaching, but from my experience on students, they don't like to use English because they find it hard to understand in science classes, especially in exams, which want someone has good understanding in exam's time”*, commented by Teacher 1 Case 1. Teacher 2 Case 1 stated, *“Students found science classes hard to understand in English, especially were exams have limited time”*. Teacher 3 Case 1 mentioned, *“As I use very little of English, but Students didn't like that as they found my engineering classes hard to understand...and asked to translate most of the questions”*. *“Students are afraid of using English,”* stated by Teacher 5 Case 1.

Case Study 2

On the other hand, Teachers of case 2 have slightly different view, according to three of them students like using English but they find it hard to deal with EMI during exams. Teacher 1 Case 2 reported, *“Students like to study in English, and they like to use English in science and engineering, but they find it harder in exams”*. Teacher 2 Case 2 stated, *“Students prepares themselves to join classes carefully, and because all computer languages are in English, students tries to understand and works hard to learn”*. Teacher 4 Case 2 said that *“Students like to communicate in English at classes specially in engineering classes that have Maths terms and they prefer it better, in exam time students like to explain questions if it is in English in more details”*.

Impact

Use of English has bad impacts on students' scores and overall performance. It has been reported by three teachers of case 1 and one teacher of case 2. All the Teachers of both the universities stated that use of English medium instruction lowers the performance of students in exams and lower the previous good grades.

Case Study 1

Teacher 3 Case 1 stated, *“As I tried to do some tests in English, students were very bad and asked to translate most of the questions”* and Teacher 5 Case 1 also reported *“Bad impact”*.

Teacher 3 Case 1 reported, *“This is the big problem faced by most of teaching staff who tried to use English in engineering teaching, that’s why most of students don’t like to use it as they afraid to fail if the EMI is the instruction of teaching”*. Teacher 4 Case 1 also has similar views, *“Unfortunately, this is the true that use of English medium instruction lowers the performance of students in exams”*. Teacher 5 Case 1 has said, *“Yes, it does”*.

Case Study 2

Teacher 5 Case 2 stated, *“First and second years did badly in exams and tests”*.

“Yes, English lowers students’ grads and their performance in exams”, reported by Teacher 1 Case 2. Teacher 3 Case 2 also reported *“Yes”*. Three of them have slightly different view as reported by Teacher 2 Case 2 *“Yes, it lowers in some subjects, but not in all areas”*, Teacher 4 Case 2 *“Yes, in some subjects, but not in all. Subjects that related to Maths don’t affect students’ performance”* and *“Mostly yes, in first and second years,”* mentioned by Teacher 5 Case 2.

Stage that language should starts

Case Study 1

Keeping in view the importance of EMI two of the teachers of Case 1 suggested starting EMI as early as possible. Teacher 2 Case 1 reported, *“As students have to choose their fields from secondary school, so EMI should start in secondary school than students can find their self’s good in using EMI”*. Teacher 5 Case 1 also stated same, *“Implement EMI as soon as possible to improve the education system and students English language as well”*.

Case Study 2

Three teachers of Case 2 also talked about EMI. Teacher 1 Case 2 said, *“Start teaching English from primary school”*. Teacher 4 Case 2 stated, *“Implement EMI in all postgraduate studies in Libya to have local teachers who can use EMI in university level”*. Teacher 5 Case 2 said, *“Support institutions that implement EMI and give them more funds and scholarships for students and teaching staff”*.

Job opportunity

Almost all of the participants agreed that to interact with the world and get benefits one has to be proficient in English. According to participants, knowing English is an asset for all those who want to excel in their professional carriers.

Case Study 1

“If they have graduated and studied in English the future is open for them in Libya and over the world”, mentioned by Teacher 1 Case 1. Teacher 3 Case 1 stated, *“Students who have better English in their specialized fields can get good job and may they can get more opportunity to have grants from government to study abroad”*. Teacher 5 Case 1 reported, *“Qualifications in science and engineering with English is open for good future”*.

Case Study 2

Teacher 1 Case 2 stated, *“They can get good jobs if they are good in English”*. *“Students who finish in computer science with good English can work anywhere over the world and can be paid well”*, mentioned by Teacher 2 Case 2 and *“they still have more opportunity in labour markets”*, stated by Teacher 3 Case 2. Teacher 4 Case 2 also has similar views, *“they have good opportunities for good job and to get technical training programs abroad”*.

Culture

However, students like English as a language but they have reservations for western culture. Three teachers out of 10 talked about Culture.

Case Study 1

Teacher 2 Case 1 commented, *“Students like English language in general, but they don’t like the western culture”*. Teacher 3 Case 1 stated, *“Most of students don’t like western culture, but they like to use English to improve their language as they have very little of English as a language”*.

Case Study 2

Teacher 3 Case 2 mentioned, *“Students enjoy learning in English with reserve”*.

Arabic

Language proficiency

Case Study 1

Almost all of the participants of the study agreed that students like Arabic very much and have high proficiency levels of Arabic Language.

Teacher 1 Case 1 stated, *“When we use Arabic as a language of teaching, students can understand the classes and interact with teachers”*. Teacher 3 Case 1 commented, *“Most of students in my college like to use Arabic, as they find it easy to understand and to learn”*. *“Students don’t find any difficulty in using Arabic and they didn’t find any change from previous school levels, they don’t have to work hard to understand or do more extra practice to understand the classes and exams”*, mentioned by Teacher 4 Case 1.

Case Study 2

Teacher 1 Case 2 mentioned, *“Students can understand more in Arabic”*. Teacher 3 Case 2 stated, *“They can connect and discuss with teachers. Teacher 4 Case 2 said, “Students can interact and have more discussion during class time”*.

Impact

Most of the teachers of both the universities have mentioned that Arabic has good impacts on the students’ grades.

Case Study 1

Teacher 1 Case 1 stated, *“The students get good marks”*. Teacher 2 Case1 said, *“Students can understand the classes easy when delivered in Arabic, and can have better marks than any other Language of instruction”*. Teacher 4 Case 1 reported, *“Students can understand the classes easy when delivered in Arabic, and can have better marks than any other Language of instruction”*.

Case Study 2

Teacher 1 Case 2 said, *“The students got good grades and can understand more in Arabic and did much better than English in Exams”*. Teacher 3 Case 2 mentioned, *“Students get good marks in exams when using Arabic”*. *“Students have good performance and they will do better in exams as they prefer to answer in Arabic and write technical terms in English and do well in exams”*, stated by Teacher 4 Case 2.

Job opportunity

Use of Arabic as a medium of instruction is an obstacle in way of getting good jobs.

Case Study 1

Teacher 2 Case 1 reported, *“Students will not get good opportunity to find good job”*. Teacher 4 Case 1 said, *“studying Arabic will be a*

disadvantage after they graduates". *"Arabic limits the opportunity to find good job and most of science and engineering graduates work as a teachers in primary and secondary schools"*, mentioned by Teacher 3 Case 1.

Case Study 2

Teacher 1 Case 2 mentioned, *"They can't find good job after finishing study"*. Teacher 3 Case 2 stated, *"Students who study in Arabic have limited their opportunity to find a job"*. *"Most of students work as teachers or in local organisations after they graduates"*, mentioned by Teacher 5 Case 2.

Resources

Most of the latest academic resources like books and journals are not in Arabic language, which is drawback of Arabic Medium Instruction. Two teachers of Case 1 and one of Case2 mentioned this problem.

Case Study 1

Teacher 1 Case 1 stated, *"Arabic references don't cover all area of studying especially up to date works"*. Teacher 5 Case 1 reported, *"Students know that Arabic limits their knowledge in science and engineering because of the lack of references and materials in Arabic"*.

Case Study 2

Teacher 2 Case 2 said, *"Teaching in Arabic doesn't cover all the curriculum of the subject, as many up to date references weren't translated"*.

Arabic-English Bilingualism

Language proficiency

Students like Arabic-English Bilingualism more than Arabic or English alone.

Case Study 1

Teacher 2 Case 1 said, *"It is good to use Arabic/English in teaching for students and teachers as well"*. *"I think the impact of students when lectures are delivered in Arabic/English in teaching science and engineering will improve by the time if the college implement it in classes"*, stated by Teacher 3 Case 1. Teacher 4 Case 1 reported, *"Students will like it more if it is started step by step and not in all classes at the same time"*.

Case Study 2

Teacher 1 Case 2 mentioned, *"It is better than English only, and students can understand in English and Arabic as well"*. Teacher 3 Case 2

commented, *“Here students can explain topics and ask questions in Arabic if they couldn’t tell it in English, and can answer and mix Arabic with English in exams”*. *“Students have good performance as they can ask and questions using Arabic and English especially in exam where time is limited”*, reported by Teacher 5 Case 1.

Impact

All teachers think that Arabic-English Bilingualism will have good impacts on students’ scores.

Case Study 1

Teacher 1 Case 1 said, *“Using two languages in teaching can give students better performance in classes”*. Teacher 3 Case 1 commented, *“I think situation will improve by the time if the college implement it in classes, as many students find it hard in first year, but by second and third year they will like it and they will use it very easily, in forth year they will think that they are using just Arabic”*. *“They may have good performance in classes and exams”*, reported by Teacher 4 Case 1.

Case Study 2

Teacher 1 Case 2 stated, *“Students do well in exams”*. *“Students understand the topic better if it is explained in Arabic/English and saves time for the teacher”*, reported by Teacher 2 Case 2. Teacher 4 Case 2 mentioned, *“Students have good performance and they will do better in exams as they prefer to answer in Arabic and write technical terms in English and do well in exams”*.

Job opportunity

Most of the participants of both the universities stated that students would be able to avail both local and international Job Opportunities if they have studied in Arabic-English Bilingualism.

Case Study 1

“They havemore opportunity to get some jobs in engineering companies that use Arabic and English language”, reported by Teacher 1 Case 1. Teacher 2 Case 1 said, *“This type of teaching gives students more chance to find good jobs in some oil and technology companies”*. Teacher 4 Case 1 mentioned, *“This will give them good opportunity to get good jobs in Libya or other Arab gulf countries”*.

Case Study 2

Teacher 1 Case 2 reported, “*Students find good jobs if they studying in Arabic/English*”. Teacher 2 Case 2 mentioned, “*Graduates with some English have more chance to get good jobs*”. Teacher 5 Case 2 stated, “*More options to work with local and mixed companies and institutions*”.

Summary

Findings of the Interviews revealed that teachers of both the cases have almost similar views with slight variations regarding all the three medium of instructions.

According to participants of both cases, English would have bad impact on the students’ academic performance for this reason Participants of case 1 think that students do not like English i.e. “*students don’t like to use English because they find it hard especially in exams*” Case 1 Teacher 1. According to respondents of Case 2 students like English despite their poor performance e.g. “*Students like to study in English but they find it harder in exams*” Case 2 Teacher 1, as they know that, English is the only gateway for going Global.

Participants of both cases stated though students like Arabic and it is easy for them to study in Arabic i.e. “*Most of students in my college like to use Arabic*” Case 1 Teacher 3 and “*Students can perform well*” Case 2 Teacher 2. All participants mentioned that use of Arabic results in lack of the job opportunities i.e. “*Arabic limits the opportunity to find good job*” Case 1 Teacher 3. In addition, the lack of academic materials and resources is an issue of Arabic Medium Instruction e.g., “*Arabic doesn’t cover all the curriculum of the subject, as many up to date references weren’t translated*” Case 2 Teacher 2.

Arabic-English Bilingualism seems to be the best solution for taking first step towards globalization. Many participants of both cases suggested Arabic-English Bilingualism as a first step towards globalization i.e. “*Students will like it more if it is started step by step and not in all classes at the same time*” Case 1 Teacher 4.

Discussion: English

English is the international language of world and hence one could not neglect its importance. Participants of the survey are also well aware of its importance but they also have few concerns related to it.

According to all the teachers of Case 1 students find English hard and thus do not like to use English in their exams. One of them has mentioned that students don’t like to use English because they find it hard to understand in science classes, especially in exams. It has also been stated that students

found science classes hard to understand in English, especially where exams have limited time. Another teacher has mentioned that students didn't even like minimal use of English and ask to translate most of the questions and they are afraid of using English.

On the other hand, Teachers of case 2 have slightly different view, according to few of them students like using English but they find it hard to deal with EMI during exams. On the contrary it has also been reported that students tries to understand and works hard to learn because all computer languages are in English. It has also been mentioned that sometimes students even like to communicate in English especially in engineering classes but in exams students like to explain questions in more details if it is in English. Teachers have reported that the use of English has bad impacts on students' scores and overall performance. All the Teachers of both the universities stated that use of English medium instruction lowers the performance of students in exams and lower the previous good grades.

It has been stated by teachers of case 1 that students perform very badly and ask to translate most of the questions if they were in English and this result in overall bad impact.

Teachers reported that this is the big problem faced by most of teaching staff who tried to use English in engineering teaching, that's why most of students don't like to use it as they afraid to fail if the EMI is the instruction of teaching. Unfortunately, this is true that use of English medium instruction lowers the performance of students in exams one of the interviewee reported.

Keeping in view the importance of EMI teachers of Case 1 suggested starting EMI as early as possible. Teachers also stated that government should implement EMI as soon as possible to improve the education system and students English language as well.

Almost all of the participants agreed that to interact with the world and get benefits one has to be proficient in English. According to participants, knowing English is an asset for all those who want to excel in their professional carriers. It has been reported that if students have graduated and studied in English the future is open for them in Libya and over the world and they would also have good opportunities for good job and to get technical training programs abroad.

However, students like English as a language but they have reservations for western culture. Teachers commented that students like English language in general, but they don't like the western culture, but they like to use English to improve their professional capabilities. Though no question related to western culture was asked in the interview but respondents still mentioned their reservations for western culture.

According to teachers English's Language proficiency is low for all the students for both the universities. Despite this interviewed teachers think that students of Case 2 like using English but they find it hard to deal with EMI. Use of English has bad impacts on students' scores and overall performance and lowers the performance of students in exams and the previous good grades, keeping in view the importance of EMI it has been suggested that EMI should start as early as possible. Almost all of the participants agreed that to interact with the world and excel in professional carriers one has to be proficient in English. Students like English as a language but they have reservations for western culture. This is similar to other studies by (Al-Hajj Eissa and Al-Mutawa, 1988; Al-Sebaee, 1995).

Arabic

Arabic is the mother tongue of almost all of the students in both the universities and the official language in Libya, students usually found Arabic very easy to understand various concepts of Engineering and Science.

Almost all of the participants of the study agreed that students like Arabic very much and have high proficiency levels of Arabic Language. Respondents stated that use of Arabic as a language of teaching, make students understand the classes and interact with teachers in a much better way. Another teacher commented that Most of students in my college like to use Arabic, as they find it easy to understand and to learn, they don't have to work hard to understand or do more extra practice to understand the classes and exams. Interviewee reported that students can connect and discuss with teachers in a much better way in Arabic.

Most of the teachers of both the universities have mentioned that Arabic has good impacts on the students' grades. It has been reported that students can understand the classes easy when delivered in Arabic, and can have better marks than any other Language of instruction, as found by Arkin (2013).

Use of Arabic as a medium of instruction is an obstacle in way of getting good jobs. Respondents were aware of the fact that students will not get good opportunity to find good job and studying Arabic will be a disadvantage after they graduates. It has been mentioned that most of science and engineering graduates who have studied in Arabic medium of instruction work as a teachers in primary and secondary schools or in local organisations after they graduates.

Most of the latest academic resources like books and journals are not in Arabic language, which is drawback of Arabic Medium Instruction. One teacher stated that Arabic references don't cover all area of studying especially up to date works. Apart from this teaching in Arabic doesn't cover

all the curriculum of the subject, as many up to date references weren't translated. This result goes in line with that of Al-Asal, and Smadi, (2011).

Almost all of the participants of the study agreed that students like Arabic very much and have high proficiency levels of Arabic Language. Most of the teachers of both the universities have mentioned that Arabic has good impacts on the students' grades but use of Arabic as a medium of instruction is an obstacle in way of getting good jobs. Most of the latest academic resources like books and journals are not in Arabic language, which is also a drawback of Arabic Medium Instruction.

Arabic-English Bilingualism

Arabic is the mother tongue and English is the Lingua Franca and combination of both can improve the current situation. Almost all the respondents agreed that Arabic-English Bilingualism is the best way to solve the problem faced by students.

Interviewees have reported that students like Arabic-English Bilingualism than Arabic or English alone. It is good to use Arabic/English in teaching for students and teachers as well. It has been reported that the performance of students when lectures are delivered in Arabic/English in teaching science and engineering is better. Another respondent reported that students will like it more if it is started step by step and not in all classes at the same time.

All teachers think that Arabic-English Bilingualism will have good impacts on students' scores. It has been noted that using two languages in teaching can give students better performance in classes. Situation will improve gradually by the time if the college implement it in steps, as many students find it hard in first year, but by second and third year they start liking it and would be able to use it very easily, in forth year. Students could understand the topic in a much better way if it is explained in Arabic/English and saves time of the teachers.

Most of the participants of both the universities stated that students would be able to avail both local and international Job Opportunities if they have studied in Arabic-English Bilingualism. They have more opportunity to get some jobs in engineering companies that use Arabic and English language both, reported one of the respondents. This type of teaching gives students more chance to find good jobs in locally and internationally.

Conclusion

Students like Arabic-English Bilingualism than Arabic or English alone. Almost all teachers think that Arabic-English Bilingualism will have good impacts on students' scores. Most of the participants of both the universities

stated that students would be able to avail both local and international Job Opportunities if they have studied in Arabic-English Bilingualism.

However, students find Arabic, the easiest medium of instruction and gain good marks but in the present age, no one can survive without knowing English. It is also impossible to take a jump from Standard Arabic to Complete English, as it is better to move step-by-step then to jump and fall. Thus, it has been concluded that at higher levels of education, Arabic-English Bilingualism should be implemented initially and then English Medium Instruction should be introduced. Government should also start EMI from Primary level so that the new generations do not find English difficult when they reach Universities.

References:

- Ahmed, K. (2010). English in the Arab Gulf. *Asian Journal of University Education*, 6 (1), 1-12.
- Al-Asal, S. M. and Samdi, O. (2011). The effect of the language of instruction on university participants` acquisition of scientific terms, *European Scientific Journal*. 52 (1), –28.
- Albukbak, A., O. (2008). Issues on the development of English language teaching. 1st edition, Misurata: The Seventh of October University. Libya
- Al-Hajj Eissa, M. and Al-Mutawa, N., (1988). Problems of using English as a medium of instruction and communication at the college of science. Kuwait University. *Educational Journal*, 4, 15, 47-94 (in Arabic)
- Al-Jarf, R. (2004). College Students` Attitudes towards Using English and Arabic as a Medium of Instruction at the university Level. World Arabic Translator`s Association (WATA)
- Al-Jarf, R. (2008). The impact of English as an international language (EIL) upon Arabic in Saudi Arabia. *Asian EFL Journal*, 10(4), 193-210.
- Al Moghani, H. M., (2003). Students' perceptions of motivation in English language learning in Libya. Doctoral thesis, Durham University.
- Al-Sebaee, Z. (1995). Experiments in Using Arabic as a medium of instruction in medical schools. *Eastern Province Literary Association*. Dammam, Saudi Arabia (in Arabic).
- Arkin, E. I. (2013). English-medium Instruction in Higher Education: A Case Study in a Turkish University Context. doctoral dissertation.. Eastern Mediterranean University. Gazimagusa. North Cyprus.
- Black J.A. and Champion D.J. (1976) *Methods and Issues in Social Research*. John Wiley and Sons, Chichester
- Crystal, D., (2003). *English as a Global Language*. 2nd ed. Cambridge University Press
- Ennaji, M. (1991). Aspects of multilingualism in the Maghreb. *In International Journal of the Sociology of Language*, 87, pp. 7-25.

- Hamdy, A. (2007). ICT in education in Libya. Libya Country Report. Retrieved 23 Dec. 2010 from <http://www.infodev.org/en/Document.412.pdf>
- Jusuf, I., (2001). The Implementation of EMI in Indonesian Universities: Its Opportunities, its Threats, its Problems and its Possible Solutions, *Presented at the 49th International TEFLIN Conference in Bali, Indonesia*. 3 (2), 121-138.
- Lindzey, G. and Aronson, E. (1968). The handbook of social psychology. 2d ed. Published Addison-Wesley Pub. Co.
- Taha, T., A. (1990). The Arabicisation of higher education: The case of Khartoum Univeraity. *Journal of Multilingual and Mulicultural Development*. 11, pp 291-305.
- Talmon, S. (2011). Recognition of the Libyan National Transitional Council. *American society of international law*. 15, Issue 16. Retrived on december 2012 from <http://www.asil.org/pdfs/insights/insight110616.pdf>,
- Tamtam, A., Gallagher, F., Olabi, G., A. and Naher, S. (2010). Implementing English Medium Instruction (EMI) for Engineering Education in Arab world and Twenty First Century Challenges, *International Symposium for Engineering Education, University College Cork: Ireland*.
- Tamtam, A., Gallagher, F., Olabi, G., A. and Naher, S. (2011). Higher education in Libya, System under stress. *Procedia – Social and Behavioral Sciences*, 29, pp742-751
- The World Fact book. (2011). Retrived on 23 Jan. 2011 from <https://www.cia.gov/library/publications/the-world-factbook/geos/ly.html>,
- Oppenheim, A. N. (1992). Questionnaire design, interviewing and attitude measurement (2nd ed.). London and New York: Pinter Publishers.
- Schützenhöfer, C. and Mathelitsch, L., (2001). English as a Medium of Instructions in Science-Teaching, Institute for Theoretical Physics, University of Graz, Austria
- Seidman, I (1998). Interviewing as qualitative research: A guide for researchers in education and the social sciences. New York, NY: Teachers College Press.
- Stevens, P., B. (1983). Ambivalence, modernisation and language attitudes: French and Arabic in Tunisia, *Journal of Multilingual and Multicultural Development*. (4), 2-3, pp 101-114.
- UNESCO IBE (2007) Libyan Arab Jamahiriya. World Data on Education, 6th edition. Retrived on december 2012 from http://www.ibe.unesco.org/Countries/WDE/2006/ARAB_STATES/Libyan_Arab_Jamahiriya/Libyan_Arab_Jamahiriya.pdf
- Wallace, J. D. and Wilkinson, B., (2004). Doing business with Libya, London Kogan Page, 2nd edition
- Zughoul, R., M. (2003). Globalisation and EFL/ESL Pedagogy in the Arab World. *Journal of Language and Learning*, 1 (2), pp 106-146