The Impact of Mobile Technologies' Competency on Utilization: Empirical Evidence

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Abstract: The focus of this study was to empirically examine the impact of mobile technologies' competency on utilization among 148 freshmen students in college of computer science and information technology at Hadhramout University using the frameworks of UTAUT model. The results indicated that undergraduates in CS & IT departments are highly utilized mobile technologies. It could be also figured out that they were extremely capable to use these devices. Moreover, it was revealed that undergraduates' competency and utilization levels were so high in communication purpose due to certain social and educational reasons. Students' competency and utilization in basic operation are strongly correlated while there is a moderate relationship between competency and utilization in communication purpose. This indicates that there is a positive relationship between the competency and utilization in basic operation and communication. Further, the results showed a strong association between independent and dependent variables while R square 78% of deviation in the dependent variable is described by the independent determinants entered in the model of multiple regression. Specifically, competency in basic operation is the highest influential variable to the utilization of mobile technologies among CS and IT undergraduates followed by competency in information seeking. Due to the results of the study, wider and greater implication of this method in college of computer science and information technology and other colleges in Hadhramout University is recommended along with the activation of the university app.

Keywords: Mobile technologies competency and utilization, college students, Yemen.

1. Background of the study

Mobile learning is a method that enables students to learn anywhere and anytime using mobile communication technologies (O'Malley et al., 2003). Moreover, this type of learning is transforming people habits, inserting new dimensions to the term of socialization, as well as forming new habits among the students (Oulasvirta, Rattenbury, Ma, &Raita, 2012). These devices are offering new style of learning opportunities to the learners as (Bower, Cram, & Groom, 2010) described "creating a new kind of reality, one in which physical and digital environments, media and interactions are woven together throughout ourdaily lives" A current report release by Cisco's Visual Networking Index (2017), reveals that by 2021 it is speculated that number of connected mobile devices will top up to 12 billion worldwide, whereas the number of mobile users will be 5.5 billion users worldwide.

Several international studies were carried out discussing the issues of M-learning in various contexts (Schuler, winters, and West, 2012; Park, Nam, & Cha, 2012; Mcconatha, Praul, and Lynch, 2008; Mirski and Abfalter, 2004; Alzaza and Yaakub, 2011; Homan and Wood, 2003; Kinash, Brand & Mathew; 2012). Studies in Arab countries observed similar situations, particularly in areas with low learning illiteracy. A current study conducted among 300 female undergraduates on perception of M-Learning adaptation in Kuwait, a country situated close to Yemen, reveals that approximately 80.3% of the students are pleased with the application of the mobile learning in their learning system. The institution currently had adopted mobile learning as the basis of their education. The study also indicates that students also believe that M.Learning enables them to learn English languages more effectively as before this method is introduced (Dashti&Aldashti, 2015).

Numerous studies conducted in KSA is much closer country with semi identical features, which adopted the M.Learning approaches, highlighted the same results on the conveniences of the MLearning. A study conducted by Alfarani (2015), on the influence of MLearning among Saudi female teachers in higher education found out that the MLearning enables them to collaborate successfully with the students during the learning process. Other

studies reported the same in Saudi Arabia higher education setting. The aim of this study was to check the probability of implementing mobile learning in to higher education. The results of the study find out that this type of learning offers greater chances to leaners as compares to the traditional learning method. Moreover, the findings also reveal that mobile learning is capable enough to raise the knowledge acquisition among learners (Almutairy et al., 2015). Similarly, a study conducted by Al-Fahad (2009) in King Saud university on 186 females' undergraduate students disclose that M-Learning develops the female students' retention of knowledge, and increase their understanding during the learning process. Meanwhile, Nassuora (2013) in his study conducted on 80 undergraduate students in KSA revealed that mobile learning has a higher level of acceptance among these students. Yemen as one of the least developed countries is not an exceptional.

According to the report issued by (Anna Seeger (GIZ) and Gentjana Sula (International Consultant, under the program called Yemeni-German General Education Improvement Program (GEIP) Yemen is known as one of the poorest Arab countries which experiencing extensive series of development challenge in all aspects including education. Despite the country 's development plans which claim to have education as one of their first priority, the first and second Millennium Development Goal (MDG) reports indicate that education in Yemen is hopelessly not meeting any of the MDGs target. Two million out-of-school children are currently experiencing these issues. These worrisome issues had urge GEIP, which held under the request of Ministry of Education (MOE) to check on the the possibility of integrating ICT to the education system in Yemen to solve this issues.

The reports also reveal on the number of challenges faces, which require immediate treatment. There is a vital need for a national agenda and sufficient national policies on ICT in education. Moreover, the issues of imbalance the technology between private sectors and technical people in one hand, public sectors and development collaborate in the other hand. The undeveloped telecommunication market with its limited speed is another challenge. The weak geographical coverage of internet services and high prices of services are another two dramatic challenges in the face of ICT integration. Furthermore, it is found out that limited access to energy with 40% access of national grid, and only 20% in rural areas had become another obstacle to effects the integration of ICT. Shortage of Arabic language resources to be used in education when integrating ICT is another huge challenge that need to be dealt with.

Despite the slow growth of the integration of ICT to Yemeni educational setting, there is still few practices and applications of ICT. Innovations in Technology-Assisted Learning for Educational Quality (INTALEQ)is an example of public private project of the application. This initiative aims to assist Yemeni students to "step up" to the future by providing them opportunities in mastering the skills needed to flourish in the 21st century. Another aim of this project is elevating the participant skills level and awareness of technology in education to improve the teaching and learning pedagogy in Yemeni high schools, particularly in on Mathematics and Science subjects. One of the outcomes of this project was an ELearning website called "Skoool Yemen". The online platform Skoool Yemen has been initiated by EDC and other partners (Intel, al-Awn Foundation, KSA, Skoool.com, USAID, the Ministry of Education Yemen), to provide digital content in science, including math, chemistry, physics and biology for tenth grade. The platform has been poorly executed in Arabic training content. No data are provided on how often and with the aid of whom the internet site is consulted.

Another application of ELearning in HE could be that one happens in the Faculty of Open Education at the University of Science and Technology in Sana. The institutions hadafforded distance mastering guides in five disciplines including, i) Accounting and Finance, ii) Administrative Sciences, iii) Arabic and Islamic Studies, iv)Sharia'a and Law, and v)Social Sciences. The personal university gives its distance-studying guides via virtual classrooms, iRadio and Learning Management System (LMS) to the international and countrywide college students.The rapid development of cellular phone possession has converted telecommunications in the Yemen over the previous decade. According to the International Telecommunications Union (ITU), there have been more than 11.6 million cell telephone subscribers in Yemen by 2011, or forty-six percentage of the whole population. A decade earlier, cell phones were hardly heard in the country, and now the Yemen government data had indicated that the sales on mobile telephones market areincreasing by time. Most of the citizens is now reachable via mobile phone. The mass importation of inexpensive handsets whichmajority imported from China has made the ownership of the devices affordable for everyone. The tremendous changes of mobile phone utilization portray completely different situation as compared to previous years. The increasing numbers of mobile technologies usage is expected to reach 16.88 million by December 2015. However, the number had jumped from 17.62 million in 2014 to 18.36 million in early of 2015, which much earlier than expected.

Since the introduction of ICT in Yemen educational setting, MOE had taken few steps by providing all the required equipment's with 7,000 computers especially in governorates schools such as Sana 'a, Aden, Hadramout, and Mukalla. This indicates that, Yemen government had a great concern to integrate the advancement of technologies in its educational system in all institutions level. One of the evidence is the opening of new faculty of Computer Science and Information Technology, where enabled the Hadhramoutuniversity students to get;

1- An updates regarding any news of the university on the website which helps students in their registration, give a brief introduction about the colleges' staff and its location. Moreover, the website provides students with topics and subjects covered in each semester along with syllables
2- An app established in 2018 to encouragethe students be keep updated with university news, current updatesand enable discussion between students and lectures through online.

This study is important because it deals with the it is conducted in an exceptional context, Yemen which is one of the countries that experiencing a scarcity of mobile technology resources, where the utilization of mobile technologies is known to be quite limited. Moreover, this study also attempts to reveal the level of mobile technologies utilisation among the students. Hence, it is hoped that the results of this study will later on bring benefits to the higher authority of the university, to improve the existing learning conditions. In addition to that, with mobile learning characteristics which facilitate and support the Yemeni educational system development, which is planned to be achieved in period between (2015 – 2025), it is advised to uncover the factors that may hinder the successful employment of this adoption. Apart from that, this study will shed some light on HE students' performance in this collegeto increase the quality of their mobile technologies utilization in the future. Another worth noted point is that this study would later on be a good reference to other future studies within the same context in Yemen or in any Arabic country. With very little searched topics in the field of integrated technologies especially in mobile technologies adoption, it is vital and essential to tackle this topic. Furthermore, the effect of students' competency on mobile technologies on the utilization is a topic that has never been conducted in thiscontext (Yemen). Therefore, this study is adding to the body of the research a new context that is seldom been known and explored. If studies like (Cochrane, 2014 & A NESTA Future Lab Series,2004) stated that there was number of factors facing the adoption of mobile technologies in HE institutions in developing countries and studies must be conducted to spot these factors or challenges, then it is vital important to uncover these elements in an underdeveloped country like Yemen.

The remainder of the paper is organized as follows. The next highlights the research methodology. The third section discusses the empirical results. The final section summarizes the conclusions, implications and future studies.

2. Research methodology

2.1 Research Design

The research's overall objective that is to shed light on the level of utilization of mobile technologies among first – year undergraduate students along with their competency in using the mobile technologies. Therefore, descriptive and correlation analysis is computed to achieve the overall objectives. The descriptive analysis will look into the student's preferences, attitudes, concerns, interests or practice of people. This notion is in a line with what Akour (2009) reported that descriptive research is meant to figure out the way things are through the collection of numerical data.

Moreover, this study is conducted to explore the relationship between mobile technologies utilization and competency level (dependent and independent variables). Furthermore, it will determine specifically the influence of undergraduates' competency in using mobile technologies on the level of adoption of these technologies through six different uses; basic information, communication, collaboration, information seeking, digital citizenship and creativity and innovation. This assumption is based on Norton (2013) which stated that competency in technology among higher education students is an outstanding factor influencing the usage of these technologies and it notably affect it.

2.2Population and Samples

The study will be conducted in Hadhramout, Yemen. More specifically, this study is intended to be conducted at Faculty of Computer Science and Information Technology in HadhramoutUniversity. The undergraduate's students of ICT and CS departments are the populations of this study.

In college of computer science and information technology, technologies like mobile devices are extensively applied. Therefore, this Facultyhave been chosen for this study to investigate the influence of competency of mobile technologies among the undergraduate students on their frequent utilization of these devices. Another possible reason is that majority numbers of staff in this faculty possesses an outstanding knowledge and are among specialists in the field of computer science and information technologies. All of the staff in this faculty is always trying to innovate their teaching method in line with the use of currentand available technologies.

Besides, all of the students in this faculty are compulsory to use their mobile devices like laptops, tablets and mobiles inside their classes to facilitate the learning process. Majority of the given task need to be done outside classes, purposely to let the students experience the mobile learning approaches. More precisely, all first year students in Computer Science and Information Technology Departments in this faculty is selected to participate in the study due to some of characteristics found in them. First, these students are newly introduced to new purposes of using these devices as stated before and uses of mobile technologies especially learning, studying and research purposes. Moreover, they are studying subjects with a relation to the topic of this study like; communication skills, learning skills, thinking skills and searching skills in the second semester of their first year. They are even studying about theory of computation. Hence, they possess at least the basis knowledge of M-Learning in general. Moreover, the choice of time which is the second semester when it is applicable to check whether being in this department studying these subjects and knowing the new purposes changed the way they utilize these devices.

2.3 Instrument

Due to the characteristics of questionnaire survey which offers cheap and time saving, hence the instrument is distributed with online and offline method. Moreover, the results of the survey questionnaire can be generalized (Fraenkel, Wallen and Hyun; 2012). The instrument used in this study is divided into three sections. Section 1: The demographic information, section 2: the utilization of mobile technologies, and section 3: the competency factor that influencing the mobile technologies utilization. Table 3.1 below presents the summary of the survey instruments sections.

Table 3.1. Sections in the questionnaire

Section	Aspect measure	No. of items
Section 1	Demographic information	5
Section 2	Utilization of mobile technologies	40
Section 3	Competency factor influencing mobile technologies utilization	40

2.3.1: Demographic Information

In this section, the items are developed by the researcher to get respondent's personal information particularly on the history of these technologies. There are four items or questions in this section. All of them are close-ended questions. All these items are asking about personal information like, departments (CS or IT), gender, and age. Etc.

2.3.2: utilization of mobile technologies

This part of the instrument is adopted from (Sedek (2014) which quoted from (Lei (2010). This section contains 40 items which divided into six sub sections of; i) basic information uses, ii) communication uses, iii) collaboration uses, iv) information seeking uses, v) digital citizenship uses, and vi) creativity and innovation uses. The aim of this section is to explore the undergraduate students' level of utilization of mobile technologies. In other words, it will reveal how frequently they utilized the mobile application in related to M-Learning. Each item in every subsection is measured through five Likert scale which represented by (1) to (5), (1) never, rarely (Once or twice), (2) sometimes (2 – 3 times a week), (3) often 4 – 6 times a week and (5) almost every day. Table 3.2 below shows the six subsections in the utilization of mobile technologies section with the number of items for each section.

Table 3.2.subsections or dimensions with items of dependent variable

Name of subsection	No. of items
Basic operation uses	7
Communication uses	9
Collaboration uses	3
Information seeking uses	7
Digital citizenship uses	9
Creativity and innovation uses	5

2.3.3: competency of mobile technologies

This part of the instrument was adopted from (Sedek (2014) which is quoted from (Oblinger (2010) This section contains forty items in general. These items are divided into six sub sections. Each subsection inquires on the level of student's skills and abilities in mobile technologies uses, which are treated as tools; basic information tool, communication tool, collaboration tool, information seeking tool, digital citizenship tool and creativity and innovation tool. The aim of this section is to explore the undergraduate students' level skills and ability in mobile technologies uses as tools. Each item in every subsection is measured through five Likert Scale which represent by 1-5, (1) No skills in this area, (2) Limited skills in this area, (3) enoughSkills: Need refinements, (4) Skilful, (5) Very Skilful. Table 3.3 below shows the six subsections in the utilization of mobile technologies section with the number of items in each.

Table 3.3.subsections and dimensions with items of independent variable

Name of subsection	No. of items
Basic information uses	7
Communication uses	9
Collaboration uses	3
Information seeking uses	7
Digital citizenship uses	9
Creativity and innovation uses	5

Based on Table 3.3 above, each itemis the same in name as and number as in previous section. However, they are different in purpose. Therefore, it is necessary to state the competency section with its subsections.

2.4 Validity and Reliability

2.4.1 Validity

Validity as stated by Fraenkel&Wallen (2009) is the step that ensures the data gathered is suitable,accurate, relevant and effective to be inferred and generalized to wider community. It could also be understood as the stage to which a test measures what it supposed to measure and allows the appropriate inferences and generalization of scores (Akour, 2009). There are different types of validation of the data that can be done such as; construct – related evidence, criterion – related evidence and content –related evidence. Most of the items and dimensions were adopted from (Sedek (2014) which is quoted from (Oblinger , 2010). Little adaptation is run for the sake of having clearer items to participants. The validity of this instrument took two steps. First, an official and authorized translator to the target language (language of participants that is Arabic) translated the instrument. Then, another translator to check the consistency of the meaning in both transcripts translates it back to English. The result was nice and the consistency is achieved. After that, the instrument is given to a specialist as a second step of validation. This instrument is given to the expert Dr.Masnida MD Khambri who is a senior lecturer in educational technology department and a specialist on laptop and mobile technologies research area. This step is in line with Streiner (2013) who stated that the best way of validating an instrument is through giving it to an expert who has a good background and knowledge in that field. After proofreading the instrument, the expert reported that the instrument nicely fit the objectives drawn except for some minor comments and changes in the language used. The suggested changes were taking into the researcher consideration.

2.4.2 Reliability

Reliability is the capability of an instrument delivering similar results every time applying it. Accordingly, Gay, Mills &Airasian (2012), relialbility is the degree to which a test could measure whatever it is measuring repeatedly. Reliability as defined by Fraenkel&Wallen, (2012) is the consistency of instrument's answers or scores from one application of that tool to another. Reliability can be applied to people and results as well (Sapsford and Evans, 1984). This study employed the reliability test to the pilot study and then the results of the actual research results. The higher the reliability value that the items possess the more reliable the item is (Pallant, 2013). Table 3.4 below exhibits the recommended of Cronbach Alpha range:

Table 3.4. Alpha range and acceptability status

Alpha range	Acceptability status
Below .60	Undesirable
Between .60 and .65	Minimally acceptable
Between .65 and .70	Responsible
Between .70 and .80	Responsible
Between .80 and .90	Very good
Above .90	Excellent

Source: Pallant (2013)

2.5 pilot of the study

Pilot study is conducted purposely to identify lacking information and improves the existing survey instrument during actual data collection. Moreover, pilot study is conducted to spot on the weaknesses of the instrument (Offredy& Vickers, 2013). Through the results of pilot study, the researcher enables to estimate about whether the instrument designed able to answers all the required information regarding the study area or not. Since the sample of the pilot study is very few, the reliability test conducted is quite clear and simple to gather and analysed. There were only thirty undergraduates' students participating in this test. This is in a line with what is stated in the study of Hertzog (2008) who suggested that number of participant in this study should not be more than ten percent of the sample size.

The survey questionnaires were distributed directly to thirty undergraduate students, all of the completed survey was, and the data were gathered and analysed using IBM SPSS version 23. The Cornbach Alpha value of the related items was produced which involved on the information on utilization of mobile technologies (0.897) and competency of mobile technologies (0.92). The results of Cronbach alpha of the actual study were also calculated and presented in the following Table 3.5. The Cronbach Alpha value for utilization of mobile technologies items is (0.85) and utilization of mobile technologies (0.895). Based on the table below, all of the instruments tested indicate value that is higher than .70 which in line with the study of Pallant (2013). Secondly, the result of cronbach alpha for the actual study is higher than the pilot study conducted. Table 3.5 below shows the dimensions with their pilot and actual Cronbach alpha results and values.

Table 3.5. Results of alpha for pilot study and actual study for all dimensions

Section	Construct	Pilot study (n= 30)	Actual (n=148)
1	UTI	0.897	0.85
2	COMT	0.92	0.895
3	UTIBI	0.849	0.83
4	UTIC	0.847	0.73
5	UTICL	0.696	0.82
6	UTIIS	0.777	0.71
7	UTIDC	0.738	0.77
8	UTICI	0.74	0.70
9	COMTBI	0.83	0.81
10	COMTC	0.828	0.789
11	COMTCL	0.828	0.80
12	COMTIS	0.80	0.71
13	COMTDC	0.74	0.787
14	COMTCI	0.69	0.743

2.6 Data collection

There are few challenges that need to be dealt with during the data collection phase. Despite the easiness of distributing questionnaires online, it is notably hard to administer it. Therefore, the researcher prefers to distribute the questionnaires in a collective way. Having a good relationship with lecturers was another reason why theresearcher prefers to perform it in collective questionnaire as compared to the online version. Majority of the academicians in the faculty are helpful and collaborative enough to lend a hand in the survey distribution phase. The undergraduate student's weak experiences of using email and online questionnaire was another reason for the researcher to choose the collective method.

The data collection step was carried out from August to September 2018. A total number of 208 undergraduate students had participated in this study. Thirty of them were chosen for the pilot study. The rest of them were used for the actual study, whichwere 178. Out of the number of questionnaires distributed, 162 were returned to the researcher. After checking the questionnaires responses, 148 of the 162 of the returned were valid, completed and used for the analysis, which is a good feedback. The number of questionnaires that is valid completed and returned are more than 60% of the total questionnaires distributed. This is considered a good number for the data analysis and report (Draugalis, Coons, and Plaza, 2008). Table 3.6 show the response rates and percentages on survey questionnaire distributed.

Table 3.6. Response rates and percentages on questionnaire

Description	Distributed in actual study	Returned	Valid
No. of questionnaire	178	162	148
Percentage	100%	91%	83%

When the questionnaires were collected, sorted and checked, the data was entered to IBM SPSS 23 statistical package for analysis. Before entering the data to the program, the variables and dimensions were coded by the researcher. All the codes for variables and dimensions are shown in Table 3.7 below:

Table 1.7.codes of all dimensions

Scale	Code
Utilisation of mobile technologies	UTI
Competency of mobile technologies	COMT
Utilization of basic operation	UTIBI
Utilization of communication	UTIC
Utilization of collaboration	UTICL
Utilization of information seeking	UTIIS
Utilization of digital citizenship	UTIDC
Utilization of creativity and innovation	UTICI
Competency of basic information	COMTBI
Competency of communication	COMTC
Competency of collaboration	COMTCL
Competency of information seeking	COMTIS
Competency of digital citizenship	COMTDC
Competency of creativity and innovation	COMTCI

2.7 Data Analysis

After the data being gathered and coded, they are ready to be analysed. In this stage, the researcher has to illustrate conclusions, suggestions, assumptions and useful information after evaluating, examining evaluating and transmitting the data collected. This is in a line with what is stated in Gay et al. (2011) study. The analysis of this study data will be carried out in descriptive and inferential statistics.

2.7.1 Descriptive statistics

Descriptive statistics is the methodology in which the researcher summarizes and explains the accumulated information, which is in the form of numbers. This type of data analysis consists of frequency, percentages, mean and standard deviation. Descriptive statistics methodology will be applied to report the level of mobile technologies' utilization among, the level of mobile technologies' competency, the level of basic operation,

communication and collaboration, information Seeking, digital citizenship and creativity and innovation skills in mobile technologies competency. The descriptive statistics tests used are means and standard deviation. The statistical criterion adapted from Najib (2003) will be employed to determine the rating level for every factor. This statistical criterion is utilized in the following equation: (1.00 -2.33): low level, (2.34 – 3.67): moderate level, and (3.68 – 5.00): high level. This criterion is also exhibited in the below table:

Table 3.8.level of Indicator of Mean Score

Average Mean score	Level
1.00 -2.33	low
2.34 – 3.67	moderate
3.68 – 5.00	high

2.7.2 Inferential statistics

This type of statistics is used to explain and make generalizations and interpretations to the wider population. Inferential statistics consists of ANOVA, MANOVA, MANCOVA, chi-square, T-test and multiple regressions. As mentioned previously. All the data analysis is done with IBM SPSS 23 statistical package. It is worth mentioning that the alpha level will be .05, which is more akin to the view of Kotrlik and Higgins (2001). In this study, it is reported that .05 is an acceptable and reliable alpha level for correlation analysis especially in educational researches.

- To find out whether technology competency has influence on mobile technologies 'utilization among first year undergraduate students
- To discover the influence of students' competency in every skill on the utilization of that skill.

In analysing this data, person correlation coefficient r- value will be used. The classification level for each factor is determined by adopting Guildford (1973) and Rowntree (1981) as shown in table 3.10:

Table 3.10. Level of Indicator of Pearson Coefficient

Pearson coefficient	Strength of Relationship
<0.20	Almost no relationship
0.20 – 0.40	Weak relationship
0.41 – 0.70	Moderate relationship
0.71 – 0.90	Strong relationship
> 0.90	Very strong relationship

3. Empirical results and discussions

3.1 Preliminary Statistical Analysis

Before attempting to analyse the data gained from the participants, it is recommended, not only in this study but also in all quantitative studies to conduct number of statistical tests to ensure that the normality of their distribution is obtained. These statistical tests are called "Preliminary Statistical Analysis". These tests allow researchers to have more obvious picture about the prediction and generalization that they will state through exploring the overall pattern of collected data.Moreover, characteristics of the gathered data are more understandable when these tests are done. The researcher did this test on his data to detect skewness and kurtosis values. This testis called (Normality test). The normality test, which refers to how data of a variable has been distributed normally (Hair et al., 2010), must be conducted prior to the correlation study. The result of this test is displayed in in Table 4.1. It is found that the sample data was normally distributed. The values of skewness and kurtosis are gained from the descriptive statistics. According to the results shown in the table below,all variables acceptedvalues of skewness and kurtosis which ranges between -3 and +3. This result of normal distribution is supported by (cramer,1998; Cramer& Howitt,2004; Doane&Seward, 2011).

Table 4.1. Results of Skewness and Kurtosis

Construct	Skewness		Kurtosis	
	Statistic	Std. Error	Statistic	Std. Error
UTIBI	-.579	.199	-.050	.396
UTIC	-.995	.199	1.970	.396
UTICL	.353	.199	-.568	.396
UTIIS	-.552	.199	.014	.396
UTIDC	.271	.199	-.457	.396
UTICI	.097	.199	-.077	.396
COM	-.489	.199	-.519	.396
COMTBI	-.908	.199	.785	.396
COMTC	.482	.199	-.632	.396
COMTCL	-.423	.199	-.365	.396
COMTDC	-.423	.199	-.365	.396
COMTCI	.317	.199	-.087	.396

3.2 Descriptive Statistics

3.2.1: Demographic information

This first section of the survey questionnaire is on respondent demographic information. The demographic information involved department, sex, age, mobile technologies own, frequency of mobile technologies usage and hours spend on the device involved. A total number of 148 respondents involved in this survey. Information is presented in Table 4.2 below:

Table 4.2. Respondent's Demographic

Variables	**Category**	**Frequency**	**Percentage**
Department	CS	73	49.3
	IT	75	50.7
Sex	Male	92	62.2
	Female	56	37.8
Age	15 – 19	20	13.5
	20 – 24	119	80.4
	25 – 30	9	6.1
Own laptop	Yes	121	81.8
	No	21	18.2
Own mobile	Yes	148	100
	No	-	-
Own tablet	Yes	21	14.2
	No	127	85.8
Period of using laptop	Never	34	23.0
	months - 1 year	35	23.6
	2 years - 5 years	50	33.8
	over 5 years	29	19.6
Period of using smartphone	Never	-	-
	months - 1 year	18	12.2
	2 years - 5 years	57	38.5
	over 5 years	73	49.3
Period of using tablet	Never	124	83.8
	months - 1 year	4	2.7
	2 years - 5 years	7	7.7
	over 5 years	13	8.8
Period of using laptop (daily)	Never	32	21.6
	1 hour - 5 hours	96	64.9
	6 hours - 10 hours	12	8.1
	More than 10 hours	8	5.4

Period of using smartphone (daily)	Never	-	-
	1 hour - 5 hours	67	45.3
	6 hours - 10 hours	44	29.7
	More than 10 hours	37	25.0
Period of using tablet (daily)	Never	131	88.5
	1 hour - 5 hours	14	9.5
	6 hours - 10 hours	3	2.0
	More than 10 hours	-	-

Table 4.2 above indicates from 148 respondents, majority of them are from IT department (50.7), 49.3% are from CS department. Meanwhile, majority of the respondents are male with 62.2 % as compared to female with 37.8%. The number of male respondents is more than female is mainly because in most of Arab countries still women' right is not fulfilled specially in education. Therefore, the number of females in HE institutions still smaller if compared to males. Majority of them with 80.4 % age from 20-24 years old, followed by 15-19 years old (13.5%), and 25-30 with 6.1 %. Most of the respondent age from 20-24 years old is due to the education systems, which force students to start studying at the age of seven and then twelve years for primary and secondary. Following that, students are forced to have one-year vacation. When calculation it is discovered that will be in the found unless there are special cases. Regarding the mobile technologies ownership, majority of them own a laptop (81.8%), while the rest does not own a laptop (18.2%).

Meanwhile, all of the respondents own a mobile or smart phone. A total number of 85.8% of the respondent own a tablet, while only 14.2% among them does not own a tablet. Based on the output on mobile technologies usage, most of the respondents are using the laptop for 2-5 years (33.8%), followed by months -1 years (23.6%), never (23.0%) and over 5 years (19.6%). Majority of them are using the smartphone more than 5 years (49.3%), followed by 2-5 years' usage (38.5%), and the least is month-1 year (12.2%). Surprisingly, majority number of the respondent never uses a tablet. This is due to (state your reason). While another 8.8% had use them over 5 years, followed by 2-5 years (7.7%) and the least is months-1 year (2.7%).

The results on daily usage of each devices reveals that the respondents commonly spend approximately 1-5 hours (64.9%) on the laptop usage, whereas only few of them spend more than 10 hours on the laptop usage. The smart phone is commonly utilized daily with approximately 1-5 hours (45.3%). Lastly, only 9.5% of the respondents spend they daily time on tablet. This is because majority number of the respondents does not own a tablet.

3.2.2: Overall utilization of mobile technologies among undergraduates

This section is design to identify the level of mobile technologies utilization based on user's frequency of using mobile technologies. In this section the question "What is the level of utilization among first year undergraduate students when using mobile technologies?" will be answered in this part of the results. To answer this question, the respondents were asked to indicate their level of frequency on each purpose of mobile technologies utilization which was measured by the five Likertscale; (1) never, (2) Rarely (once or twice), (3) Sometimes (2 – 3 times a week), (4) Often (4 – 6 times a week) and to the most frequent use (5) almost every day. The results presented involved 148 respondents respectively. The results of all dimensions in the dependent variables will be stated like in the below table.

Table 4.3.the level of mobile technologies utilisation among CS & IT undergraduate students

Items	N	Mean	SD	Rank
Communication	148	4.6	2.62	1
Basic Operation Purposes	148	4.0	4.02	2
Information Seeking	148	4.0	3.50	2
Creativity and Innovation	148	3.56	2.46	3
Digital Citizenship	148	3.0	4.88	4
Collaboration	148	3.0	2.39	4

As mentioned earlier, one of the objectives of this study is to study on the level of mobile technologies utilization among CS & IT undergraduates' students in general. Therefore, based on table 4.3 above, the output had confirmed that out of six factors of mobile technologies utilization purposes, majority of the undergraduates' students frequently used the mobile technologies by means of communication (M =4.6, SD =

2.62). Following that, basic operation purposes (M =4.0, SD = 4.02) and information seeking (M =4.0, SD = 3.50) are equally and highly utilized by HE students. Creativity and innovation with (M =3.56, SD = 2.46) is in the third rank. Lastly, Digital citizenship with (M =3.0, SD = 4.88) and collaboration purpose (M =3.0, SD = 2.39) are as noticed the least equally utilized among the students.

3.2.3: Overall competency of mobile technologies among undergraduates

This section is design to identify the level of mobile technologies competency based on user's skilfulness of using mobile technologies. In this section the question "What is the level of competency among first year undergraduate students when using mobile technologies?" will be answered in this part of the results. To answer this question, the respondents were asked to indicate their level of skilfulness on each purpose of when using these devices which was measured by the five Likertscale; (1) No skills in this area , (2)Limited skills in this area, (3)enough Skills : Need refinements, (4)Skilful (5) Very Skilful. The results presented involved 148 respondents respectively.

Table 4.4. Results on overall competency level of mobile technologies

Items	N	Mean	SD	Rank
Basic Operation Tools	148	3.9	3.49	1
Information Seeking Tools	148	3.8	3.10	2
Communication Purposes	148	3.7	3.78	3
Creativity and Innovation Tools	148	3.4	2.52	4
Digital Citizenship Tools	148	3.0	4.40	5
Collaboration Purposes	148	2.9	2.07	6

The results clearly proven that the most prominent competency level among the students is as expected basic operation tools (M =3.9, SD = 3.49), followed by information seeking tools (M =3.8, SD = 3.10). Thirdly, HE students are competent in communication purposes (M =3.7, SD = 3.78). Meanwhile, creativity and innovation tools is unexpectedly the next mastered skill among the students (M =3.4, SD = 2.52). The HE students are least skilled on digital citizenship (M =3.0, SD = 4.40) and collaboration (M =2.9, SD = 2.07).

3.2.4 Overall, mean score and standard deviation for mobile learning utilization and competency level.

Table 4.5. Overall; mean score and standard deviation for mobile learning utilization and competency level

Dimension	N	Mean	Std. Deviation
Overall utilization	148	151	12.1
Overall competency	148	141	13.5

Table 4.5 above demonstrate the results on the overall results of utilization of mobile technologies and competency of mobile technologies in the learning field conducted among the undergraduates' students. Based on the above table, it can be clearly seen that the results of overall utilization of mobile learning is (M = 151, SD =12.1). Meanwhile, the overall competency level is (M= 141, SD= 13.5). Hence, the results had indicated that CS & IT undergraduates in HadhramoutUniversity are highly utilizing the mobile technologies in their hands. Moreover, it is indicated that these students are so competent in using these devices for the six purposes.

3.3 Inferential Analysis

This section is stating the answer for the last two questions of the study in order to uncover the relationship between independent variable of competency of mobile technologies in purposes such as; basic information, communication, collaboration, information seeking, digital citizenship and creativity and innovation and the dependent variable which is the utilization of these technologies.

3.3.1 The Relationship between the independent variables and the utilization of mobile technologies

To check how strong a relationship between two variables, Pearson correlation (coefficient) must be done. This test is denoted by r. The strength of the relationship can be indicated through the value of r, which may range

between (+1 & -1). In stating the relationship,zero value indicates that there is no relationship between variables, while a value greater than 0 tells a positive relationship between variables. If the relationship is described as positive this means if the value of one variable increases the value of the other value increases as well. On the other hand, if the value of the r is below (0.20), it implies that there is a negative relationship between the two variables. This negative relationship shows that the increase of one variable results in the decrease of the other variable. This can be clearly shown through the table adapted from Guildford (1973) and Rowntree (1981).

Table 4.23 summary of Pearson correlation

Pearson coefficient (r)	Strength of Relationship
<0.20	Almost no relationship
0.20 – 0.40	Weak relationship
0.41 - 0.70	Moderate relationship
0.71– 0.90	Strong relationship
> 0.90	Very strong relationship

Source: Guildford (1973) and Rowntree (1981)

The table 4.23 below answers the fourth question, which is (Does mobile technology competency influence the utilisation of these devices. And since mobile technologies is measured through the six purposes, the researcher will check whether is there any relationship or influence for basic information, communication, collaboration, information seeking, digital citizenship and creativity and innovation on the utilization of mobile technologies.

Table 4.24. Summary of the correlation Matrix of utilization of mobile technologies (dependent variable) and six independent variables.

P	UTI	COMTBI	COMTC	COMTCL	COMTIS	COMTDC	COMTCI
UTI	1.000						
COMTBI	.755	1.000					
COMTC	.576	.653	1.000				
COMTCL	.503	.351	.296	1.000			
COMTIS	.649	.508	.431	.126	1.000		
COMTDC	.649	.508	.431	.126	1.000	1.000	
COMTCI	.438	.330	.216	.156	.155	.155	1.000

The results from the table 4.24 indicated that there is a strong relationship between utilization of mobile technologies and students' competency in basic operation purpose (r=.755, p <.01). This tells that whenever students' competency in basic operation is increased alternatively the utilization of mobile technologies is increased as well. It also revealed a moderate relationship between students' competency in communication purpose and the utilization of mobile technologies (r= .576, p < .01). This shows that utilization of mobile technologies among undergraduates is increased when these students' level of competency in communication purpose is increased too. The data gained from the above exhibited table indicates that there is a moderate relationship between Hadhramout students' competency in collaboration purpose and utilization of the devices they are possessing with (r = .503, p < .01). This signifies that there is a positive relationship between the two variables. Moreover, focusing on the result displayed for the relationship between the mobile technologies utilization among students and their competency in information seeking purpose, we can clearly notice that there is also a moderate relationship between the two (r = .649, p < .01). This result also indicates that the relationship between the two is positive. The fifth result also shows a moderate relationship between students' competency in digital citizenship purpose and the utilization of these mobile devices with (r = .649, p < .01) which tells that there is there is appositive relationship between the two variables.

The relationship between students' utilization of mobile technologies and their competency in creativity and innovation purpose is moderate like other results with (r= .438, p < .01) which shows that there is positive relationship between the two. The relationship between independent variables themselves varied between almost no relationship, weak relationship and moderate relationship. The relationship between basic information purpose and other variables can be described as weak and moderate where it shows (r=.653,351, 508,508,330, p <.01) respectively with communication, collaboration, information seeking, digital citizen ship and creativity and innovation. Therefore, it can be indicated that there is a positive relation which varied from variable to another as it ca n be noticed in the table. Communication purpose, on the other hand, shows a weak and moderate relationship with value (r =. 296, .431, .431,216, p <.01) with other variables respectively and namely;

collaboration, information seeking, digital citizen ship and creativity and innovation. This tells us that there is a positive relationship; though it can be described as weak and moderate. Collaboration purpose has almost no relationship with variables like; information seeking, digital citizen ship and creativity and innovation with (r= .126, .126, .156, p< .01). The relationship between information seeking purpose and digital citizen ship and creativity and innovation varied greatly. It is very significant with when the relationship between information seeking and digital citizen ship with (r= 1.0, p < .01) and almost no relationship with creativity and innovation with value of (r = .155, p < .01). There is almost no relationship between information seeking and digital citizen ship with (r= 1.0, p < .01). The overall relationship between independent variables; COMTBI, COMTC, COMTCL, COMTIS, COMTDC, COMTCI with the dependent variable UTI is positive and significant.

3.3.2 Variables Influencing Undergraduates Utilization of Mobile Technologies

Multiple regressions in this study had been used to answer this question. This test is meant to assess the relationship between two or more independent variables and a dependent variable. There are two prominent suppositions for multiple regressions. These are multicollinearity and singularity. Multicollinearity is a situation in which two or more independent variables in a multiple regression model are significantly correlated to each other. This means each of the variables can be highly predicted from the other with a considerable degree of accuracy. There is multicollinearity if the relationship between variables is so high like (r = +.9 to - .9). Singularity, on the other hand, when there is only a good relationship between variables. Both assumptions are found within the range (r = +.9 to - .9). Moreover, the VIF value does not exceed 10, which indicates no serious sign of multicollinearity. Multiple regressions can be achieved through different methods of analysis. There are mainly three methods which are; hieratical, standard and statistical (stepwise). To answer this question, the standard method will be used to analyse.

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.882[a]	.778	.772	.14392

Table 4.25. Summary of the Multiple Regression Result (Review)
a. Predictors: (Constant), COMTBI, COMTIS, COMTCL, COMTCI
b. Dependent Variable: utilization

The summary of the multiple regression analysis in table 4.25 reveals that multiple correlation coefficient (R) equal to 0.88, which showed that there was a strong relationship between independent variables and dependent variable. The analysis also revealed that (R square) is0.78 that means that 78% of deviation in the dependent variable isexplained by the whole predictor variables entered into the regression model stated.

Model		Unstandardized Coefficients		Standardized Coefficients	T	Sig.
		B	Std. Error	Beta		
1	(Constant)	1.991	.129		15.389	.000
	COMTBI	.457	.033	.755	13.929	.000
	COMTIS	.244	.038	.358	6.427	.000
	COMTCL	.129	.020	.294	6.479	.000
	COMTCI	.122	.025	.204	4.892	.000

Table 4.26. Multiple regression on the dependent variable (utilization of mobile technologies)

The table shown above provides results of the multiple regression analysis. The outcomes of the test prove that all independent variables influence the dependent with degree of significant. Peering close look to the result provided in the table above, we notice that Beta values of the independent variables varied from one IV to another. This result shows that COMTBI is the highest in the influence on mobile technologies utilization as the dependent variable with (beta = .755, t= 13. 929, p<.05). This means that there is a high significant influence for this independent variable on the dependent. COMTIS scored the second highest IV affecting the DV with (Beta = .358, t = 6.427, p< .05). COMTCL, which is the third in the order of the factors influencing the dependent, it is less significant than the first two. This variable has beta score (B= .294, t = 6.479, p <.05). The least influential variable is COMTCI with (beta = .204, 4.892, p< .05). From all these gained results we can concluded that undergraduate students in this faculty is utilizing mobile technologies most if they have highly recognized skills and capabilities in the basic information purpose. Moreover, competencies in information seeking purpose will result in frequent use of mobile technologies among undergraduate students. Furthermore, a student who is competent in collaboration purpose may use mobile technologies frequently but not as those

competent in basic information and information seeking. Gaining skills in creativity and innovation purposes will results slightly in students' use of mobile technologies. In other words, the probability of undergraduate students' use of mobile technologies is very low when they have capabilities in creativity and innovation purpose.

Consequently, the result of the regression analysis reveals that competencies in basic information purpose is the most effective variable in forecasting CS& IT undergraduates'students' utilization of mobile technologies. Following basic information competencies is information seeking and collaboration purposes. The result also reveals that students' skilfulness in creativity and innovation purpose has no significant influence in their utilization of these devices.

4. Conclusions, implications, and future studies

The aim of this study was to empirically examine the impact of mobile technologies' competency on utilization among 148 freshmen students in college of computer science and information technology at Hadhramout University. The uniqueness of this study is due to the few searched topics in this field in the context (Hadhramout). This assumption is of relation to one of the UTAUT model factors that is self-efficacy. Therefore, it was supported by this theory along with competency-based education. The instrument used to collect the data of the study is adopted from (Sedek (2014) which is quoted from (Lei, 2010&Oblinger , 2010) which has been adapted to suit the research objectives. The data was gathered with the use of a questionnaire, which was distributed, manually to participants. This study questionnaire consists of three main sections; demographic section, utilization of mobile technologies section and competency of mobile technologies section. The first section contains five items while each of the second and third sections contains forty items. Therefore, there are eighty-five items in this instrument in total. The second and third sections contain six subsections stating the six purposes of ISTE and NETS.S standards; basic operation, communication, collaboration, information seeking, digital citizenship and creativity and innovation. Each of these six has different number of items to measure it. The second section is adopted and adapted from (Sedek (2014) which is quoted from (Lei, 2010) while the third section is adopted and then adapted from (Sedeq (2014) which is quoted from (Oblinger , 2010) . Items of the second and third sections are measured with the use of likert - five scales. To validate the instrument before distributing it, an expert in the same field at UPM University wasgiven the tool to check the appropriateness and capability of the items to achieve the objective of the study. A back-to-back translation was applied to validate the items consistency in meaning as well. Moreover, before conducting the actual study, a pilot study was conducted to check the reliability. The value of Cronbach's alpha – coefficient for the instrument is ranging between (0.69 - 0.92). The data were analysed by using SPSS version 23. Two types of data analysis were applied. First, the descriptive data analysis was employed to measure the percentage, frequency, mean and standard deviation. Secondly, inferential statistics was applied. The results of this study indicated that undergraduate students in faculty of computer science and information technology are highly utilizing mobile technologies. Similarly, they have good capabilities and skills in using them. These results of utilization are supported by students' competency in using the same purposes where it is discovered that students are so competent in using mobile technologies for communication.

The findings of this study also indicated that students' competency in basic operation(beta = .755, t= 13. 929, p<.05) and information seeking (Beta = .358, t = 6.427, p< .05), were two highly influential factors directing students' frequency use of mobile technologies in their campuses. In addition, the collaboration is the third influential factor with B= .294, t = 6.479, p <.05. This is in a line with the study conducted by (Cheon et al. (2012) who illustrated that college students use mobile technologies more than primary and secondary students. Moreover, Thieman (2008) discovered that students in language classes extensively use laptops while Cochrane and Bateman (2010) revealed most of students use smart phones in regular basis. This indicates that the process of integration of mobile learning is much easier in HE institutions to primary and secondary schools. In addition to that, Churches (2008) reveals that great number of students are using mobile technologies like; smart phones, laptops and tablets for basic operation like; saving files and documenting them. This study us very supportive to the results of this study which states that basic operation is the second highly utilized purpose among CS & IT students. This implies that mobile learning method is supportive for the learning and teaching process. It could be also concluded that HE institutions ought to elevate the amount of the utilized mobile technologies.

The results of this study revealed that the overall mean of competency of mobile technologies was very high. This mean indicates that students in college of computer science and information technology are very skilful and capable in using mobile technologies. The result of students' competency in mobile technologies is more significant if compared with the one shown in the study of Ribble (2009). Ribble (2009 reveals that students had

moderate level of skilfulness in using technologies in their campuses. Results in Ahmed, (2013) study shows that HE students strongly believe that adequate competencies and capabilities contribute to the successful and effective technology integration. This assumption was proved through this study. It is revealed that when students' competency in using mobile technologies for communication purposes was high, students level of frequency use of mobile technology was high as well. Similarly, students' competency in basic operation is significant, therefore, the level of utilizing mobile technologies for this purpose is high. A much closer results was noticed in the study of Sedek (2015) which reveals that competency in U-tech as communication is the highest. Sedeq (2015) study is mirroring the results of this study in which students level of competency in communication is the second highest.

The results revealed that there is extremely intense relationship between undergraduates' competency of mobile technologies and their utilization in basic operation purpose. This study also revealed that students 'competency in mobile technologies in communication purpose has a moderate relationship with the utilization which can be also significant and lead to a positive relationship. These two results indicate that student's competency in basic operation and communication is affecting much the utilization of mobile technologies than other purposes. It might be understood that high and moderate relationship means that students capabilities' in these two purposes motivates them to highly utilizing the mobile technologies in their hands. Therefore, it can be concluded and predicted that students excessively using these technologies. This is more like the results Churches (2008) gained from his study in which he uncovered that mobile technologies like; learners in uses like; save files and documents intensively utilize smartphones, laptops and tablets. On the other hand, Singh (2013) discovered that gadgets like smartphones and laptops are utilized to make calls and send messages.

The results also revealed that basic operation is the highest influential factor to the utilization of mobile technologies. The second influential factor is information seeking. This will tell this student basic operation is a fundamental condition for them to utilize the mobile technologies that is true. Without basic, it is difficult for any user of these devices to continue using the device, this is in a line with many studies which states that basic operation skills are crucial for the utilization of any technology. Luckily, information seeking purpose is the second that tells that students are eager to search for information for their study. It is shocking to have this result within students who are newly introduced to these technologies in their learning campuses. Moreover, this result will motivate the college of computer science and information technology to consider greater integration of this method. Mirroring the gained results of this study, Honget al.'s (2003) explored that most their participated students strongly believed that possessing basic knowledge in a technology helped them a lot in having more engaged and effective use of internet. Hatakka et al. (2013) also stated those students were enabled to use laptops for storing data for research when they were capable enough to use these laptops. When Norton (2013) ensures that competency in using mobile technologies is a prominent factor in these devices utilization. In addition, Goel (2006) reach to a result that undergraduates' skilfulness in technology competency is influencing the level of utilization of these devices.This study goes deeply discovering the skills affecting mobile technologies utilization in Yemen context.

This study has theoretical and practical implications. As for the theoretical implication. Competency of technologies is a new factor added to UTAUT by studies like Norton (2013) and Ayub et.al (2010) which indicated that competency is the vital important. Results of this study emphasize the significant effect of competency on utilization of mobiletechnologies among HE undergraduates in Hadhramout University. Moreover, the study, specifically, discovers what kind of skills and competencies are significantly effective in students' level of frequency use of mobile technologies. It reveals that competency in basic operation is the most influential factor on the utilization. In addition to that, the study shows competency in information seeking as the second prominent factor affecting the utilization of mobile devices. These two results are theoretical contributions to the body of UTAUT theory.Through the results of this study it can be concluded that competency in basic operation is a key element of HE students on Hadhramoutto achieve better performance and activities' fulfilment. In other words, CS & IT students 'success and high act is bound to how excellent are they in basic operation. This assumption is supporting and adding to the theory CBE. Moreover, it is indicated that not only competency in basic operations but also competency in information seeking may affect students' level of performance through more utilization of mobile technologies, which is proved to elevate motivation and engagement. In education setting and campuses HE students are definitely in need for skills that will enable them grasping knowledge efficiently and quickly. Therefore, students 'excellency in such competency may possibly increase their level in acquiring needed information sufficiently and successfully. These two results are updating CBE approach with more specific data regarding needed skills for students' success. The NETS.S along with the developed version (ISTE, 2007 are standards and blueprint for factors affecting the adoption of technologies and competencies needed to have students effectively adopting these technologies in educational

settings. Throughout this study results two things are introduced to these two road maps. First, this study significantly reveals two of the standard skills that are basic operation and information seeking as the most influential factors affecting the utilization of technologies among students. Second, it gives a clear picture of a new context and how the process of adoption is. Moreover, relationship between utilization and competency of mobile technologies is revealed.

In terms of the practical implications, through results which shows the second most used purpose is information seeking it could be implied that students become more aware about getting what will enrich their backgrounds with knowledge in their field. Thus, there must be much focus paid to this method to have better level of students. To have this fulfilled, it is advised that faculty of computer science and information technology to strengthen their bandwidth and permit students to have more access to the internet to encourage them using mobile technologies for that purpose. Moreover, to have a better engagement of students, it is desirable to activate the university application. The use of this application may guide students' choice of information to what is more beneficial and related to their study. Furthermore, activating the app may also elevate the effect of competency in communication uses in which students will be forced to contact only lecturers or classmates. This will result in more engagement and directed communication that will lead to better learning and utilization of mobile technologies. Despite the significant competency of CS and IT students in basic operation and information seeking, it is preferable that these students acquire more competencies to have higher level of mobile technologies utilization. This assumption is supported by (Male et al., 2010) who declared the importance of students possessing technical skills that will assist them in their workforce. Moreover, they detailed that these skills must be gained prior entering working places which means that they must empowered these skills in HE institutions. This is achievable through trainingteaching staff on how to integrate technology into classes. There must be also workshops to empower them with techniques that will enable them directing these learners after arming them with needed capabilities to the desirable uses that will strengthen their skills and make them ready for the work force. This is in a line with the impact (2014) which states that education institutions must link their teaching staff to chances that will provide them with technological skills enabling them to have better adoption of continues emerged technologies effectively.As it can be seen from results that HE undergraduates are utilizing the gadgets for communicating with their friends or family, which means social type of use; therefore, lecturers ought to shift these learners to communicate more for the sake of learning through contacting their lecturers and peers in the campus and other countries. Lecturers must open channels for students to show them how communication can be a good tool with the existence of internet and these mobile technologies. They may innovate through trying the flipping classroom or problem based or any new method of teaching since mobile learning is facilitating these methods a lot. Since students' competency in collaboration competencies is comparably significant, then teachers may employ the online class in case s/he is busy and cannot perform the lecturer. Therefore, students will meet him/ her virtually and digitally. Moreover, the college may seek partnership with different colleges in different parts of the world who will assist them in updating and refreshing not only students' information but also lecturing staff as well. This may happen through the video conferencing. These two implications are useless and waste of time with a weak and low internet bandwidth. Therefore, the college needs to strengthen its internet bandwidth in advance. Moreover, administration must be aware of the needed infrastructure to have this happen.

For future line of research, it is highly recommended since this college is adopting mobile learning method to activate the university app to be a source of knowledge and learning. It is recommended to get use of the app to contain an LMS (learning management system) that will not only help students to register and know their subjects but also communicate and collaborate in different college activities that happened digitally. Moreover, the experience of using M.Learning in this college must be expanded to other colleges to show them the benefits the faculty in outcomes results and learning quality as well. It is also recommended to conduct this research in another governorate where it might be found more colleges are applying this method. This change will result in having different results since the participant s will be greater and the context varied a little bit. It is also recommended to have this study done in qualitative mode where the researcher can get more in depth data about why students choose certain purpose rather the other.With the existence of the app and the website, it is highly recommended to conduct and exploratory study on students and teachers' perspectives towards the existence of these tools in the campus. This study will be like an evaluative study covering strengths and weakness of both tools. Studies must be conducted to checkingteachers' point of view towards this new method along with whether the infrastructure of the college is supportive or not.

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