

A Study of Students' Perceptions Regarding Online- Learning Experiences for Instructional Continuity in a Covid-19 Pandemic

Sadia Sadiq* (Principal Author)

Lecturer-Department of Education

National University of Modern Languages, H-9 Islamabad-Pakistan

Ms.Rubana Saeed Ms.Nabeela shakur**** (Co-Authors)

Lecturer- Department of Education

National University of Modern Languages, H-9 Islamabad-Pakistan

Abstract

Online learning is a learning experience that has differences and similarities with e-Learning. These are primarily focused on the use of mobile communications technology which empower students to navigate learning resources conveniently whenever and wherever they would like, whether it is on campus or even off campuses. During the critical pandemic situation when globally education system shifted its learning process to online and remote mode. In Pakistan it also shifted on LMS and Online-learning mode. It further provides a new versatile learning framework within the context of diversified learning conditions. The perception of students for all of these technologies has become one of the key reasons for the productive implementation of m-learning mode in higher education. This research was carried out to analyze students' perceptions of NUML in order to application of their mobile technology to adopt m-learning and explore their perceptions regarding mobile learning facilities. The total numbers of three hundred students from different degree level programs of department of education participated in the study. As a survey tool for gathering data, Google form-based questionnaire was used. Collected data was analyzed and interpreted by using mean, standard deviations, multiple regression and descriptive analysis. The study revealed that it is a best suitable contemporary mode for the instructional continuity , but at the same time the stakeholders have need to address the relevant factors (internet and gadget cost, mental wellbeing and student-teacher connectivity) in terms of clear understanding of instructions and establish guided learning resource management system for teachers and students.

Keywords: Online-Learning, Technological Modes, Mobile devices, Higher Education, University Learning Environment

1. INTRODUCTION

The applications of mobile technology and associated technology in recent years have increased greatly due to their capacities to be used in multiple fields. The use of technologies including cell phones, smart phones and PDA has also made its ways into the teaching and learning field. Moreover, scholars and teachers at degree awarding institutions and educational organizations round the globe are progressively utilizing mobile technology to navigate learning resources, to accessed the sites, and to promote education in an innovative and creative modes by Valk, Rashid, and Elder (2010). Throughout the past number of years, the various studies on the implementation of m-learning have expanded in several countries such as the USA, Asia, Britain, Denmark and Australia (Kim & Kim, 2012). The University of Florida emphasizes on the importance and implementation of m-learning by creating connectivity to robust digital networks on campuses using mobile technology (Lan & Huang, 2012). Furthermore, they revealed that the more emphasis must be drawn on the way to the significance of m-learning and connected practices amongst university scholars because at anytime, anywhere, it offers various facilities. The higher education institutions must also prepare for a more versatile learning framework in the future to encounter the requirements of future generations of pupils whose are rapidly connected to portable technology. Although several studies to scrutinize the practice of m-learning in higher education institutions, however, often constrained. Thornton & Houser, 2002) However, the frequency of higher education institutions being adopted of using mlearning is still sluggish; This indicates though that it has many strengths, there are many challenges

to its adoption within the higher education setting (Chen et al., 2003; llan, & A Maniar, Bennett, Hand, , 2008), one of the key reasons attributable to the insufficient practice of m-learning is deficiency of effective research to examine the factors affecting m-learning reception in higher educational sectors. Stockwell (2007). The current study is therefore conducted to determine the perceptions of the students in the higher education institutions regarding m-learning systems.

In addition, that use of handheld devices to help content with features of social networking (e.g., capacity to update material and then posting remarks) can encourage students to engage in additional interactive learning situations. Advancements in mobile technologies have allowed academics to flexibly sending out instructional mails.,SMSs Through modern technology like wireless devices, Pocket PCs, Apple iPhones, Smart tablets and phones, students and teachers are capable of connecting by voice and photo or video, as well as text. This is becoming a general perception among learners to use mobile gadgets for educational purposes (Lan & Huang, 2012)., for example Valk, Rashid, and Elder (2010) Revealed how mobile cellular phone-led education can provide facilitated access to educational resources and services for students in developed countries, living in remote and remote areas. (Sadiq. S and Batool. S 2017) In many other recent experiments on phones and tablets (Chen et al., 2003; Allan & Maniar, Bennett, Hand,2008), reduced display sizes have been shown to generate psychological limitations associated with students 'focus and graphic processing (Kim & Kim, 2012). Scholars had also indicated that they want more chances to make learning strategies

more accessible so that they can learn when and how they choose to. Having mobile technology generally allows students the independence of learning, that can also make a contribution to positive experiences in learners (Kukulska-Hulme, 2009).

Instructors and administrators of educational organizations are weighing a wide range of questions as they strive to understand and prepare for a possible coronavirus pandemic. This essay asks: Is your institution ready to deal with the associated interruptions in terms of maintaining instructional continuity for the learners? Could students realistically be expected to take more than two eight-week online time to complete the course? Do we have sufficient appropriate modes for course continuation?

At the institutional level, suitable technological tool should be made widely available, and training resources made accessible, especially for those instructors who do not usually rely on a learning management system (LMS) or other computer-based teaching tools. Instructional technology offices may need to hold virtual classroom sessions on the technologies and/or advising sessions for instructors in the event of longer-term interruptions of on-campus operations. Campus-wide communication strategies (twitter, google classrooms, skype, WhatsApp, messenger, zoom classes, podcasts and padlet etc. must already be in place. some of the listed interventional instructional strategies in the chart need approximately arrangement of development before the lesson/course interruption the aforementioned, and that all students must be informed now on how faculty plan to maintain communications if courses can no longer be offered on campus.

Moreover, technology-based software advancement (referred to as the Mobile Learning Systems or MLS in this study) tends to encourage teachers to create innovative ways of teaching and learning. Ironically, most teachers and learners disregard modern technologies of teaching and learning because they cannot perceive themselves to be part of the global environment of learning. To ensuring that people misunderstand the essence of learning, technological advancements-based education and facilities may also not adapted by the people because they think it cannot meet distinct needs of the students Stockwell (2007) claimed that survey findings on mobile technology in educational environments will vary whether learners want to practice mobile technologies (smart phones) or something like that in the classroom (e.g. laptop PCs). In previous studies (Thornton & Houser, 2002), Stockwell (2008, 2010) suggested that technology, pedagogical, psychological, and social constraints also sometimes discourage students from using mobile devices including smartphone for vocabulary learning activities, while having an optimistic perception of mobile learning activities.

1.1 Rationale of Study

A significance of contemplation has been also widely discussed as an individual method of learning perceptions (Wu & Looi, 2012). Denton (2011) points here as "reflection reflects an individual ability to reason in the higher order, particularly human ability to connect reflections" (p. 838). During these global uncertainties due to pandemic COVID-19, educational system tried hard to continue its teaching learning process by shifting the mode from face to face to online or remote learning. Moreover, researchers have used the term perception to describe diverse levels of reflection, such as content-based reflection, meta-cognitive reflection, actualization-authorship reflection, and comprehensive reflection, to motivate scholars to think about potential learning scenarios (Grossman, 2009). Throughout the context of the objectives of research, was to get the content-based

perspectives of the learners on the bases of their individual experiences, perspectives and perceptions about LMS was considered most valuable and thus were investigated. There have been very few researches about the implementation practice of mobile technology in contemporary learning; most of these studies involve the working efficiency of learners. In this study, the researcher focused on how students in IIUI, used their personal mobile devices (including mobile computers) as learning apparatuses. Specifically, this research tried to log the students' responses allowed them to explore their perceptions and learning processes through mobile learning environments outside their classroom.

1.2 Statement of the Problem

Despite the rapid development of m-learning, the factors influencing m-learning adoption among students in institutions of higher education need to be explored. Without contemplating the significance of online-learning acceptability among students and exploring the terms of perceptions of pupils towards the usage of mobile learning, m-learning technologies may trigger ineffective implementation. Reconnoitering students' perceptions for using m-learning can also promote the positive adaption of m-learning in the higher education environment. Whereas in Pakistan, the online-learning gap continues to exist where many researchers are calling for research on the adoption of m-learning in institutions of higher learning. Additional research is required in order to examine the perceived adaption of mobile applications and m-learning facilities by students in universities. The research here, therefore, aimed to investigate the perceptions of the students for the implementation of online-learning systems at the universities and in education sector.

1.3 Research Objectives

The objective of the research was to find out students' perception on mobile learning when use in a blended collaborative instructional framework. Specifically, the study seeks to:

1. Ascertain the category of mobile devices readily available among students for mobile learning;
2. Find out the students' behavioral intentions for adoption of online-learning;
3. Find out to what extent students' perceptions of perceived easiness and facilitating conditions affects their behavioral intentions towards online-learning.

1.4 Research Questions

The research questions were as follows:

1. What were students' perceptions towards mobile technology used for learning?
2. Whether mobile technologies present opportunities for innovative ways in delivery teaching and learning process?

3. What were the key factors which perceived as barriers for online-learning adoption?
4. What were the impacts of perceptions towards mobile technologies on learning?

1.5 Significance of the Research

Online-learning has many characteristics, such as learning flexibility at all times and any place that have changed the learning and learning environment. This feature allows students to benefit from their free time outside the classroom to complete their studies and homework. Few empirical studies have revealed about the implications of practices of m- learning in higher education institutions Most of the studies have recommended several of the factors influencing online-learning acceptability in universities. A deeper understanding of the students' needs, their perceptions would empower decision-makers to effectively implement m-learning Whereas in Pakistan, the m-learning adoption gap continues to exist where many researchers are calling for research on the adoption of online-learning in institutions of higher learning Additional research is required in order to examine the perceived adaption of mobile applications and m-learning facilities by students in universities. The research here, therefore, aims to investigate the perceptions of the students about the implementation of m-learning programs in the university sector.

1.6 Delimitations of the Study

The research was delimited for collection of data to the Departments of Education, IR, Mathematics, and Computer Sciences of NUML due to the limitation of time, access and resources for the researcher.

1.7 Conceptual Framework/Theoretical Framework

As mentioned above, online learning arises as a new mobile implementation that is normally used in a social context, and therefore the foundational paradigms did not entirely replicate the distinctive perspectives of Context factors for mobile learning modify user acceptability. Suitable enhancement and alteration of the original design is essential with this. Including the four core constructs of learning variables, the basic explanation and conceptual frameworks for research model's structure has been listed out below in Figure 1. It framework on m-learning adoption is designed to address key conceptual perspectives.

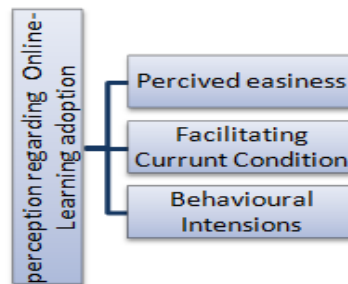


Figure: 01: Conceptual framework of Perceptions about Online-Learning Adoption

2. LITERATURE REVIEW

Mobile phone usage is growing rapidly among higher education students. A research conducted by (Wilhelm, Yankov, & Magee, 2011) found that all participants who happen to be Northwest University students possess at least one cell phone. A related study by (Wilhem, 2012) on the phone usage survey further clarifies the fact that university students owned an average of 4.4 mobile phones as students in their lifetime. Furthermore, the research found that 95.6 percent of participants believed that mobile phone ownership was really significant (Asuamah 2013). Evidently, the three researches published in various settings point out that in tertiary institutions, possession and usage of mobile phones cannot be overemphasized. Mobile learning is steadily gaining ground in terms of its accessibility, context, and usage amongst higher education students.

M-learning includes the usage of phones or digital devices for educational purposes while being on the moving. The mobile phones, tablets, palmtops, and tablet computers to use for mobile learning could also be categorized as common examples; tablet PCs, laptops, and streaming media players could also be included (Kukulska-Hulme & Traxler, 2005). For compact, portable electronic devices, the first generation of really mobile technology has been incorporated into several functionalities (Peters, 2007). Modern advancements in education and social software applications using Web 2.0 technologies (e.g. blog, wikis, Twitter, YouTube) or social media platforms (e.g. Facebook as well as Myspace and Twitter) also enabled mobile applications more interactive and ephemeral, and provide more academic opportunities as well. It has been also commonly accepted, moreover-learning however does not include mobile device adoption, but also multidimensional learning. (Walker, 2006). Winter (2006) Mobile learning idea re-conceptualized and introduced "mobile mediated learning" (p.9). Pea and Maldonado (2006) Use the concept of mobile interactive learning technologies or WILD, a term developed at the SRI International Centre for Learning Technology, to describe technology that enabled learners to engage in innovative activities in ways which were considered impossible.

The idea that young adults (16-25 years) are transitioning into mobile phones and personal digital assistants is emerging from a mileage analysis in UK universities and higher education (Mitchell & Savill-Smith, 2004). In a study conducted at University Industri Selangor, Malaysia (Suki & Suki, 2010), almost all of the students who included in the research accepted that mobile phone connectivity was a crucial factor of using mobile technology as the learning mechanism. The study further emphasizes the personalization aspect of mobile technology by enabling learners and lecturers to share their learning activities and other connected practices that were found to be among of the reasons that conversant their practice of mobile devices in learning (Suki & Suki, 2010). Tan and Lui (2004) conducted a research based on a developed Mobile Learning System (LMS) to support learning in an elementary school in Taiwan. The research objective was on exploring the applicability and benefits of mobile technology to Taiwanese English learning practices in secondary school. Schafer., Farooq, U Carroll J, and M.W. Rosson, M.B (2002) Experimental findings collected suggested that the effects of learning through LMS is greater than that of the conventional method.

According to the research, many students enjoy using LMS because it is easy to use and can maximize interest in learning (Tan & Liu, 2004). Other research conducted on by (Al-Said, 2015) showed that Saudi Arabia's Taibah University graduates have positive perceptions regarding mobile learning.

The learners have been of the opinion that using mobile learning would promote and enhance successful learning connectivity and empower them to learn at the right moment (Al-Said, 2015). According to Brandon (2011), m-learning allows for thinking beyond formal education (particularly classroom-based, teacher-mediated activities) to incorporate learning strategies into broader productivity and technological approach, and to balance formal learning through informal teaching, socialization, and encouragement for efficiency. Fozdar, B, I, & Kumar, L.S. (2007) in several situations. as pointed out, m-learning does not fit into the overall plan of instruction implementation, but generates the optimal performance when implemented in order to support the current instruction strategy. As certain, mobile access is not really a substitute for both the functioning of a program as an advancement of an integrated educational experience. Kumari et al (2009) indicated that m-learning allows learning genuinely customizable as learners have the opportunity to select learning material based on their interests. M-learning increases efficiency, content continuity and encouragement, in addition to being student-centered. There is an indication that Mobile Learning not just to includes students and communicates with them in a way that supports their personality, it also enables them to join the professional world (RIM, 2009). The assumption is that students getting familiarity with resources for actual-world learning would have had a benefit in the marketplace. A lot of studies were conducted to find out the perspective of the learners while the different mobile technologies were implemented in higher education.

3. RESEARCH METHODOLOGY

3.1 Research Design

The current study opted the Descriptive Research design to collect data; the research was exploratory in nature. Stratified random sampling was used to carefully group students into departments and programs. The strata were comprised of different faculties and department of international Islamic university Islamabad (IIUI). As a survey tool for gathering data, Google form-based questionnaire with provided options (based on five point Likert scale) of selecting the one suitable answer was used. Collected data were analyzed and interpreted by using frequency, mean, standard deviations, and t-tests The strata compose of the various departments (Education, Mathematics, IR and Computer Science) in the university (IIUI), Google form based questionnaire with 23 items categorized into three constructs, was sent via social media (Facebook, Whatsapp, email) and distributed 300 filled questionnaires were returned of 400, indicating response rate of 75.6%.

3.2 Population of Study

All Students of the Departments of Education, IR, Mathematics, and Computer Sciences of NUML from undergraduate and graduate levels were considered as the population for the research.

3.3 Sample and Sampling Techniques

For the research probability sampling (Stratified random sampling) method was adopted. the sample size was consisted of 300 participants. Because in Probability Sampling, premised as Malhotra & Das (2005) said that, every individual in a population is equally represented and would have the same chance of being selected. There was further stratified random sampling was adopted for getting the sample of the research, with random samples taken from stratified groups, which was more reliable in proportions to the population to choose samples from defined populations.

3.4 Instrumentation

Survey Questionnaire as a structured technique was used in this study for data collection that was consisted of a series of questions and statements, included in the questionnaires for this study and respondents were asked to choose the option to show their level of agreement. The survey questionnaire was divided into two major sections e.g. demographical variables and, selection responses question. A degree of openness was also provided in the survey for the students to give their responses about their perceptions on mobile learning experiences. The students' perception was measured in the questionnaire in order to collect the relevant information regarding what they perceived experience and useful learning in the setting of mobile learning. A questionnaire was developed to study students' perceptions towards the effectiveness of mobile learning, consisted 23 statements. Completely filled responses were received and the data collected was processed for statistically analyses. The questionnaire was consisted upon the statements based on 5-point Likert scale selection responses also included preference-based questions.

3.5 Validity and Reliability

The questionnaire has been assessed by two specialists in the domain of emerging technology and online learning. The questionnaires were then distributed. In addition, the questionnaire was also asked to be filled by 20 students (9 undergraduate and 11 postgraduate). Students were asked to comment on the clarity of the terminology, the format and the length of the questionnaire. Additionally, specialists were asked to comment on the accuracy and the capacity to develop structures for questions and items used for the research.

The final version of the questionnaire was updated and modified according to the feedback and suggestions from experts and the students. The validity of the content is therefore ensured for the study. For the reliability and internal consistency of the measurement scales, Cronbach's Alpha (α) measurement was used. Cronbach's Alpha of all the constructs included in this area ranges from 0.83 to 0.90, indicating a decent level of reliability (Hair et al., 2006). Moreover, both the content validity and the reliability of the tool were also satisfied. (Table 1).

Table:1 Reliability of Questionnaire Construct

Construct	Cronbach Alpha(α)	Mean	SD
Perceived Easiness	0.90	3.6250	1.0199
Facilitating Conditions	0.83	3.7711	1.0563
Behavioral intentions	0.85	3.5429	0.8624

3.6 Data Collection

Data were collected via online responses through Google survey form by using various social media platforms e.g. Facebook, What Sapp and emails for getting the Students Mobile Learning Perception Questionnaire (SMLPQ). The SMLPQ was an adapted form of the World Campus Mobile Learning Research Survey designed at the Pennsylvania State University's Campus (Mockus et al, 2011). The SMLPQ consisted of two sections, A and B. Sections, A aimed at eliciting responses included demographical data about gender, departments, qualification and mobile devices types and users, while section B was based on students' perceptions towards m-learning constructs.

3.7 Data Analysis

The method of analysis of the data used in this study was a descriptive analysis using simple percentages, mean along with description techniques (demographical data) to explain the data compiled from questionnaire responses was also being used to substantiate the analysis. To interpret the data, as statistical techniques, mean, standard deviation, t-test and f-test were used. Multiple regression analysis has also been done to predict values of dependent variable that is perceived behavioral intentions (PBI) with relation to independent variables of perceived easiness (PE) and facilitation conditions (FC).

3.8 Results

Section- A (Demographical Data)

Table: 1: Descriptive Data

Items	Frequency	Percentage
Gender	Male	72
	Female	228
Programme Level	Undergraduate	206
	Masters	83
	MS/PhD	11

Departments	Education	121	40.3
	Mathematics	43	14.3
	Computer Science	97	32.3
	IR	39	13
		300	100.00

Table 01 clearly indicated that 24% and 76% represent male and females respectively with most (68%) of the respondents from undergraduate level. Departmental level indicated most responses from education department with 40% of responses while mathematics represented 14% of respondents; CS represented 32% as well as IR having of 13% respondents.

Table2: Mobile Devices and Users type

Items	Categories	Frequency	Percentage
Types of mobile Devices	Smartphones	190	65.5
	Tablet PCs	93	31.7
	iPad	17	2.8
Types of mobile users	Frequent Users	160	58.0
	Wannabes	92	26.7
	Tradionalists	48	15.3
		300	100.0

Table 2 indicated 65.5% of the users having smartphones and 31.7% respondents were using tablets and PCs for m-learning, while looking into users type it indicated that 58% of the respondents are frequent users of the mobile devices and 26.7% are wannabes while 15.3% are traditional users.

Table3: Mobile Technology and Users type

Items	Category	Frequency	Percentage
Online-Learning awareness	Yes	123	41
	No	177	59
Willingness to use Mobile devices for Lectures	Yes	146	48.6
	No	154	52.4
Willingness to Adaptation of Mobile devices if become mandatory by institutions	Yes	97	32.4
	No	203	67.6
		300	100.0

As table 3 shows the results of the MT and its users type which indicated that 41% of the respondents are aware of the term m-learning, while (n=177) 59% of the respondents do not know what m-learning is. (n=146)48.6% of the respondents were willing to use m-

learning for their academic activities and (n=154)52.4% of the respondents were not in favors of using m-learning mode for their academic learning or taking lectures.(n=203)67.6% of the respondents were willing to adapt mlearning if it become mandatory from the respective institutions for them.

Section B:

Table 4: Intended Skills to use Mobile technology among students (Perceived Easiness)

Statements	Skilled	Average	Never Used	Means	StDev.
Sending text/SMS	284(97.3%)	16(2.7%)	0	3.0	0.16
Social media User	389(97.3%)	10(1.7%)	6(1.0%)	3.0	0.24
Downloading games/music/applications and usage	236(89.3%)	54(9.0%)	10(1.7%)	2.8	0.59
Web engines searching for information	266(94.3%)	28(4.7%)	6(1.0%)	2.9	0.43
Sending and receiving emails	248(91.3%)	36(6.0%)	16(2.7%)	2.9	0.6
Sharing files/content via apps(whatsapp,bluetooth,Infra-red etc.)	296(82.6%)	89(14.8%)	15(2.6%)	2.5	0.71
Composite Means				2.8	

(Skilled=3, Average=2, Never used=1)

As Table 4 showed the results of perceived easiness, Venkatesh (2003) states "Perceived ease" as the ease with which a proposed system is used; m-Learning is the system. A majority of participants in this aspect (97.3%, n = 284) skilled and ((2.7%,n= 16) average in using the technology with ease for sending SMSs and (94.3%, n= 248) are feeling easy to send and receive emails, (94.3%,n=266) are skilled in web searching engines for learning content, (82.6%,n=296) perceived easiness in sharing files and content via apps which shows that m-Learning facilitates interaction With fellow students, teachers and subject matter, mobile technology provides multiple platforms of communication, both synchronously and asynchronously. Just 1% (n = 6) of the respondents chose to never used web searching engines with the interaction facilitation (SMS, Sharing files or content and sending or receiving emails) through m-Learning

Table 5: Students' Perception towards Adaptation of online-Learning (Facilitating Current Conditions)

Statements	Strongly Agree	Agree	Neutral	Strongly Dis agree	Dis agree	Means	StDev.
Institutions are providing technical, support for learning	98(32.6%)	168(56%)	0(0%)	18(6%)	16(5.3%)	3.9	0.81
Having Resources (Mobile devices, Internet Access) are too expensive	114(51.8%)	83(37.7%)	6(2.7%)	16(7.3%)	81(37.7%)	4.38	0.77
Have IT Handling skills	33(15.0%)	178(30.9%)	3(1%)	24(10.9%)	62(24.5%)	3.44	1.16
M-Learning increase students' productivity	24(10.9%)	54(24.5%)	41(18.6%)	156(52%)	25(8.3%)	3.15	1.25
Increase students 'chance to get better grades	45(20.5%)	46(20.9%)	3(1.4%)	180(45.5%)	26(11.8%)	3.72	0.96
Facilitates better interaction among peers and teachers	39(17.7%)	59(26.8%)	35(15.6%)	51(23.2%)	116(38.6%)	3.06	1.36

(Strongly Agree=5, Agree=4, Neutral=3, Strongly Dis agree=2, Dis agree=1)

Table 5 as shows that conditions of facilitation on the other hand are well-defined as the extent to which a person have confidence in that organizational and technical structure be present to backing m-learning. (Venkatesh et al., 2003). Thus the overall results showed that students' perception of infrastructural, institutional and technical assistance for their use of the m-Learning is significantly positive. While insignificant effect on perception of m-learning adoption as of Most of the survey participants (32.6%, n= 98) strongly agreed and 56%, (n=168) They agree or have the resources to help them allow use of m-Learning, and though (n=18 ,6%) while n=114(51.8%)were strongly agree and n= 83(37.7%) of the respondents are agree with it that the provided facilities are huge economic burden for them and having high cost for usage. Likewise, the majority of participants (n=156,52%) were disagree that using m-Learning will increase students' productivity for learning. 38.6%(n=116) respondents remained strongly in opposition of the opinion were that m-learning is a facility which increase better interaction among the students and with their teachers. 45.5% (n=180) strongly disagree with the statement that m-learning provide better chance to the students to increase their grades, while only 20.5%(n=45) respondents strongly agreed with the view that m-learning will be helping them to get good grades. 30.9%,(n=178) respondents agreed that they have enough IT handling skills for m-learning, while 24.5%(n=62) of the respondents disagree with the

statement of that they have enough IT handling skills,6% of the respondents remain neutral for opinion that they have enough IT skills.

Table 6: Students' Perception towards Adaptation of Online-Learning (Behavioral Intentions)

Statements	Strongly Agree	Agree	Neutral	Strongly Dis agree	Dis agree	Mean s	StDev.
I feel insecurity to use ICT for learning	112(37.3)	71(23.6%)	11(3.6%)	58(19.3%)	48(16%)	2.4	0.81
I do not enjoy Mobile learning	89(29.6%)	81(27%)	0(0%)	64(21.35)	66(22%)	2.9	0.35
ICT usage frustrate me	66(22%)	62(20.6%)	3(1%)	133(44.3%)	36(12%)	2.1	0.93
I enjoy to try new technology for studies	78(26%)	52(17.3%)	0(0%)	82(27.3%)	88(29.3%)	2.8	0.59
Using MT is best idea for this situation of COVID-19	62(20.6%)	112(37.3%)	7(2.3%)	58(19.3%)	61(5.3%)	2.7	0.65
It is ok if MT is required component of the studies	133(44.3%)	62(20.6%)	1(0.33%)	56(18.6%)	48(16%)	2.5	0.75
M-Learning couldn't be compatible with students' learning	173(57.6%)	49(16.3%)	0(0%)	41(13.6%)	37(12.3%)	1.9	0.89
Students would be willing to use M-learning if supported	113(37.6%)	77(25.6%)	0(0%)	53(17.6%)	57(19%)	2.8	0.58
Adopting M-learning in future will be a perfect idea.	78(26%)	53(17.6%)	7(2.3%)	39(13%)	18(6%)	2.9	0.46
M-learning means learning anywhere at any time.	142(52.6%)	88(29.3%)	13(4.3%)	48(6%)	9(3%)	2.6	0.73

Table 7: Multiple Regression Analysis (Dependent variable PBI)

R2	Adjusted R2	F value	Pvalue
0.643	0.625	62.651	0.002***

***Significant at $p \leq 0.001$

Dependent variable: Perceived Behavioral Intention for M-Learning

The results, showed in Table (7), indicate that perceived behavioral intentions Describe about 62.5 % of the differential in future use of M-Learning. The F value is equal to (62.651) and is thus significant at ($p \leq 0.05$) so this indicates that there is a significant relationship between independent variables and the dependent variable It was revealed that "Perceived easiness" ($\beta = 0.397$, $p \leq 0.001$), "Facilitating Conditions" ($\beta = 0.277$, $p \leq 0.001$) and, are positively and significantly related to the "Behavioral intension" of M-Learning (determination Coefficient $r^2 = 0.643$). The results are therefore supported the objective of the research.

Table 8: Multiple Regression Analysis (ranked independent variables)

Construct Order in regression Model	Adjusted r²	F value	T value	Beta	P value
Perceived Easiness (PE)	0.543	181.108	4.788	0.397	0.002***
Facilitating Conditions (FC)	0.601	112.733	3.452	0.277	0.001***

***Significant at $p \leq 0.001$, ** Significant at $p \leq 0.01$

Dependent variable: PBI for M-Learning

As shown in the Table 8, Facilitating conditions came first or demonstrate 60.1% of the disparity in behavioral intentions to use M-Learning in the upcoming potential situation. Perceived easiness ranked second (next to position) and explained around 54.3% difference in behavioral intentions on using M-Learning for future learning.

Discussion

As the significant predictors of perception and the scholars' intentions towards usage of technology, Venkatesh et al (2003) present three main building blocks (behavioral intentions, perceived easiness and conditions facilitating). In addition to these guiding features, the students employed perception of behaviors, anticipation (see Fig. 1) to assess their willingness and intent to usage of MTL for students' academic requirements.

In this segment, students have positioned high trust in mLearning performance to support their learning errands for meeting performance expectation. The majority of students used their mobile devices to send and receive emails, making up of respondents. Owusu-Acheaw and Larson (2015) reported that almost all students use their phones to access their social networking sites and spent around thirty minutes to three hours a day. In sum, the overall average mean of 2.8 was based on respondents' skills in the use of mobile technology. This indicates that almost all of the survey participants also had required skills in use of the mobile technology. The results of the study by the researcher corroborate the findings of (Suki & Suki, 2010) that the interactivity impact of online technology affects the implementation of m-learning. (Table 4). However majority of the student didn't perceived it easy due to economic burden and non-provision of facilitating infrastructural facilities to the students such as internet cost, mobile devices cost and other related factors as shown in (table 5), most of the students were confident in using advanced technical tools of mobile devices like learning apps, web engines as the results indicated in table 4. As for behavioral intentions towards the use of m-learning, the students didn't perceived it compatible or alternative of their face to face learning, but they believed that it is facilitating their learning anywhere or anytime so it could help them to tackle time and place barrier for their learning (table 6). The above results of the

study were legitimate the implementation of m-Learning as an assistance for learning of students to improve their communication, skills formation and achieve the goals of the course. This confirms Vifansi (2002) and Momtazur Rahman et al. (2009) who argue that not just the academic requirements but also the learning needs of the students must be fulfilled through e-class or curriculum. This is essential for the effective implementation and operation of a learning system such as Venkatesh et al. (2003) argued which, that before description could be applied, students should endorse a clear strategy to use the suggested methodology which would help to shift learning independence and ownership to the teachers and students themselves. This shifting of mode would help and contribute towards the sustainable incorporation and inclusion of students' need in mainstream education system.

Conclusion

The findings show that most students know the use of mobile devices well, as a large amount of them often use advanced apps on their mobile devices and are keen to use m-learning with confidence. Most students from this study are strong and willing to learn through mobile learning system in this current situation because they believe that their learning will be improved and their academic time could be saved. The study results have practical implications for the development and implementation of a user-friendly m-learning system. SMS alerts may be implemented to remind students whenever a commitment or due date of assignment is due and whenever significant interactive activities have been announced by the University. Universities may have to work on the next level of academic learning that is m-learning and e-learning, which is the future of global learning paradigm.

Suggestion

The main future concerns and suggestions of m-learning adoption are as follow:

1. Universities and educational institutions may maximize the understanding of potential advantages of using m-learning amongst faculty and students.
2. Finding the suitable infrastructure while creating user friendly interface system for m-learning adoption.
3. For successful implementation of m-learning, students' suggestion must be needed to incorporate in term of their concerns and challenges.
4. The design of m-learning should be fully compatible with mobile devices such as smartphones and their operating systems.
5. Different internet providing companies must be bound to specific cost charges to the students.
6. To address other hurdles e.g. power shortfall, signal issues, internet accessibility the authorities may ensure its implementation online as well as off line mode.

7. Proper training to the staff and faculty as well as students must be provided to cater technological usage issues.
8. Create useful student lessons with technology usage, rather than spending time in learning how to use technology first and then lectures.
9. Fair monitoring of the system may be ensured.

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