

# Design a Mobile Learning Framework for students in Higher Education

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**Abstract**—ML (mobile learning) has extended e-learning to a new paradigm of “anywhere, anytime learning”. The use of 3G and 4G Phones (high-speed data transfer) will be represented as a great opportunity for both learners and teachers to meet together, access and exchange information in virtual spaces whilst on the move. The aim of this work is to design a mobile learning framework for Students in higher education. Thus, this will provide better quality of teaching. Additionally, Mobile learning (M-learning) has turned into a critical instructive innovation part in advanced education. M-learning makes it workable for students to learn, team up, and impart thoughts among each other as much as web innovation and improvements will allow. In any case, M-learning acknowledgment by learners and instructors is basic to the occupations of M-learning frameworks. Attitudes towards M-learning innovation is an imperative method to measuring whether or not learners and instructors are prepared to utilize M-learning. Such attitudes will serve to distinguish qualities and shortcomings and encourage the advancement of the innovation foundation. We will investigate students and instructors' state of the arts in using M-learning in higher institutes for some of Private and Public universities of Ministry of higher education. As a result of student feedback regarding M-learning methods of teaching, a suitable framework for M-learning is proposed by reviewing many other frameworks and also by the analysis of results of a survey that asked many students and staff in higher education fields.

**Keywords:** M-learning, Mobile learning framework-learning, learning, pedagogy, Collaborative knowledge, Smart Technologies, Technical aspect, Cultural Aspect, Social media, Theoretical Aspect.

## I. INTRODUCTION

As mobile devices are turning out to be progressively ubiquitous, many researchers and experts have fused the innovation into their teaching and learning situations. As [1] has foreseen, "mobile learning is a harbinger without bounds of learning". The utilization of mobile learning

range generally, from advanced education and corporate learning settings [2], to formal and informal learning, to classroom learning, replacing formal learning and field study. Despite the many types of and expanding administrations offered by portable learning, it is still early stage as far as its mechanical restrictions and instructive implications [3]. Although, few researchers offer a system for hypothesizing about M-learning with discussion hypothesis and action hypothesis [4] [5]. Instructional designers and educators require a strong hypothetical establishment for mobile learning with regards to separation training and more direction about how to use development, mobile innovations and incorporate them into their findings. Also, mobile technology offers new open doors for students' learning exercises in advanced education, which permits substantial and deep access to various areas. From an educational point of view, there are various advantages to be picked up by making the learning procedure intuitive and socially collaborative, as proposed by a constructivism learning approach. Mobile technology offers the adaptability of adjusting learning into the daily exercises of learners, and along these lines, guaranteeing that learning takes place during practice. This guarantees learners, in spite of the fact that they are not physically in the classroom, can in any case share in learning exercises, along these lines enhancing learner engagement [6]. In the 21st century, where learners are required to learn vital aptitudes like basic ideas, being a part of the teamwork to do particular tasks, relational abilities and interactions. It is in this critical manner that advanced education foundations may create learning situations that will bolster and urge a constructive way to deal with teaching and learning. We conducted surveys among students of higher education in the Kurdistan Region to show how the M-learning is being accepted and adapted as a new methodology in learning. As a result of the survey, we will propose a framework for Mobile learning that address all the requirements that are needed for applying the framework in higher education in the Kurdistan Region educational institutes.

In the next section, a background to the study will be provided, followed by related work of M-learning. Then the aim and result of a Questionnaire will be presented. We then include the design of a framework in section 4. The paper is organized into the following sections. Section 2 presents the literature review on the subject as well as work in related areas. Section 3 presents a Questionnaire. Section 4 presents the design of a mobile learning framework for students in higher education. Section 5 includes the conclusion.

## II. RELATED WORKS

Only fifty years ago, communication by means of the phone gave the capacity to converse with somebody from a distance. Nonetheless, the capability of the phone has extended to incorporate different elements. These days, cell phones consolidate the components of conventional phone, information content, a journal, remote web association while certain phones also include PC abilities. Prior research on the utilization of cell phones in conveyance of instructive substance was confined to the components accessible on cell phones. For example, a study directed in Africa demonstrated the utilization of the short messages framework in speaking with understudies over the landmass. A study in Japan demonstrated that students in Japan like to use email facility on their cell phones. Along these lines, when planning portable materials for their English subject, the component of email is likewise included [7]. Designing content for e-learning is different from planning content for M-learning. This might be because of many components which incorporate physical factors. The lessons conveyed utilizing PCs and the World Wide Web can be seen utilizing a 12–19 inch screen. PCs can hold huge memory and classroom lessons can be directed with PCs as the fundamental medium. This is known as Computer Assisted Learning. It is a standard to print materials from the web, however this will not be the situation for portable learning. In conveying lessons through cell phones, there are various aspects that should be investigated. Mobile devices have been utilized increasingly frequently to monitor activities in regular daily life, gathering immense measures of information about user behavior [8]. This pattern likewise influences learning exercises that happen at any time and anywhere. In this manner, the difficulties of assessing M-learning, a procedure which includes various free factors that impact the learning procedure, are mentioned. At that point, the best in class on utilizing the Semantic Web advancements to handle Big Data is presented; truth be told, the Semantic Web empowers the administration and elaboration of the information delivered by the learners in a versatile learning activity. M-learning has caught the imagination of numerous instructors in higher education as they have gained, by the elements and devices inserted inside compound cell phones [9]. Japan has the first educational institute to have M-learning devices (i.e. iPods) used by

their students to help with English learning [10]. This achievement was soon trailed by the activity of Duke University in the United States to equip all first year understudies with iPods [11]. Oxford University in the United Kingdom, additionally, has investigated the joining of iPad as powerful innovation for taking on the web programs [12]. Besides, evidence showed that Columbia University in the United States has begun to use cell phone learning with research on how educators and understudies can use the cell phones for learning [13]. As indicated by [14], there have likewise been various effective endeavors by advanced education establishments worldwide in utilizing instant messages to bolster remote learners, for example, Kingston University and the Ulster in the United Kingdom, some Universities of Thailand, the Chinese University of Hong Kong, and University of Victoria in Australia. Additionally, research is likewise being led to decide the capability of M-learning in customary types of advanced education. However, M-learning in Higher education settings has not become widespread across the universities and is still in the testing stages. In addition, the examination into mobile adaptability has been founded primarily on the difficulties and the chances of this innovation in training when all is said in done and in online distance learning specifically. What's more, numerous new research have been rising in different academic areas, including mechanical, educational, and methodological issues, and issues identified with substance and UI adjustment.

### 2.1 Mobile learning

In this unique situation, various researches contemplate the use of mobile and remote correspondence, and the advances in education which thus have been conducted. Specialists have signified these innovation support learning approaches as "mobile learning". During its development, M-learning was characterized distinctively by different scientists. A survey of the writing of the diverse definitions uncovers four methodologies for characterizing mobile learning: cell phones, learners and learning procedure, learning and mix of various segments, and a blend of these three methodologies.

1. Mobile Devices: The use of handheld devices, for example, PDAs, mobile phones, portable workstations, and whatever other handheld data innovation devices that might be utilized as a part of educating and learning [16].
2. Learning experience: Where a learner can be physically mobile while in the meantime, staying associated with non-proximate source of data, guideline, and data communication technology [17].
3. Learning process: The securing of any learning and ability through utilizing mobile technology, anywhere, anytime whenever that outcome in a

modification in conduct, on the other hand the accessibility of on the web and personal flexible supporting, open, learner-centered education [18].

4. The Combination of all factors: The mix of e-learning and mobile computing that guarantees the access to applications that support learning at anytime and anywhere [19].

The four factors appearing above underline the uniqueness of mobile learning in and recognize mobile learning from different types of instruction and preparing, for example, web based learning, distance training, and e-learning.

### III. Questionnaire

We have conducted a survey regarding using mobile technology among students in higher education. We have selected 10 questions that can help us in understanding the behavior of students regarding new learning techniques. On the whole, students show that if there is a framework application, it will support the lecturer and the students for learning process. The Survey helps us to propose several components of our mobile learning framework, more over to show how mobile learning can be used among students who have taken the survey. The first few questions were about general information of the students: 'what is your study, and where?' And 'in which stage you are right now' and 'what is your major'. We have done 200 surveys as a starting point, and later we will conduct more surveys to evaluate our framework and application in future work. For instance, here is an important question that we have selected to show the results in Q4: we have asked 'do you get the benefits of using mobile phones in your study?' The answers show that 21% indicate strongly agree and 32% shows agree, while 41% were not sure. So this means the majority were happy to use it in their education, as it is shown in Figure 1.

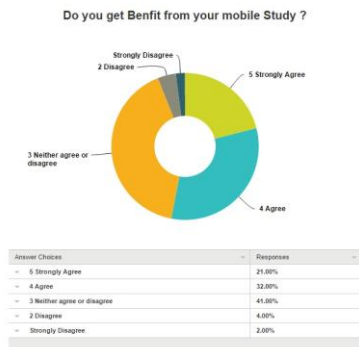


Fig.1 Using Mobile Phone in their Study

The question five has been written regarding the group working and collaboration. The results show 22% strongly agree and 34% agree, while 41% was not sure. This means the majority agree with collaboration and group working using mobile phones. As it is shown in Figure 2.

Mobile Learning technology help me to work as group with my friends ?

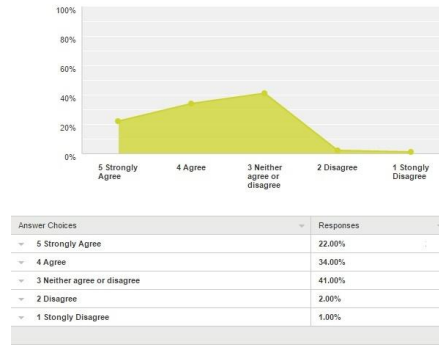


Fig.2 Group working using mobile phones

Question 6 focuses on is mobile device help students to find information about course subject and material. The results show 24.24% strongly agree and 37.7% agree, while 29.9% students show neutral about their answer. This result shows that students use mobile for their subjects and material. As it appears in figure 3.

Mobile Technology help me to find related information about the courses ?

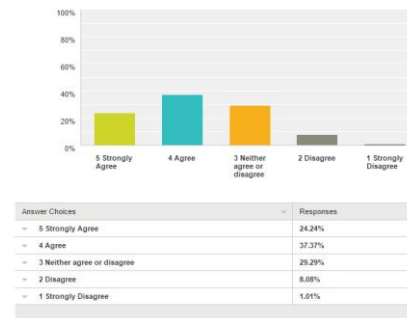


Fig.3 Finding related information about subject

Final question is about contacting the lecturer and get feedback about homework and assignments, the results shows 29.59% of students strongly agree plus the 21.43% agrees that mobile technology helps to provide feedback to the lecturer. This means that students support ideas of M-learning. as it shows in Figure 4.

Mobile Technology help me to get in touch with my lecturer easily and instantly ?

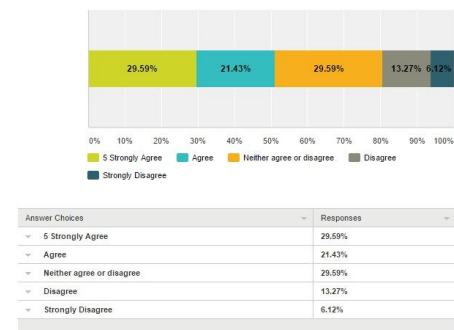


Fig4 Lecturer contact and feedback

So we can conclude from the survey results: the students in higher education will be happy to use mobile technology in their learning process, because it gives them opportunities in class and out of class for activity. However, there are challenges to applying many applications with different content and this makes the students confused. In addition to that, the training issue is the most challenges for M-learning. So we notice that there is not a clear framework to address all these issues to apply M-learning in higher education. So we propose a new framework that supports all components that are needed to use M-learning in the learning process in higher education. In next Section we will provide the details of the framework.

#### IV. Framework

In this framework we have defined three main components that lead to deliver M-learning in higher education (Technical Aspect, Cultural Aspect and Theoretical Aspect). Figure 5 shows all components of the proposed framework in detail.

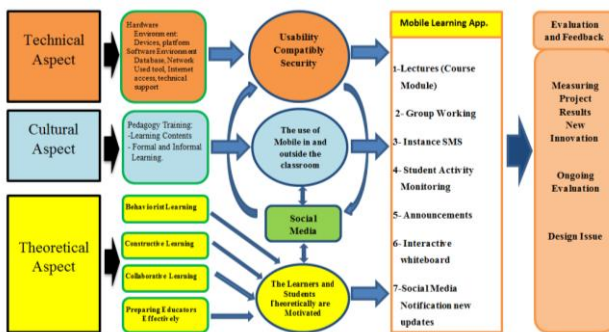


Fig.5 M-Learning proposed framework

##### 4.1 Technical Aspect:

Technological challenges include device / hardware issues, software specialized issues, framework and system issues; applications and device ease of use, accessibility and implementation. There are a few specialized issues also. To begin with is the connectivity issue that refers to the issues of network in specific places, and issues of the natural mix between the equipment and the product of the device (i.e. the mouse wheel, soft keys, and so on [21].

###### 1-Hardware Environment:

With respect to the hardware, there is an extensive variety of cell phones to browse including portable workstations/note pads, tablet PCs, individual computerized associates (PDAs) and smart phones.

###### 2- Software Environment:

M-learning innovation environment is additionally a contributing component to the plan of mobile learning activity. Environment constitutes components, for example, database, platform, network and other technological parts of mobile learning [20].

*A-Database:* The profiles of the understudies that played out the capacity of M-learning makers were assorted. Therefore, there must be a database for storing all these information. As to earlier information about application improvement for M-learning situations, it ought to be noticed that a portion of the understudies were self-taught: from the individuals who had turned out to be occupied with the theme quite a long while previously to the individuals who had taken an instructional exercise or a particular, one-off course. Conversely, others had no earlier preparation in this regard. Just a single student had an absolutely proficient interest.

*B-Network:* Wireless technology and cell phones are getting quicker and all the more intense constantly. Indeed, there is currently a propensity to replace desktop and smart phones and other different sorts of devices that require an alternate sort of connection. Also, there is right now a multiplication of tools and programming languages to create cell phone applications and, simultaneously, a continuing development in particular commercial centers for distributing and sharing applications of this type.

*C-Used tool:* There are many applications in mobile technology that support some of M-learning functionality, therefore, we need mobile application with all capabilities that supporting M-learning efficiently.

*D-Internet access:* The internet is the biggest challenge when applying M-learning in and out of the class. Nowadays the mobile operator can easily provide internet for mobile phones, so it is very useful for universities to provide this service to the students who are contracted with these mobile operators.

*E-Technical support:* The latest advances in M-learning are changing the basic role of cell phones from making or accepting calls to recovering the most recent information on any subject. The main challenges in technical support are availability and battery life. For example. Meeting require transmission capacity for non-stop / quick streaming, the volume of documents / resources stored by a particular device, security issues, Work / life balance [23].

###### 3-Usability:

The awareness and skills of mobile device use are greatly recommended for the achievement of Mobile learning. Studies have likewise uncovered that convenience issues have a great impact on the achievement of cell phone applications; however, there is an absence of research about learning, understanding, convenience, viability, and productivity of mobile applications or ease of use [20] [26] [27]. The

experience of end clients profoundly affects the achievement of M-learning [24]. Usability issues are observed to be critical variables in learners' high fulfillment levels. Assisted learning is possible by the utilization of the framework suggested. For example, if the client did not get the message or protect remark in a particular time span, he/she would likely not feel happy with the framework; along these lines, bringing about less engagement in the framework [25]. There are some basic issues to focus upon that ought to be mulled over by an engineer to enhance the ease of use of M-learning application, for example,

- a) M-learning ought to contain "Get" work.
- b) Graphics ought to add on requiring interfaces, this will prompt to build the ease of use of M-learning application.
- c) Adding a few catches, for example, "next" and "back" catches would be useful, enhancing the ease of use of the application, however the number key-pressed navigation mechanism.
- d) Another way to deal with enhancing ease of use issues is to make the user interface adaptable To/by the client, by making the learning content by and by important and acceptable in a given setting.

#### 4- Compatibly

Compatibility is likewise a major issue with mobile devices. Also, there are still similar issues as to software. The majority of these devices do not support the standard desktop programming that a student would depend on for everyday assignments.

#### 5- Security

Teachers need to guarantee each student will profit by the current devices or else offer options for those not able to obtain them. Aside from that, there is an issue of security, safety, robbery and misfortune. Cyber crimes are turning into a risk as innovations thrive. Individual and organization information are typically put away in the mobile devices for usability when the need emerges. Being little and versatile makes the device generally easier to lose or to be taken. The information can be stolen when you use the device. Instances of stalking, data fraud and cyber bullying are going on and there is no standard method for securing the clients. Clients are just informed regarding the dangers and given tips on the most proficient method to minimize [28]. How responsible, moral and safe the learners use the device is additionally another

issue that should be considered. Another shortcoming of cell phones is the powerlessness to hold a lot of data which has brought on many individuals to transform into distributed computing. Be that as it may, this open cloud administrations have additionally demonstrated how unprotected these may be. In May 2012, IBM chose to reveal a bring-your-own-gadget (BYOD) strategy and banned the utilization of Dropbox because of the possible external intrusion [29]. Moreover, instructors need to strategize their lessons well, particular, when managing constrained capacity limits.

#### 4.2 Cultural Aspect:

A challenge for M-learning is the plan of the data caching method. Learners have their own particular learning inclinations, so learners may utilize a cell phone diversely relying upon their learning conduct or learning culture. For instance, learners may want to do at least one of the accompanying as a component of their learning procedure: take pictures, record video, compose notes, or make their own sites. Because of the assortment of accessible media, students can learn in various courses in view of their favored learning styles. It is further indicated that teachers and students can profit by lively, dynamic, and experiential learning wherein the chance to build, institute, and reexamine their learning ways is obvious. Be that as it may, a result - driven culture influences teachers and students, and their association of educating and learning. Subsequently, culture ought to be considered as another main consideration, which may affect the learning execution in the portable learning environment [30].

#### 1- Pedagogy Training:

Beginning with training of teachers, and offering support to students on the most proficient method to use the mobile in an educational setting. Challenges exist likewise in creating compatibility among the educators, guardians, and school authority, and even in putting aside a typical administration time for instructor groups and analysts to think about lesson, difficulties, and create elective procedures. The instructors of science, as it happened, was the primary curricular zone amended for the smart phones[30]. There are two central points in regards to Pedagogy Training:

##### a) Learning contents:

According to [31], not just do users search for a usable framework yet they likewise search for a satisfying and connection with involvement. In this way, components, for example, pleasure, client fulfillment and inspiration are considered. Aside from that, substance ought to likewise be efficient. A composed substance could improve comprehension and consequently advance learning outcomes. A sorted out substance must be connected to the objectives and destinations. Similarly, as with some other type of exhibited

materials, objectives and targets give the ability to read a compass. Combined with this is the way that when there are objectives and destinations, criticism can be gotten. On the other hand that one arranges the substance in a story shape, i.e. in a story shape, learners will have the capacity to investigate an issue on an individual premise as they will be straightforwardly required in the learning. Accordingly the story mode additionally permits students to consider what they have learned, lighting up the way toward learning, and bit by bit gives a sorted out structure of information. Cultural difference is also a vital element and inspiration, collaboration, and communication.

b) Formal and Informal Learning:

The formal learning involves the learning in a physical zone, for example, classroom, lab, and course lobby. While, Informal learning will involve the learning outside the classroom, labs, and course lobby, for example, in home and library. Mobile learning offers the chance to move past the formal classroom and permit more flexibility for adapting anyplace, at whatever time. M-learning can be used as apparatus to enhance a nature of instruction and informal learning, for example by the use of a portable application a teacher can get their student criticism in regards to an after effect of the specific condition and in the meantime the speaker can impart and talk about the outcomes to the students simultaneously. This will prompt making a sort of cooperation among the students.[32]"Learning as it happens casually and by means of web-based social networking instruments is profoundly social as is planned" and is a critical piece of expanding access to information to learners.[33] Informal learning is raised and started by an individual. Then each of Internet access, going to the nearby logical workshop, going to the library and having scholarly and logical examinations with companions will be spoken to as a type of informal learning. Furthermore, Informal learning by using mobile learning can be taken as an apparatus to take care of an issue of formal learning. For example, when a teacher passing out a gathering work task though a portable application, the present materials won't be satisfactory to address the entire prerequisites of this task. Thus the utilization of portable learning system will be a key variable to address and tackle an issue errand. This is on the grounds that the understudies can make some simultaneous exercises remotely, for example, Internet seeking, web based chat, input gathering by utilizing and afterward choosing a legitimate and reasonable outcome.

2- By allowing cell phones in universities you can grow learning outside of the classroom. Students won't just have entry to data amid PC lab time (which is in gradual decline). They can look into data from any place on the campus. Collaboration will increment as understudies can utilize these gadgets as research apparatuses amid tasks and gathering work. Plus understudies love innovation so they are probably going to be amped up for it and keep learning outside of school hours. Having those learning applications, advanced course books, and so on cell phones permits them to get in additional follow up on and learning in amid downtime. They can convey their books and notes with them at all circumstances and have moment access to materials. If students are truly energized and occupied with learning within the classroom, they are probably going to keep learning outside of the classroom and they can do as such with versatile innovation. It is surprising how portable innovation can change training into something more enchanting and connecting with than you could have ever envisioned. In case you are thinking about permitting cell phones on your school remote system, get in touch with us here and we can walk you through the procedure and answer any of your inquiries.

#### 4.3 Social media

Distinguished social media for learning as a quickening pattern alongside mobile applications, tablet processing, portable learning, individual learning situations, and area based administrations as key developing technologies. As each of tablet figuring, portable applications, and M-learning method the web-based social media for learning will be spoken to as key rising innovation of learning. The oddity of cell phones and their universal uses for "correspondence, coordinated effort, assembling, and sharing" in and outside of tutoring may build enthusiasm for STEM professions and post secondary study. There is some proof to propose that the utilization of portable advances with fitting instructional methods can help maintenance in post secondary STEM (Science, Technology, Engineering and Mathematics) majors [32]. In fact social media have a direct impact (positive and negative role) to motivate the students in order of using M-learning as it has been represented inside a proposed framework. Thus, the police and the rule of using social media in a classroom should be explained properly to the students.

#### 4.4 Theoretical Aspect

A theoretical aspect has been represented as a fundamental component of outlining a mobile learning framework, since this angle will spur the learner and students to utilize M-learning application altogether of improving nature of instruction. Likewise to propel the learner and students to use portable adaptability proficiently and to find another idea of learning altogether of showing signs of improvement in the nature of learning furthermore to tackle misty issue by contribute the student's ideas[34].Theoretically, cogently,



M-learning can enable learners by empowering them to better evaluate and select pertinent data, reevaluate their objectives, and rethink their comprehension of ideas inside a moving and developing edge of reference (the information context). Theoretical aspect will cover each of Behaviorist learning, Constructive learning, Collaborative learning, and planning instructors adequately.

a) Behaviorist Learning

Behaviorism is a learning hypothesis in view of conduct can be controlled or altered in light of the forerunners and outcomes of a conduct. For example, a student will get a like sign by the speaker when he/she presenting the task before 8 pm, therefore whatever is left of the students will see their partner accomplishment and it will prompt to empower them of presenting their assignment on time. This will lead to motivate a student to accomplish it is task or homework on time. This will be represented as a kind of change in student learning behaviour.

b) Constructive learning

In fact learning is a ceaseless procedure, for example student during his/her life will get a huge number of information. Learning is viewed as a procedure of effectively developing information by coordinating encounters into the learners' earlier information; the learner assumes a dynamic part in building his/her knowledge. The M-learning application will be spoken to as an intelligent instrument for the learner to distributing their insight to the students. Thusly the students will use this information and their encounters to understand a specific problem. Furthermore, by using Constructivist mobile learning in a conventional method for instructing will be changed. For example a learner won't be required to clarify the entire thought, ask and answer the inquiries. Rather the learner will draw the fundamental headings of entire thought and let the students take in the entire thought in and outside the class and with different students [35]. To persuade learners to exceed expectations past, their present aptitudes level (i.e. Enacting learners' zone of proximal advancement.); learners are seen as information constructors [36].

c) Collaborative learning

It's clear that the collaborations between students will be represented to as a win key of enhancing the learning procedure, however, in truth; it is troublesome for a few students get in touch with each other after the class. Mobile learning applications will encourage joint efforts between understudies at whatever time and anywhere. When understudies concur with their associates, they frame social ties, and these are imperative for collective learning [2]. The gathering talk gives a shared taking in an environment where understudies gain from each other, and it permits the educator to

guarantee that understudies are on track [20]. The focal points of versatile learning can be increased, through community oriented, logical, constructionist and constructivist learning environments. Students were doing broad synergistic work with their associates utilizing their computerized gadgets. Dialog, trading notes, checking realities, looking for elaboration and other data gathering activities should be possible utilizing their cell phones while the understudies are in the genuine surroundings of their scientific research. From the past explanations and quotes it is uncovered that versatile learning has an immediate effect to enhance the collective learning issue for understudies. Therefore, we are contended that communication, learning ought to be tended to as a piece of Mobile learning and it ought to be disclosed to the students This is to rouse the . understudies and teachers to utilize portable learning [۳۳].

d) Preparing students effectively

M-learning technologies offer instructors and students a more adaptable way to deal with learning. PC labs are extraordinary, however do your students utilize technology in the classroom, in the school cultivate, in the study corridor, in the exercise center, and on field trips? With versatile learning devices, you can do this, and more it gives the possibility to engage and elevate students in their learning. To expand viability, training in the 21st century must be dynamic, drawing in, and altered. Students must have widespread access to Mobile technology that will empower basic thinking, differentiation, and issue solving. Cell phones customarily have a terrible notoriety in schools, yet that is beginning to change. Rather than banning phones, some ground breaking teachers are effectively grasping them.

e) The Learners and Students Theoretically are motivated

At this step the learners and students should be pushed by using the framework. This is on the grounds that at this level they have enough students about the part of portable adapting hypothetically. Therefore: firstly, the understudies is persuaded to utilize mobile taking in this by changing their behaviorist of learning. Furthermore, the understudies are persuaded to utilize Mobile taking in this by changing of their Constructive of learning. Thirdly, the students are propelled to utilize M-Learning in this by clarifying the impact of this method of collective learning. At last, Preparing instructors successfully has been tended to, this to rouse students altogether by using mobile learning applications.

4.5 Mobile Learning App.

This section a proposed mobile learning application interface component will be displayed and discussed in the following points:

#### 1. Lectures (Course Module) part:

This part will be located in the main interface in a form of a button. By using this button the Students will be able to view and download their course modules.

#### 2. Group Working part:

This part will be located in the main interface in a form of a button. By pressing this button the students will be able to work on a particular project as a team concurrently.

#### 3. Instance SMS

The third proposed part will be Instanced SMS button. This button will be used as an efficient and fast way of communication between students and lecturers.

#### 4. Student Activity Monitoring

In this part the lecturer and university administration could monitor all students' activities and easily can find the week points for student in collaboration or engagement with mobile learning and try to involve the students with many interactions tasks.

#### 5. Announcements

This part will increase the interactivity of the proposed application. Through this button an urgent announcement will be sent to the students.

#### 6. Interactive whiteboard

The Interactive whiteboard button will be employed as a tool to solve the equations or drawing a particular shape by the students and lecturer concurrently.

#### 7. Social Media Notification new updates.

It is the final part that has been proposed in this M-learning Application framework. This part will permit the students and lecturer to access a closed group of social media such as Facebook, Twitter, Viber, and Whatsapp.

#### 4.6 Evaluation and feedback

To address the whole weakness points that will be raised during and post the process of M-learning application development this part has been studied. Each of measuring project results new innovation, ongoing evaluation, and design issue will be a key success to implement a developed application with learners and students satisfaction.

#### V. CONCLUSION

In this work a questionnaire has been done to show *the learning, and how the-desire of students by using M students eager to have a Mobile framework* application to support them in their study. Therefore, the results of the survey, it is revealed that *most of the students are agreed of learning, but at the same time some of them will -using M .need to be motivated properly* The survey with our literature review is helping us to think about M-learning in our region and to design an M-learning framework for

students. The aim of this task was to motivate the students to use M-learning. Then each of Technical, Cultural, Theoretical aspects and Social media inside a proposed framework has been represented as a key success to motivate the students to use M-learning. In future work, we have a plan to develop and implement a proposed framework in mobile application to that supports all the proposed framework components.

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