International Journal of New Findings in Health and Educational Sciences (IJHES)
ISSN 2980-0641
DOI : 10.63053/ijhes.66

Exploring Socio-Cultural, Constructivist, and Lifelong Learning Dimensions in Mobile Learning: A UNESCO Framework

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ARTICLE INFO

Keywords: *Mobile Learning, Learning Opportunities, Mobile Education, Distance Education*

ABSTRACT

The subject of mobile learning and training is a very well-known topic in the specialized fields of education in the world today, this type of learning and training is independent of time and place, especially with the increasing progress of mobile technologies and the universal and relatively fair distribution of these technologies at the level The world, especially in remote areas with few educational resources, has enjoyed a good global fortune, so that most of the international organizations and institutions around the world that have a hand in the field of education, especially public education, have taken advantage of the opportunities provided in The platform of these technologies and communication based on it have benefited a lot to achieve their educational goals, which is currently the world organization of UNESCO, although it seems that in our country despite the provision of many infrastructures of communication and technology The issues associated with this issue are still largely neglected, if not unknown, but the widespread reflection of such types of education at the world level cannot be kept out of sight and this accelerated global movement cannot be avoided. In this article, the problem is summarized Mobile learning has been discussed from a theoretical point of view, the fields of emergence and development of learning and mobile education all over the world and the unique efforts of the UNESCO World Organization to improve the knowledge and awareness of people by taking advantage of the opportunities of this type of education and prominent projects. And its universality is mentioned, mobile education is compared with distance education and the goals of this type of education are stated. In the end, several researches conducted in the country on mobile learning and education are given.

1-Introduction

Avoiding time and space has long been a human desire, to be able to not be where we need to be but to take advantage of the benefits of being there is very desirable because it will save us time, money and energy. This will be especially evident in the case of education, because under no circumstances will everyone be able to receive all the educational materials, they need in one specific place at the same time.

The use of other technologies and the use of their platforms in education, due to their universality and relative cheapness in the present era, can remove the space and time obstacles in front of education and provide the necessary knowledge and awareness to different strata, especially the weak and less privileged. can be easily distributed even in the most remote areas, provided that we are well aware of the conditions and materials for the effective and useful provision of such training.

2. What is mobile learning?

According to the definition of Merlot (2014), this type of learning refers to "the ability to acquire or provide educational and learning content through personal pocket devices such as PDAs, smartphones, and tablets." Educational content refers to any content format that has an aspect of educational dimensions to improve learning and is accessible through the mentioned tools. Although mobile learning and education used handheld personal computers or laptops in its infancy, the term mobile learning refers to both the technological and educational aspects of learning (Crompton & Burke, 2018). In line with the integration of both these dimensions, there are still differences on whether learning and mobile education should be viewed as a technological and instrumental issue, or whether the mobility and mobiles of the learner and learning should be given more attention, or basically whether the issue of rich learning experiences that learners receive through these tools is discussed (Paulins et al. 2015).

1. In 2000, Quinn defined mobile learning as follows: "a type of learning that occurs with the help of mobile devices and is the intersection of mobile technologies and electronic learning (Quinn 2000)." A more comprehensive view, however, is to generalize mobile learning to any type of learning that occurs when the learner is not stationary, that is, in this type of learning, mobiles and non-stationarity of the learning place and the learner are very important, and it should also be done through the phone portal. Patchler, et al, 2009 (O'Malley & Stanton 2002). Regarding the term mobile education, it is preferable to consider it as content and educational materials that are delivered only or mostly through hand-held or pocket-sized electronic devices (Traxler 2005). If we want to refer more precisely to this type of learning, we should also refer to the theories of Sharpless, who is one of the researchers in the field of mobile learning. He strongly defends the opinion that mobile learning is only learning through tools and technologies such as Mobile phones, tablets or other possible devices are not the future. According to him, the learning that happens as a result of the lack of stability of the learner's location is called mobile learning, and this type of learning is perhaps and probably the best way to realize it is smart mobile phones, but it cannot Definitely and solely dependent on such tools Sharpless says that focusing on the technological aspect of mobile learning cannot bring us closer to its true nature and may even distract us from the original concept, but perhaps today The reason for the extensive and comprehensive features of smart mobile phones is the best tool to have all the portable features together and at once. Mobile learning is a learning experience or opportunity that is independent of time and place and happens in a mobile mode. This mobility has many aspects such as:

2".The mobility of physical space": people are constantly trying and moving for continuous learning to fill the gaps in their daily lives or to learn new topics later by reflecting on the gaps in their lives, this space can Be completely dependent on learning or be a background

3. Portability of technology": Portable tools and information sources are well within our reach and even today it is possible to use all the different and numerous tools and capabilities by synchronizing them in a modern tool such as a mobile phone or tablet. to have ourselves

4. The mobility of the conceptual space": learning topics and their fields are competing fiercely for increasing people's attention, on average, every adult faces 8 main learning projects every year, while dealing with numerous small topics every day. Learning is transactional, so depending on a person's interest, curiosity, or tasks, their perceptual attention is moving between different subjects.

5. The mobility of the social space": learners are members of different social groups and depending on their position in the family, workplace, street, classroom, etc., they have various encounters during the day.

6. Dispersion of learning over time": learning is the result of a cumulative process that includes connections and reinforcements that occur in different learning experiences and these experiences happen in both formal

and informal contexts (Sharples 2009).

The key point in such a theory can be to pay attention to the fact that in mobile education, it is the learner who is mobile and non-stationary, not technology or educational media, so in this type of education, one should create golden opportunities anytime, anywhere. He paid special attention to providing educational services to children and strengthening their learning. Due to the increasing growth of social interactions through powerful technologies in the 21st century, flexible learning environments can be designed to suit the needs and different conditions of learners (Shuler 2009).

To hypothesise to present a theory about mobile learning, 4 steps seem essential: "The first step"; What is special about this type of learning compared to other learning activities? Clearly and necessarily, the differences must start with the hypothesis that in this type of learning, the learner is constantly in motion, we learn new topics and ideas through walking in different spaces, and by changing our location, we also share them with others. We share, and over time, we enrich our learning by reacquiring and building new knowledge in the new contexts we encounter based on what we have already acquired, moving toward lifelong learning. (Kusujiarti & Kusdarjito, 2021). It can also be a type of mobile learning, so the issues that we must address in theory related to this type of learning are how knowledge and skills can be transferred during the movement of people in different fields such as school and home, how learning can be managed during these transitions and how technology has been able to help rapidly moving people to effectively bridge the learning gaps in their daily lives (Sembiring, et al, 2022). "Second step"; A theory of mobile learning should include learning that takes place outside the classroom or lecture halls, with the form and structure of people to their activities in the direction of educational processes and outcomes, and this means that the learner is only on the move for this. It is not the type of learning, but it acknowledges that according to the current conditions and the requirements of life in the present age, measures should be taken so that people have opportunities to learn during their journeys and journeys, people according to their surroundings and the context in which they live. are located there, artistically creating spontaneous and unique learning that can be mobile) (Li, et al, 2018. "The third step", which can also be very valuable; a learning theory should be based on its contemporary successful learning experiences, the American National Research Council (1999) collected a series of research in the field of educational effectiveness, during different courses and topics, and stated that effective learning should be: learner-centred, knowledge-centred, be based on assessment and based on society. These findings are by the social constructivist approach, which sees learning as an active process of building knowledge and acquiring skills through rich experiences in a supportive and supportive community. The last step" is that a mobile learning theory should consider technology that is available and usable for everyone the universality of a technology must be considered. While nowadays technologies such as mobile phones and hand-held personal computers are almost universal among people and especially learners, they can be considered, also these technologies, especially mobile phones and their network infrastructures, are well developed in developing countries. It is currently developing, especially in African regions, as it is stable and accessible to everyone, on the other hand, the good convergence of mobile phones with other required technologies such as computers, cameras, and various software is also considered one of its major advantages, from the point of view There is also a very important convergence between personal technologies and mobile phones and new concepts of continuous learning, which will be reviewed in Table 1 (Sharples et al. 2005)

Table 1. Convergence between new technologies and new learning (continuous-lifelong)

New learning	New technology
personalized	Personal
Learner Oriented	User-centric
Depends on the situation	Along
Collaborative	connected to the network
comprehensive	comprehensive
Ongoing	durable

In the process of formulating a theory about mobile learning, in January 2005, a team of members of the European MOBILearn project held a meeting and discussed their new findings. The month since the beginning of the project on mobile learning theory was reflected as follows:

1. Preferably the learner is mobile, not technology.

2. .Learning is what is mixed with other daily life activities.

3. Learning can be both in achieving goals and producing them.

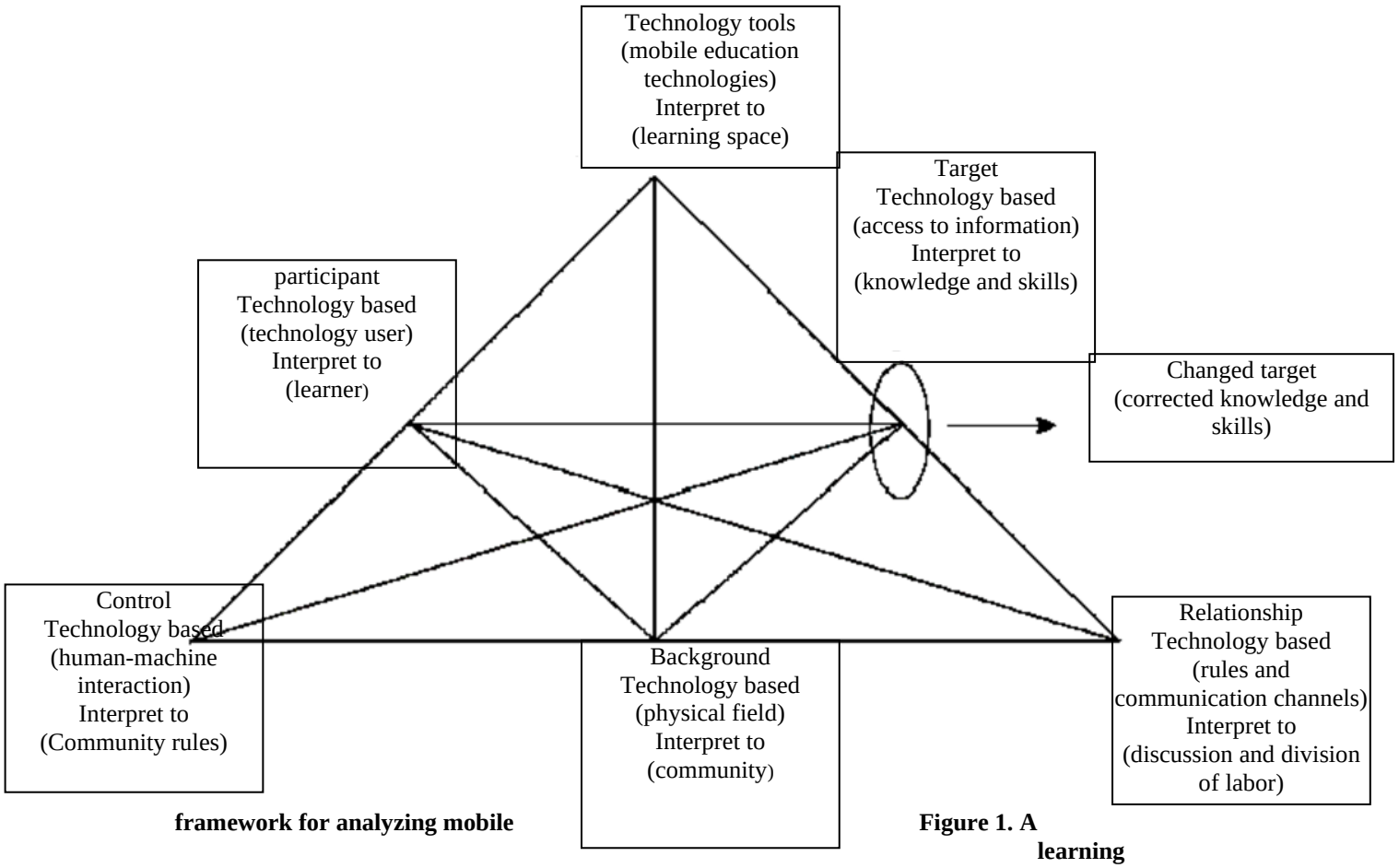
4. Learning control and management can be distributed (to different places and times).

5.Contexts are created through the learner and his interactions.

6. Mobile education can be both in conflict with formal education and complementary to it.

7. In mobile learning, ethical issues such as ownership and privacy should be taken into consideration (Sharples et al. 2005).

This learning as a conversation in the context is somehow based on John Dewey's philosophy of pragmatism Pasak's dialogue theory, and Engstrom's historical-cultural theory of activity have been used to analyze the system of activities in mobile learning, all these steps through a diagram that models The developed activity is called Engeström and is characterized by Engeström 2006).



framework for analyzing mobile **Figure 1. A learning**

In this model, there are two layers, one is the semiotic layer which is interpreted and the other is the technology-based layer, the semiotic layer is the interpretation of the learner's goal-oriented activities into social signs and tools, which can enable the learner to enter Public discourses, like writing or conversation, which according to Vygotsky's theory, use inner speech as a source to control and expand other activities. Also, the technology-based layer considers learning to be a kind of engagement with technological tools (Daniels et al. 2013), Sharpless believes that learning takes place in a sociocultural system in which most learners are required to create activities that are within the frameworks of cultural and historical are supposed to interact, in this framework we are dealing with cultural concepts such as control, context and communication that define the limitations and possibilities ahead for us; "Control" of learning may be in the hands of one person, such as a teacher, or distributed among several learners. In a social mode and in interaction with other people (such as mobile networks, sites, web communication, etc.) or in a personal way, the social mode is more desired here. The "field" of learning is also a very important structure that can imply different conditions, for example, fields based on technology or fields based on the culture and community of people, about the "communications" in a mobile learning system. He said that the most important type is the corresponding relationship between the cultural and technological layers, based on which the learner's

activities are determined in the system, and gradually with the cultural dominance of technology, the learner will try to adapt to it (Sharples 2005).

3- Comparison of mobile education and distance education

Trexler believes that mobile learning is not the result of the intersection of mobileness and learning, but rather the intersection of mobileness and distance education (E-Learning). Therefore, it is necessary to pay attention to its history and development based on the contractual relations of distance education and define and expand it in the context of such education. Based on the definitions of distance education and virtual learning environments (VLEs) that have been officially proposed, and in all of them, the importance and role of the learner have been given a lot of attention, according to Trexler's claim, we have mobile learning in this educational field of immigrants and less We are witnessing natives of mobile learning, which means that with the development and advancement of network and communication infrastructures and mobile technologies becoming fast and cheap, they have adapted their distance education with these technologies and have taken a step towards becoming mobile. (Traxler 2009). "Therefore, Trexler does not consider this type of education to be original, and considers it to be dependent and the result of traditional distance education with the combination of technology (Guy 2009)." UNESCO, however, has a direction opposite to Trexler's opinion and considers the definition of mobile learning as mobile distance education to be a simplification and perhaps simplistic of this type of education, which is one of the most important references that UNESCO uses to reject comments such as Trexler about mobile education. It is that, unlike distance education, which is mostly organizational and formal, mobile education is a type of education that takes place outside the boundaries of the educational system, especially schools and universities (Winters et al. 2013), (Barzegar and Kazemian 2013) also refers to mobile learning as a model of electronic learning and refers to the acquisition of knowledge, attitude and skills by using mobile technologies, Mehdipour and Zare Kafi have considered mobile learning as a natural evolution of distance education that It includes some of its neglected features such as wireless technology (Georgiev et al. 2004). location, educational changes, teacher-student relationship, student-student relationship, giving feedback, class presentations, assignments and tests) have been examined in the following table (Mehdipour & Zerehkafi 2013

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Table 2. Differences between distance education and mobile education according to the capabilities of each based on 6 axes

Issue	Distance Learning	Mobile training
place	Attending classes or websites	Learning anytime and anywhere
Educational changes	Text and image-based tutorials	Training based on text, sound, image and animation
	Teaching lessons in class or on websites	Contextual and mobile learning (not staying in a certain place)
Teacher-student relationship	with a time delay (based on the time of checking email or website by the student)	Immediate delivery via SMS or email
	Passive communication	Instant communication
	Asynchronous	simultaneous (real-time)
	Scheduled	Automatically
Student-student communication	Face to face	flexible
	Generally audio conferences	The possibility of audio and video conferences
	by Email	via text message
	Specific location	No geographic restrictions
	Spending time to reach the website	Without wasting time only through mobile networks or mobile internet
	Set aside time for group meetings	Flexibility in time based on mobile features
	Poor communication due to lack of alertness of other group members	Strong communication due to one-to-one connections and reduced interruptions
giving feedback	1 to 1 feedback	1 to 1 feedback
	Asynchronously and with a time delay	Both simultaneously and asynchronously
	Standardized/universal education	Personalized training
	Scoring based on specific criteria	Scoring based on performance and progress
	Simulated and laboratory-based	Both real and lab-based situations

	experiments	
	Paper-based	Less paper, less printing and lower cost
Class presentations, assignments and tests	In the classroom or with the help of a computer	In any place
	spend time	Instant
	This can be done in a limited time	No time limit
	Standard tests	Personalized tests
	Usually delayed feedback	Immediate feedback
	Fixed length tests	The length and number of various questions
	More theoretical and text-based	Practical tests available
	Monitoring and viewing on the site	Observation in the field and observation in different places
	Class-oriented presentations	One-on-one presentations and richer communication
	Usually presented in 1 language	The possibility of automatic translation to any desired language
	More personalized but overall based on teamwork	The possibility of participation and teamwork at the same time
	Delivery of paper assignments	Delivery of assignments electronically
	Manual delivery of assignments at a specific time and place	Electronic delivery of assignments anywhere and anytime
	Allocating the teacher's time to giving lectures and relevant teaching	Dedicating more of the teacher's time to providing personalized help and instruction

4- The main goals of mobile education and learning

Now let's see what is the purpose of mobile training. Is the purpose of this type of learning only to introduce mobile technology to the education and learning of people, especially students? Or is there a higher goal and that is to use the countless and unique advantages and possibilities of these technologies and their efficiency in teaching and learning people? Many experts believe that the purpose of mobile education in most countries is to provide educational services and send the required content to students who live in remote areas, especially on the outskirts of cities and villages, and in fact, the unique features of this technology such as wide coverage and lack of dependence on time and place to receive educational services refer to this type of learning (Oberer & Erkollar 2013). A group that is more related to the fields of education considers the most important purpose of using mobile education in the fields of education to facilitate learning with the help of its special facilities, they believe that informing teachers and those involved in education about the potential benefits and Especially mobile phones and tablets in classrooms can facilitate learning among students, especially during out-of-school hours (Crow et al. 2010). The hands, who have a somewhat sociological and postmodern perspective, have addressed this issue by adopting the position that education is an inalienable human right, and they consider this type of learning through the public portal of mobile phones to make this happen, according to their belief. Discrimination and inequality in receiving the necessary and basic life education for humans can be solved to a large extent with the help of this type of learning, and based on the claims of UNESCO, its realization is considered a clear and definite matter (Aderinoye et al. 2009). In the Education for All (EFA) plan of UNESCO, the goals and strategies of mobile education and learning were identified with 6 key educational goals to meet the learning needs of all children, adolescents and adults, which are as follows (Torres 2011):

Objective 1: To strengthen and expand early childhood education and care, especially for vulnerable and deprived children

Goal 2: Ensuring that by 2015, all children, especially girls who live in difficult conditions and ethnic minorities, will have access to a quality, complete and free primary education.

Goal 3: Ensure that the learning needs of all youth and adults are met through equitable access to appropriate life skills and education programs.

Goal 4: Achieve a 50% relative increase in adult literacy by 2015, especially for women, and equitable access to continuing and basic education for all adults.

Goal 5: Eliminate gender disparities in primary and secondary education by 2005, and achieve gender equality in education by 2015, with a focus on ensuring girls' full and equal access to and success in high-quality primary education.

Goal 6: Improve all quality aspects of education and ensure universal success so that learning outcomes are recognized and measurable for all, especially in literacy, numeracy and essential life skills.

5- Successful global programs in the development of mobile education

According to the belief of the United Nations Scientific, Cultural and Educational Organization (UNESCO), mobile education today plays a very important role in expanding and strengthening learning opportunities for learners with different situations and often lacking educational facilities. UNESCO claims that mobile education today is an obvious fact and more than theorizing, for example, in the program in the "Life with Nokia" project, based on the preferences of users, various messages of text, multimedia and a program for them from were sent to the servers, these contents include things such as: helping high school students to pass school exams, teaching agricultural methods to increase yield, reducing losses and marketing products, training on fetal and maternal health for pregnant mothers and There were cases for awareness in the field of addiction and diseases such as HIV/AIDS, diabetes, etc. Also, in the menu of this project, there were trainings for empowering women to improve the family economy and earn money through jobs and domestic and local businesses, all these contents provided reliable reliable information and knowledge for users Access to all this knowledge was paid for less than $1 per month (Chipchase 2008). Environmental education programs or "Eco Mobile" helped secondary school students to get to know the ecosystem around their place of residence better, by asking them questions and asking them to answer them by Exploring their surroundings to find the correct answer, this project became a full and rich cooperative and exploratory exercise with the help of GPS (Burden & Kearney 2016). The "UNESCO Literacy" project was implemented to complete and support the conventional methods of literacy for about 250 girls in deprived and marginal areas of Pakistan. Based on the success of this project, the number of literate girls covered by this program has increased from 250 to It has reached 2500 people in Pakistan (Miyazawa 2009). "Prioto Gemma" programs, were held in Salta Province, Argentina, and its main goal was to establish effective communication between the country's education system and schools located in the outskirts and suburbs of the city. Advancement and policy-making helped to resolve and manage them during the project implementation period (Kraut 2013). UNESCO's "Empowerment of Women and Girls" programs, to design, produce and develop gender-sensitive training and content, literacy and development skills, have been able to promote women's education, these programs are also carried out in cooperation with Nokia. has taken and since 2010 it has been carried out in almost all backward and developing countries of the world (Belalcázar 2015).

6- Mobile education and learning in our country

In our country, limited research has been done both in the field of theoretical foundations and the application of this type of education in different fields, it does not seem that this type of education has a special and well-known place among the educational community and especially the official education system of the country. has gained, maybe because effective steps have not been taken in the field of knowing and examining the theoretical foundations and approaches of this type of education to inform the general scientific community, it seems that this type of education and its unique advantages and possibilities except in limited cases, the country's academic community has been neglected, in the field of defining mobile learning, its approaches and effectiveness, one of the few published articles is the research of Barzegar and Kazemian (2013), which investigated the theoretical foundations of mobile learning and its place In the distance learning system, the opportunities and challenges resulting from this learning have been examined in general and briefly, and finally, the future perspectives of mobile learning have been considered as solutions to meet the needs of learning in the 21st century. In the field of case studies and applied research, it can be said that some efforts have been made among the academic community of the country in the fields of medical education, agriculture and language education, of course, most of them are limited to examining the attitude, feasibility, upcoming opportunities and The challenges have been:

Sarani and Ayiti (2013) in research titled "The effect of using a mobile phone (short message) on learning English vocabulary and students' attitude", the effect of using a mobile phone (short message) on learning English vocabulary and students' attitude towards the benefits, the disadvantages and use of mobile phones in learning and teaching English have been investigated and the results have been reported positively. Amirtimori, Dastjardi and Khosravi (2012); Investigated the effective factors of mobile learning based on the FRAME model from the point of view of master's and doctoral students of some fields of Isfahan University of Medical Sciences and came to the conclusion that in the learning dimension, the students view the mobile phone as an educational tool, in the Socially, they use it as a means of interacting with their classmates, in the interactive learning aspect of mobile phones to transfer ideas and information with other learners, and in the aspect of using the device for educational and research activities throughout the day and night. brand. Zamani, Bebri and Mousavi (2011); In their research, to investigate the effective attitudinal factors in the acceptance of learning through mobile phones by medical students using the descriptive-correlation method, concluded that the model of acceptance of learning through mobile phones in the studied community is confirmed and, accordingly, applicable. in the desired society. Tajri Moghadam, Rad and Shaban Ali Fami medicine (2013); In a research to investigate the attitude of agricultural promotion experts

in Razavi Khorasan Province towards the use of mobile phones in promotional activities, they have suggested descriptive and correlational methods that the Ministry of Agriculture, considering the low cost of mobile phones, should use this information tool in the coordination of classes and programs. To use educational services, informing about the facilities and services of agricultural jihad, consultation and questions and answers in the field of specialized agricultural issues.

Conclusion:

By reviewing the evidence related to the research conducted about the extensive and comprehensive programs and projects of mobile learning and education all over the world, it can be concluded that this topic is widely favoured by everyone today, especially by examining the commitment and Requiring countries to implement mobile education programs in their remote and deprived areas and benefit from its benefits and opportunities to improve people's knowledge and awareness, it can be seen that a large and global movement in the field of mobile education has begun. which can be well aligned with the goals of the educational system of any country, the use of mobile technologies and network-based communication platforms and infrastructures is especially good for people living in remote areas and with few educational resources for a country the size of Iran. It can be fruitful for the realization of educational goals and especially public education, although to design and compile such programs based on the national and local culture of the vast regions of Iran, there must be calculated and precise planning, which requires the coordination and mobilization of all organizations. are related, of course, theoretical issues and correct and accurate needs assessments should be addressed first in connection with the necessity of such training at the country level, and then action should be taken to formulate executive and operational plans, it is hoped that by conducting studies and More research in this regard will be provided as much as possible for the spread of mobile education in our dear country of Iran.

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