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# INTEGRATION OF MOBILE LEARNING IN BALTISTAN REGION: A CASE OF SECONDARY TEACHERS' READINESS

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## ABSTRACT

*Mobile-learning techniques show new horizons in the field of education that enhance a m more learner centered pedagogical approach to a more specific teacher-centered. Knowing teachers' readiness for Mobile Learning could enable a more successful integration. This study aims to investigate the readiness for mobile learning integration among Baltistan Regions teachers. In order to investigate teachers' readiness toward mobile learning, the Mobile Learning Readiness Survey (MLRS) developed by Christensen and Knezek (2017) was utilized. The results of this study showed Secondary School teachers' mobile learning readiness was high in general. Secondary school teachers' readiness of possibilities and benefits were high as compared to preferences and external influences. This study would present the information for the administration about teachers' readiness to integrate mobile learning. The study also recommends the policy makers that the teachers be given sufficient training on how to use mobile learning into teaching and learning processes to acquire the requisite knowledge and skills in integrating the technology in classrooms.*

**Keywords:** Teachers' Readiness, Mobile Learning, Mobile Learning Integration.

## INTRODUCTION

Mobile devices are increasingly coming to penetrate people's daily lives. Mobile learning (m-learning) is viewed as key to the coming era of electronic learning (e-learning) ( Al-Adwan, Al-Madadha, & Zahra , 2018; Padmanathan & Jogulu, 2018). The concept of learning with small laptops was developed by Alan Kay in 1972 as cited in Henderson & Chapman, (2012). Since pioneering academics who have paved the way for a better understanding of the philosophical, pedagogical, and the conceptual basis of today's mobile learning (Henderson & Chapman, 2012; Wakefield & Smith, 2012). Behera (2013) illustrated the main types of mobile devices for m-learning used in education process are Note Book computers, Tablet, PC Personal Digital Assistance (PDA) Cellular Phones,

Smart Phones etc. The Partnership for 21$^{st}$ Century Skills (2009), a US organization, has developed a Framework for 21$^{st}$ Century Learning. The framework expresses the three areas highlighted as most important for 21$^{st}$ Century learners are Learning and Innovation, Information, Media, and Technology, Life and Career (Lahiri & Moseley, 2012).

According to NEP (2017) the integration of technology in school education is an integral part together with a shift from the paradigm of memorization of school education to the modern method of learning through exploration, experimentation and innovation. The goal is to use their curricula for their recognized educational programs around the world, which trains our high school children with the certification of IT skills and knowledge. Waqar (2014) explored that mobile phones are now widely used by people who belong to different sectors of Pakistan. In Skardu tablets were given to a number of teachers through a USAID funded Pakistan Reading Project but the use of technology by the teachers depends on the way they perceive it. The importance of mobile learning is increasing rapidly due to its convenient usage so there are many studies are being conducted in world to analyze how teachers perceive it. The use of technology by the teachers depends on the way they perceive it (Zehra & Bilwani, 2016). Butt and Qaisar (2017) explore that Pakistani university teachers and students are prepared technologically and are willing to spent time and money in learning mobile based learning applications. Klimova (2019) found that the students who used mobile applications in their studies achieved significantly higher learning outcomes than students who did not use this application, the personalized mobile application.

The Educational Strategy for Gilgit-Baltistan (2014) education sector is in continuous change from traditional teaching learning classroom towards mobile learning paradigm. Chief Minister Gigit Baltistan (GB) inaugurated the E- learning system in one of secondary school in Skardu district (Radio Pakistan, 2019). M-learning is the mode of E-learning. However, before adopting the mobile learning strategy in schools, it is imperative to assess the readiness of teachers. Integration of mobile learning is challenging for teachers if they are unprepared with sufficient knowledge. A research conducted in Baltistan region revealed that teachers are illiterate in terms of ICT (Iqbal, 2017). The implementation of emerging technologies in educational Institutions in mountainous, remote, rural and backward areas is delayed due to lack of experts ( Rahim, Tie, Begum, & Sahar, 2011). Previous researches have been done on availability of mobile phones technology to the teachers in Pakistan (Butt & Qaisar, 2017), Factors Influencing Behavior Intentions in Distance Education in Punjab (Shams, Butt & Iqbal, 2014), AIOU Students' Satisfaction About Formative M-Assessment Using SMS Technology in Pakistan (Mir, Iqbal & Shams 2019) but there is lack of researches to find out teachers' readiness in Pakistan and specially in Gilgit Baltistan. The GB government is going to integrate mobile learning in schools. Recently in 2019 e-learning system using mobile devices is inaugurated in one of secondary school in Skardu district. Before integration of Mobile Learning, it is necessary to check readiness of teachers. So, the current research is an attempt to investigate the readiness of teachers about Mobile Learning integration in teaching learning process.

The study aimed to investigate secondary school teachers' readiness for integration of mobile learning in the classroom.

**Methodology**

A descriptive research design was used to investigate the readiness of secondary school teachers in Baltistan Region. According to Directorate Education Baltistan Region, there were 1162 teachers of 110 secondary schools in Baltistan region. Which is the target population of this research and 513 teachers of 36 secondary school in Skardu District were accessible population of the study. Teachers were also asked to respond to the number of years they have been teaching and also mention subjects they are being teaching. 154 Secondary school teachers from Skardu District were selected using convenient sampling technique, 154 questionnaires have distributed and received 143 questionnaires.

**Instruments**

The questionnaire used, involving four constructs of readiness such possibilities, benefits, preferences, and external influences (Christensen & Knezek, 2017). The MLRS can be a useful tool for measuring teachers' readiness for incorporating mobile devices and mobile learning strategies into the classroom. This instrument was created by adapting a previously created likert-type item to evaluate the impact of the one-to-one iPad implementation for high school teachers and students (Christensen & Williams, 2015). The four factors, possibilities, benefits, preferences, and external influences distributed across 28 items, can lead to better understanding of the preparation of teachers for implementing mobile learning. A five-point Likert scale that demonstrated degrees of agreement (from strongly disagree to strongly agree) was applied to measure teachers' readiness for the integration of ML in classroom.

To determine content validity of this adapted version of the MLRS, the researcher contacted eight experts in the field of technology and education. In order to validate the questionnaire; a panel eight experts from different universities of Pakistan were requested to evaluate content validity and face validity. The survey consists of 28 self-report questions, and of these 28 questions experts in the field determined that questions 1 to 9 effectively measure possibilities, 10 to 21 effectively measure benefits, and 22 to 24 measure preferences and 25 to 28 effectively measure external influences.

A pilot study was conducted to determine if survey items were understandable by participants and if measures of internal consistency were satisfactory. A pilot group 30 secondary school teachers were administered the survey. Cronbach's alpha, the measure of reliability, was calculated for the scales for items measured on the five-point Likert scale. The Cronbach's alpha value is found as 0.823. The instruments reported coefficient alphas for reliability for the entire instrument as follows: Possibilities (.734), Benefits (.772), Preferences (.827), and external influences (.750).

**Results**

**Mean Score of Teacher's Readiness For Mobile Learning Integration**

*Table 1*

*Mean Score of teacher's readiness for Mobile Learning Integration*

|  | N | Mean | Std. Deviation |
|---|---|---|---|
| Readiness | 143 | 3.49 | .47 |
| Possibilities | 143 | 3.88 | .47 |
| Benefits | 143 | 4.71 | .54 |
| Preferences | 143 | 2.86 | .98 |
| Externa influences | 143 | 2.82 | .97 |

Respondents were asked to indicate on a five-point scale ranging from strongly disagree (1) to strongly agree (5) their views on the readiness for ML integration. In Table 5, the mean of teacher's readiness for benefits is the highest with mean score 4.71 while external influences are the lowest with mean score 2.82, which denotes teachers' readiness for benefits for ML integration is higher as compare to other constructs. The mean for possibilities was found 3.88 which indicate that the teachers are ready for possibilities of mobile learning. The teachers are not ready for preferences of mobile learning with the mean score 2.86. The mean for readiness was found 3.49, thus, teachers' mobile learning readiness can be said as "high" in general, teachers 'readiness for ML were positive.

**Discussions**

Pakistan is a striving country and is highly motivated to provide its people with high quality education. Therefore, the education sector emphasized the use of technology in schools and the need to prepare teachers with all skills needed for technology integration in the curriculum. A huge budget has been allocated to developing education and providing schools with the most advanced technology. However, providing resources will not provide assurance to a successful implementation of technology in education (Gulbahar, 2007). Teachers have an important role in technology integration, and they are considered one of the important factors that determine the success of ML integration. Their attitudes, beliefs, discernments, and readiness toward technology play a significant role in their adoption of technology. According to Churchill (2020), Technological enhancement in education is largely dependent upon teacher readiness to conceive, plan and integrate learning technologies and activities. The results were revealed that their readiness is above the median in all three dimensions. This means that teachers are ready to integrate mobile learning. However, among four constructs, the possibilities and benefits show the highest, while preferences and external influences is the lowest. The results are consistent with the study results of Miglani & Awadhiya (2017).

**Recommendations**

- This study revealed that teachers are not ready for preferences although they perceived the possibilities of mobile learning and they were aware of benefits but they don't prefer

to use mobile technology so it is recommended that school districts utilize more technology training of teachers in the classroom to reduce their hesitation in using mobile devices.

- The mean score for external influences was low that indicates that there is a need of more policies to facilitate the institutions with ML devices and infrastructure should be improved. The stake holders should bound the institutions to improve technical infrastructure and wireless network to enhance learning.
- This study revealed that teachers are not ready for preferences although they perceived the possibilities of mobile learning and they were aware of benefits but they don't prefer to use mobile technology so it is recommended to conduct qualitative research to explore the reasons of not preferring mobile learning.
- As teachers showed low readiness for external influences so, it is recommended to conduct research to investigate the role of institution for successful mobile learning integration.

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