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Utilization of Mobile Learning among Teachers & Students: Challenges & Prospects Towards Improvement of Instruction

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Abstract

The research investigates and analyzes the situation of teachers and students using mobile learning from three dimensions: Critical, Operational and Cultrue. Three hypotheses are proposed to evaluate the difference of the teacher and student respondents on the extent of utilization of mobile learning in terms of the digital literacy dimensions, the correlation between teachers' teaching performance and the use of mobile learning, and the correlation between students' academic performance and the use of mobile learning. The research collected questionnaires from 300 students and 50 teachers in Huaihua University, analyzed the data and drew conclusions through statistical methods.

Keywords

Mobile Learning; Teacher; Student; Instruction.

1. Introduction

Innovative teaching and learning require the use of technologies to make the academic environment (Mwandosya, et. al., 2019) that foster creative, analytical, and innovative knowledge and skills wherein technology supported instruction provides opportunities to make studying attractive. As discussed by Oyelere et al. (2016), “Mobile education offers technological innovations and contextualized learning opportunities” wherein it enhances teaching and learning attractive and exciting to both teachers and students because of the technological advantage in the teaching and learning process.

Educational technology must allow professional learning to be reflective and continuous focusing on achieving learning outcomes through technology supported instructional materials and the ability of teachers to perform the required work allowing academic change for the betterment of stakeholders particularly the students. The researcher believes that the educational technology concepts must be integrated in the role of teachers as they prepare the instructional materials given the available technology as as well as continuous professional learning enhancement is needed to cope up with the increasing demands and different challenges of the present time, specifically the advanced technological innovations. In addition, teachers as lifelong learners need to update their knowledge and upgrade their skills or capabilities for them to be self-directed learners, confident persons, concerned citizens and active contributors for the higher educational institutions and the society at large when it comes to educational technology. We must take note that standard is a pre-set of criterion or a level which shows measurable indicators in which the technology supported instructional materials must conform.

In the educational technology in the digital age, the mindset of a win for all is what Berg and Walker (2021) emphasized in their discussions on empowering people, in this study the teachers as they prepare technologically supported instructional materials leading towards better teaching and student learning process. Moreover, in developing support structures it involves professional learning that will help in getting the win for all objectives in an

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educational technology setting making an academic environment a more meaningful and rewarding place. Collaboration can help teachers get into the ways for success and remove or eliminate barriers by listening to others to understand the issues and challenges completely when it comes to educational technology as well as around learning, practices, processes, systems, and shared decision making involving in technology supported instructional materials.

In the digital age, the researcher realized the reasons and motivation for this research entitled "Utilization of Mobile Learning Among Teachers & Students: Challenges & Prospects Towards Improvement of Instruction" is to determine how teachers' and students' perceived educational technology in the digital age as a basis for integrated framework of technology supported instructions. Also, the researcher is motivated to be able to provide recommendations as a basis for an integrated framework of technology supported instructions leading towards an enhanced teaching-learning process.

2. Statement of the Problem

This study aims to assess the challenges and prospects of mobile learning utilization among teachers and students towards the goal of improving instruction. Specifically, it will focus on the following questions:

2.1. Profile of Respondents

Teachers and students will be surveyed separately in this study. Teacher respondents will distinguish between their degree, years of teaching and their mobile teaching training. Student respondents were differentiated by gender, age, and major category. The research will focus on whether these factors make a difference in mobile teaching and learning.

2.2. Assessment of the Respondents on the Extent of Utilization of Mobile Learning

The study will focus on the level of assessment of the respondents on the extent of utilization of mobile learning in terms of three digital literacy dimensions: Critical, Operational and Cultural. The following questions will be answered .

Is there a significant difference in the assessment of the teacher and student respondents on the extent of utilization of mobile learning in terms of the digital literacy dimensions?

Is there a significant relationship between the assessment of the teacher respondents on the extent of utilization of mobile learning with the teaching performance of the teacher respondents as reflected in the recent performance evaluation?

Is there a significant relationship between the assessment of the student respondents on the extent of utilization of mobile-learning with the student's academic performance as reflected in their courses utilizing the mobile-learning?

To what extent is the impact of using mobile learning on the instructional materials as regards to the degrees of classroom technology integration: substitution, augmentation, modification, or redefinition?

3. Conceptual Framework and Research Hypothesis

3.1. Conceptual Framework

The conceptual framework presents the research paradigm of the study wherein it shows gathering the profile of the teachers and students as well as their performance evaluation. Moreover, the significant relationship and difference will be measured as to utilization of mobile learning in terms of critical, operation and cultural. In addition to the utilization of mobile learning is the assessment of impact of using mobile learning on the instructional

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materials in terms of substitution, augmentation, modification, and redefinition which lead to formulation of basis for improvement guidelines in the utilization of mobile learning.

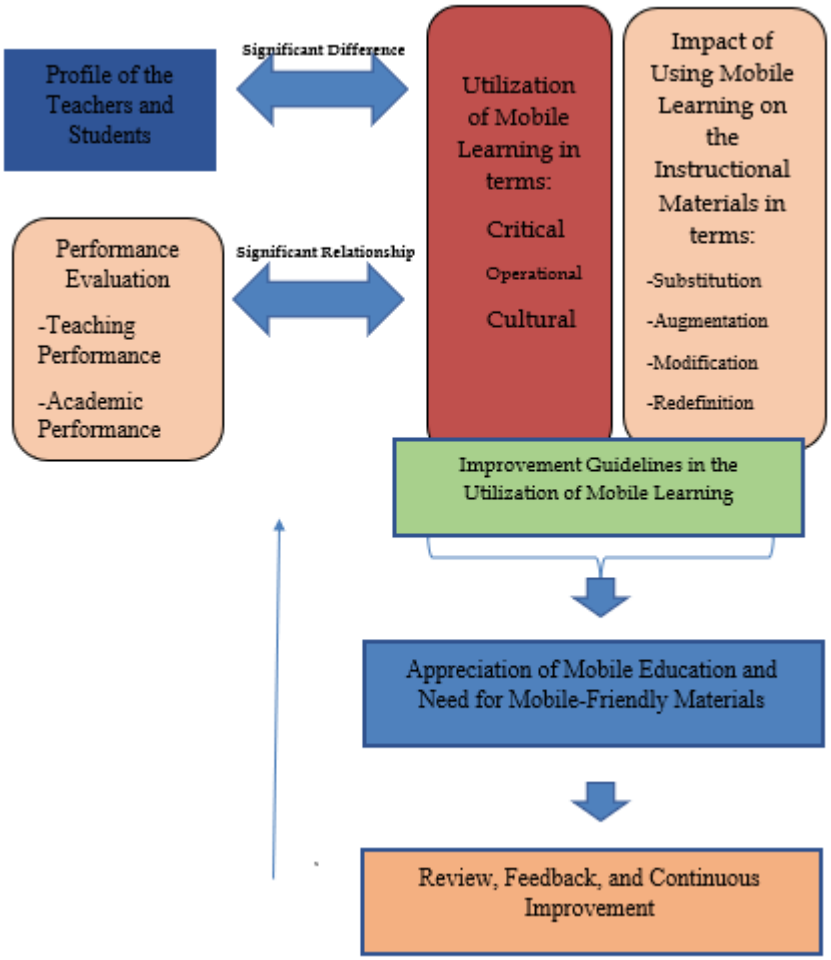

Figure 1. Conceptual Framework

Technology is a part of everyday academic interactions as digital tools and devices when used properly will evidently make technology a powerful tool in the transformation of teaching and learning. Hence, this study will lead to appreciation of mobile education and need for mobile-friendly materials with review, feedback, and continuous improvement.

3.2. Research Hypothesis

The null hypothesis will be tested in this study:

HO1: There is no significant difference in the assessment of the teacher and student respondents on the extent of utilization of mobile learning in terms of the digital literacy dimensions.

HO2: There is no significant relationship between the assessment of the teacher respondents on the extent of utilization of mobile learning with the teaching performance of the teacher respondents as reflected in the recent performance evaluation.

HO3: There is no significant relationship between the assessment of the student respondents on the extent of utilization of mobile-learning with the student's academic performance as reflected in their courses utilizing the mobile-learning.

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4. Data Analysis and Conclusion

A total of 350 questionnaires were collected in this study, including 50 from teachers and 300 from students. Majority of the students-respondents were 19-21 years old, 176 out of 300. Most of the students-respondents belonged to Generation Z, most of the students-respondents were female which was composed of 202 out of 300 total respondents or 67.3 % and finally majority are enrolled in the course of Liberal Arts. For the teacher-respondents, majority of them had 16 years and above teaching experience, most of the teachers had master's degree, attended seminars and training about teaching methodologies, classroom management and educational technology.

The questionnaire focuses on Critical, Operational and Cultural dimensions. During the data analysis, Frequency count was used to tabulate the counting of answers by the respondents as assessed by them. Percentage was used to show the extent of frequency distribution wherein it determines how a part relates to its whole and presents quantitatively the profile of the respondents. Standard deviation was used to measure variation of responses on the assessment of the respondents. Weighted mean was used as the measure of central tendency. One Way Analysis of variance was used in detecting the significant differences between more than two variables. T-Test for Independent Samples was used to get the significant difference between variables and independent groups.

4.1. Summary of Assessment on the Level of Extent of Utilization of Mobile Learning

The Table 1 summarizes the Assessment on the Level of Extent of Utilization of Mobile Learning as to three indicators: critical dimensions, has a highest 3.25 mean of .63 std., operational dimensions, 3.21 or .65 std. and lastly is cultural dimensions with a lowest mean of 3.17 or .66 standard deviation. In totality, it shows 3.21 mean, .62 std, utilization.

It was stated that critical, operational, and cultural dimensions are among the indicators that can be used in mobile learning using educational technology. The result summarizes that the use of mobile learning is utilized by the respondent-teachers towards the goal of improving instruction.

Table 1. Summary of Assessment on the Level of Extent Of Utilization of Mobile Learning

INDICATORS	MEAN	STD	INTERPRETATION
Critical Dimensions	3.25	.63	UTILIZED
Operational Dimension	3.21	.65	UTILIZED
Cultural Dimensions	3.17	.66	UTILIZED
OVERALL	**3.21**	**.62**	**UTILIZED**

LEGEND: VERY UTILIZED (=3.51-4.0); UTILIZED (=2.51-3.50); MODERATELY UTILIZED (=1.51-2.50);
NOT UTILIZED AT ALL (=1.0-1.50)

4.2. Significant Differences in the Assessment of the Teacher and Student Respondents on the Extent of Utilization of Mobile-Learning in terms of the Digital Literacy Dimensions

The Table 2 depicts that there is no significant difference on the following dimensions: critical, operational, and cultural. The overall significant value of .10 means that the null hypothesis was accepted hence, the data revealed that there is no significant difference as assessed by the for

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teacher/student-respondents as to the utilization of mobile-learning in terms of the digital literacy dimensions.

Table 2. Significance Differences in the Assessment of the Teacher and Student Respondents on theExtent of Utilization of Mobile-Learning in terms of the Digital Literacy Dimensions

INDICATORS	CLASSIFICATION	MEAN	SD	F-VALUE	SIG VALUE	DECISION ON HO	INTERPRETATION
Critical Dimensions	Student	3.24	.65	1.61	.21	ACCEPT	NOT SIGNIFICANT
	Teacher	3.30	.57				
Operational Dimension	Student	3.20	.66	.59	.45	ACCEPT	NOT SIGNIFICANT
	Teacher	3.25	.59				
Cultural Dimensions	Student	3.16	.68	2.31	.13	ACCEPT	NOT SIGNIFICANT
	Teacher	3.23	.54				
OVERALL	**Student**	**3.20**	**.64**	**2.77**	**.10**	**ACCEPT**	**NOT SIGNIFICANT**
	Teacher	**3.26**	**.52**				

4.3. Significant Relationship between the Assessment of the Teacher Respondents on the Extent of Utilization of Mobile-Learning and Their Teaching Performance

Table 3 shows significant relationship between the the teacher-respondents teaching performance on the extent of utilization of mobile-learning. The output revealed that there is no significant correlation between teaching performance and extent of utilization of mobile learning. It is noted that r-value is .107 interpreted as very weak positive correlation while 2tailed value is .461 which is greater than .05 that leads to an acceptance of the null hypotheses that there is no significant relationship between the variables being tested. The data shows that there is a very weak positive correlation between teaching performance and the extent of mobile learning utilization among teachers, which means that when teaching performance is high, the more they are inclined and the more they use mobile learning. The teachers extensive use of mobile learning, on the other hand, is not attributed to their teaching performance, as attested by significance value of the 2 tailed .461. It is possible that other factors caused the teachers extensive use of mobile learning, perhaps because of the pandemic situation and other factors including school curriculum, policies, and regulations.

Table 3. Significance Relationship between the Extent of Utilization of Mobile-Learning with the teaching performance of the Teacher Respondents

Variable Tested	*r*-value	Degree of Correlation	Sig (2 tailed) value	Decision on Ho	Interpretation
Teaching Performance	**.107**	**Very Weak Positive**	**.461**	**Accept**	**No Statistically Significant Correlation**
Extent of Utilization of Mobile Learning					

It is a reflection that teachers teaching performances as correlated with their use of mobile learning has no significant correlation. This also shows that teachers are not only using mobile technology in their teaching methodologies to improve their teaching performances. To summarize, we can state that teaching performance has no significant impact on the use of mobile learning since teachers are now adjusted with the ideas of new normal.

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4.4. Significant Relationship Between the Extent of Utilization of Mobile-Learning and Student's Academic Performance

Table 4 shows significant relationship between the student Performance to the extent of utilization of mobile learning. It is noted that r-value is .311 interpreted as very weak positive correlation while 2tailed value is .001 which is lower than .05 that leads to rejection of the null hypotheses that there is a significant relationship between the variables being tested. The data shows that there is a very weak positive correlation between student performance and the extent of mobile learning utilization among students, which means that when student performance is low, the lesser they are inclined and the lesser they use mobile learning. The students extensive use of mobile learning, on the other hand, is attributed to their learning performance, as attested by significance value of the 2 tailed .001. It is possible that other factors caused the students extensive use of mobile learning, perhaps because of the new normal condition relative to their school academic requirements.

Table 4. Significance Relationship on the Extent of Utilization of Mobile-Learning and Student's Academic Performance as Reflected in their Courses Utilizing the Mobile-Learning

Variable Tested	*r*-value	Degree of Correlation	Sig (2 tailed) value	Decision on Ho	Interpretation
Student Performance	**.311**	**Weak Positive**	**.001**	**Reject**	**Statistically Significant Correlation**
Extent of Utilization of Mobile Learning					

4.5. Assessment on the Extent of Impact of using Mobile Learning on the Institutional Materials

The Table 5 shows a summary of the assessment on the extent of impact using mobile learning on the institutional materials which reflects modification with the highest mean of 3.24, substitution and augmentation had the lowest mean of 3.17 respectively. The overall mean of 3.19 means that the teacher-respondents perceived the impact of using mobile learning on the instructional materials to a great extent.

The summary shows that all the indicators on the use of mobile **l**earning on the institutional materials are helpful as the academic institutions reach their objectives on their delivery of their skills and ideas to the students. These learning materials are important because they can significantly increase student achievement by supporting student learning.

Table 5. Summary Assessment on the Extent of Impact using Mobile Learning on the Institutional Materials

INDICATORS	MEAN	STD	INTERPRETATION
Substitution	3.17	.68	GREAT EXTENT
Augmentation	3.17	.64	GREAT EXTENT
Modification	3.20	.60	GREAT EXTENT
Redefinition	3.24	.60	GREAT EXTENT
OVERALL	**3.19**	**.59**	**GREAT EXTENT**

LEGEND: VERY GREAT EXTENT (=3.51-4.0); GREAT EXTENT (=2.51-3.50); MODERATE EXTENT (=1.51-2.50);
NO EXTENT AT ALL (=1.0-1.50)

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5. Recmmendation

Driven by the findings of the study and propelled by the conclusions drawn, the following recommendations are hereby presented for consideration.

Based on the result of the study, the usage of mobile technology is a highly recommended learning device to address the Generation Z.

Teachers are encouraged to continue attending seminars and training not only about classroom management, educational technology, and different tools of using mobile devices but also focus on a systematic approach to evaluate online teaching and learning adaptation, in comparison to the previous format, where, in person education may have been the focus. Although most of the teachers had master's degree, still it is suggested for other teacher-respondents to enroll in a post graduate course.

Different dimensions of teaching and learning are highlighted to give emphasis for the benefit of E-Learners. Dimensions of Teaching and Learning instructional framework can combine the core elements of effective teaching: purpose, student engagement, curriculum and pedagogy, assessment for student learning, and classroom environment and culture.

The University should continue the observation of performance evaluation among the teachers to find its essentiality determining the strengths of teachers and those aspects of their practice which could be further developed. From this recommendation, the schools' evaluation can help to improve the effectiveness of teaching and learning and raise educational standards.

The Administrator of the University should give emphasis that E-learning can produce better outcomes and academic achievements. It is helpful to analyze student satisfaction and their performance. This can be sought with the combined knowledge among the teachers of the proper methods to teach and guide students in the right direction, as well as understanding the theoretical and conceptual knowledge of the subject they teach.

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