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INTERACTIVE MOBILE LEARNING PRACTICES OF HIGHER SECONDARY STUDENTS

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Abstract:

This research investigates the interactive mobile learning practices of focusing on using mobile technologies, particularly Quick Response (QR) codes, to enhance listening, speaking, reading, and writing language skills. The sample comprises 280 students drawn from six higher secondary schools in Chennai district of Tamil Nadu. Interactive Mobile Learning Assessment Scale, developed and validated by the investigator, was used for collecting data. The findings reveal that the overall mean score for interactive mobile learning practices is average; there is no significant difference in these practices among students when grouped by study group, gender, locality, and board of study. However, a significant difference is observed based on residence, indicating variations in interactive mobile learning practices between hosteller and day scholar students. The research suggests recommendations for further enhancing mobile learning practices among higher secondary students in Tamil Nadu.

Key Words: Interactive Mobile Learning

Introduction:

The introduction of new technology-assisted learning tools such as mobile devices, smart boards, MOOCs, tablets, laptops, simulations, dynamic visualisations, and virtual laboratories have altered education in schools and institutions (Haleem, 2022). Mobile learning is a method that combines the use of multiple new technologies including online networking, mobile content, and mobile devices, and has a higher level of uncertainty and risk in individuals' perceptions that may lead them to reject or delay acceptance of mobile learning (Kim & Rha, 2018).Mobile technologies facilitate academic interaction and information exchange with experts, colleagues, and students. Access to innumerable instructional resources is made easier through internet connectivity. A flexible, individualized, and collaborative learning environment is provided by mobile learning. It has no boundaries in terms of place or time. The educational exchanges between teachers and students have been significantly impacted by these technology affordances. Mobile learning makes education more flexible, contextual, personal, collaborative, and lifelong. Higher education institutions must focus on creating a need-based curriculum for students, with the help of smart education apps and AI-based programs. Embedding technology in the educational curriculum can help students learn in a better and effective manner (Sharma, 2023).

Need and Significance of the Study:

The Indian education system has recently realised the significance of technology adoption, in the face of the pandemic (India Today Web Desk, 2020), and continues even after the pandemic. Technological advances brought applications of innovations to education. Conventional education increasingly flourishes with new technologies accompanied by more learner-active environments. In this continuum, some learners prefer self-learning. Traditional learning materials yield attractive, motivating and technologically enhanced learning materials. The QR (Quick Response) code is one of these innovations. Tamil Nadu State Government introduced new textbooks with a pattern of curriculum for 11th standard in 2017, including upgraded visual representations, internet activities pages with website/ mobile links, and QR codes that can help the students directly access information about topics. The American University School of Education (2020, June 25) asserts that the effective use of digital learning tools in classrooms can increase student engagement, help teachers improve their lesson plans, and facilitate personalized learning. The study aims to determine how QR helps the students to enhance language learning and how the students adopt the new technologies of QR-based learning.

Objectives of the Study:

Based on the study the different strategies of Interactive mobile learning Practices. The following are the objectives of the present study;

- To find out the level of Interactive mobile learning practices of higher secondary students.
- To compare the Interactive mobile learning practices of higher secondary students with respect of Group of Study, Gender, Locality, Residence, and Board of Study.

Hypotheses of the Study:

In line with above objectives of the study, the following hypotheses have been formulated for the study.

- Interactive Mobile Learning Practices of higher secondary students in Chennai district is not high.
- There is no significant difference in Interactive Mobile Learning Practices of higher secondary students, sub-grouped on the basis of their Group of Study.
- There is no significant difference in Interactive Mobile Learning Practices of higher secondary students, sub-grouped on the basis of their Gender.
- There is no significant difference in Interactive Mobile Learning Practices of higher secondary students, sub-grouped on the basis of their Locality.
- There is no significant difference in Interactive Mobile Learning Practices of higher secondary students, sub-grouped on the basis of their Residence.
- There is no significant difference in Interactive Mobile Learning Practices of higher secondary students, sub-grouped on the basis of their Board of Study.

Methodology of the Study:

The selection of the methodology of the study depends upon the aims and objectives of the study. The present study is a descriptive one, involving normative survey technique. In this study stratified random sampling technique is used to select the sample where the defined population has an equal and independent chance of being selected as a member of the sample. The sample comprises 280 students (Male 198 & Female 82) drawn from three government and three private higher secondary schools in Chennai district of Tamil Nadu. Interactive Mobile Learning Assessment Scale, developed and validated by the investigator, was used for collecting data. The collected data were subjected to descriptive differential and relational statistical analyses.

Distribution of the Sample:

The following table presents the distribution of the higher secondary students who formed the sample in terms of their Group of Study, Gender, Locality, Residence, Board of study.

Distribution of the Sample:

S.No	Variables	Sub-Categories	Sample	Percentage
1.	Group of Study	Arts	34	12.1
		Bio-Science	132	47.1
		Bio-Maths	46	16.4
		Computer-Maths	68	24.3
2.	Gender	Male	198	70.7
		Female	82	29.3
3.	Locality	Rural	176	62.9
		Urban	104	37.1
4.	Residence	Hosteller	45	16.1
		Day Scholar	235	83.9
5.	Board of Study	Matriculation	102	36.4
		CBSE	37	13.2
		Government	97	34.6
		Govt. Aided	44	15.7

Analysis and Interpretation of Data:

Hypothesis 1:

Analysis of the Sample (Whole Group) in terms of their Interactive Mobile Learning Practices Scores

Table 1: The Level of Interactive Mobile Learning among Higher Seconday Studetns

No. of Students	Mean Interactive Mobile Learning Practices Score	Level
280	14.46	Average

The Table 1 shows the mean interactive mobile learning practices score of the sample (whole group) is 14.46. This reveals that the higher secondary students who formed the sample have a average level of interactive mobile learning practices.

Hypothesis 2:

There is no significant difference in Interactive Mobile Learning Practices of higher secondary students, sub-grouped on the basis of their Group of Study.

Table 2: Significant Difference in Interactive Mobile Learning Practices of Higher Secondary Students, Sub-grouped on the Basis of their Group of Study

Source of Variance	Sum of Square	Degrees of Freedom	Mean Square Variance	F-Ratio	Significance at 0.05 level
Between Groups	29.777	53	0.562	0.520	Not Significant
Within Groups	243.995	226	1.080		

The Table 2 shows the significance of difference between the mean Interactive Mobile Learning Practices scores of the higher secondary students, sub-grouped on the basis of their group of study. The sum of squares 'between groups' is 29.777 with degree of freedom of 53. The sum of squares 'within groups' is 243.995 with degree of freedom of 226. The computed value of 'F' (0.520) is 0.05 level of significance. Hence the framed null hypothesis is accepted. This establishes that the higher secondary

students are not differing in their Interactive Mobile Learning Practices, when sub-grouped on the basis of their Group of Study.

Hypothesis 3:

There is no significant difference in Interactive Mobile Learning Practices of higher secondary students, sub-grouped on the basis of their Gender.

Table 3: Significance of Difference in Mean Interactive Mobile Learning Practices Scores of Higher Secondary Students, sub-grouped on the basis of their Gender

Gender	N	Mean	S.D	't' Value	Significance at 0.05 level
Male	198	54.02	12.90	1.968	Not Significant
Female	82	58.89	28.47		

The Table 3 presents the analysis of the Interactive Mobile Learning Practices scores of the higher secondary students, sub grouped on the basis of their gender. As revealed by the table the sample consists of 198 male students and 82 female students. The Mean Interactive Mobile Learning Practices score of male students is 54.02 and that of the female students is 58.89. The Standard Deviations are 12.90 and 28.47 respectively. The calculated 't' value is 1.968of significance at 0.05% level. It implies that there is no significant difference in of Interactive Mobile Learning Practices of higher secondary students on the basis of their gender. Hence, the hypothesis is accepted and it is concluded that the male and female higher secondary students are same in their Interactive Mobile Learning Practices.

Hypothesis 4:

There is no significant difference in Interactive Mobile Learning Practices of higher secondary students, sub-grouped on the basis of their Locality.

Table 4: Significance Difference in Interactive Mobile Learning Practices Scores of Higher Secondary Students, sub-grouped on the basis of their Locality

Locality	N	Mean	S.D	't' Value	Significance at 0.05 level
Rural	176	53.86	14.47	1.826	Not Significant
Urban	104	58.12	24.53		

The Table 4presents the analysis of the Interactive Mobile Learning Practices scores of the higher secondary students, sub grouped on the basis of their locality. As revealed by the table the sample consists of 176 rural students and 104 urban students. The Mean Interactive Mobile Learning Practices score of rural students is 53.86 and that of the urban students is 58.12. The Standard Deviations are 14.47 and 24.53 respectively. The calculated 't' value is 1.826of significance at 0.05% level. It implies that there is no significant difference in of Interactive Mobile Learning Practices of higher secondary students on the basis of their locality. Hence, the hypothesis is accepted and it is concluded that the rural and urban higher secondary students are similar in their Interactive Mobile Learning Practices.

Hypothesis 5:

There is no significant difference in Interactive Mobile Learning Practices of higher secondary students, sub-grouped on the basis of their Residence.

Table 5: Significance of Difference between the Mean Interactive Mobile Learning Practices Scores of Higher Secondary Students, sub-grouped on the basis of their Residence

Residence	N	Mean	S.D	't' Value	Significance at 0.05 level
Hosteller	45	43.57	15.06	4.927	Significant
Day Scholar	235	58.61	19.26		

The Table 5 presents the analysis of the Interactive Mobile Learning Practices scores of the higher secondary students, sub grouped on the basis of their residence. As revealed by the table the sample consists of 45 hosteller students and 235day scholar students. The Mean Interactive Mobile Learning Practices score of hosteller students is 43.57 and that of the day scholar students is 58.61. The Standard Deviations are 15.06 and 19.26 respectively. The calculated 't' value is 4.927of significance at 0.05% level. It implies that there is a significant difference in of Interactive Mobile Learning Practices of higher secondary students on the basis of their residence. Hence, the hypothesis is rejected and it is concluded that the hosteller and day scholar higher secondary students differ in their Interactive Mobile Learning Practices.

Hypothesis 6:

There is no significant difference in Interactive Mobile Learning Practices of higher secondary students, sub-grouped on the basis of their Board of Study.

Table 6: Significance of Difference among the Interactive Mobile Learning Practices mean scores of the higher secondary students, sub-grouped on the basis of their Board of Study

Source of Variance	Sum of Square	Degrees of Freedom	Mean Square Variance	F-Ratio	Significance at 0.05 level
Between Groups	91.020	53	1.717	1.030	Not Significant
Within Groups	376.923	226	1.668		

The Table 6 shows the significance of difference between the mean Interactive Mobile Learning Practices scores of the higher secondary students, sub-grouped on the basis of their board of study. The sum of squares 'between groups' is 91.020 with degree of freedom of 53. The sum of squares 'within

groups' is 376.923 with degree of freedom of 226. The computed value of 'F' is (1.030) of 0.05 level of significance. Hence the framed null hypothesis is accepted. This establishes that the higher secondary students are not differing in their Interactive Mobile Learning Practices, when sub-grouped on the basis of their board of study.

Conclusion:

The present study has been done with a clear focus on the Interactive Mobile Learning Practices of higher secondary students, But the findings and conclusion of the study are quite relevant to the higher-level students of the entire state of Tamil Nadu, though not the entire country. Hence, the suggestions and recommendations of the present study deserve a closer look by the government authorities and other agencies, working for the enhancement of the higher education system in the state and the country.

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