The Influence of Ipad and Tablet Computers on the Enhancement of Oral and Listening Proficiency among Young Students

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Abstract:- Educational technology integration rises as schools rethink American school ideology and practices. Technology may be used in schools to develop modern education, but iPad integration in basic math's teaching has to be understood. In response to these challenges, this in-depth case study examined how iPads as personalised learning aids affect third graders' arithmetic performance and attitudes using nearly experimental qualitative as well as quantitative information. How did NPS School use iPads in a thirdgrade mathematics classroom as well as how did it influence elementary school students' math skills and attitudes? Subquestions helped fully and comprehensively evaluate the practice problem. How do iPads and textbooks compare in third-grade arithmetic? How do tablet users see math's differently from traditional students? These study questions were answered by two third-grade math classrooms. Standard education and iPad-integrated teaching were given to two groups. iPads were the only group difference. Content, lesson design, evaluations, inventories, & instructors were identical. Student learning and attitudes were assessed using both pre- and post-tests or an ATMI. The instructor & coordinating administrator were questioned for further information. Researchers also looked at teacher lesson plans to see how iPads were used. This study discovered quantitative-qualitative gaps. Although the post-test and ATMI were not statistically significant, the interviews with the participating adults suggested that students who utilised iPads for teaching had better involvement, attitudes, and productivity.

Keywords:- I-pads, Tablet, Academic Achievement, Attitudes, Oral and Listening Skills.

I. INTRODUCTION

According to (Preciado-Babb, 2012), the use of iPads as well as mobile phones has helped pupils form novel connections between their everyday lives and the mathematical concepts they are learning in school. This happens when classes use the aforementioned technology to put student learning and practice. Students with a more positive outlook on mathematics are more likely to put in the effort necessary to master the subject's content and associated abilities. When classes include technology-based learning, students report better levels of satisfaction in their courses and a more hopeful attitude on life (Kulik, 1994). In addition, the constant improvement of students' attitudes towards education as well as their individual sense of selfconcept happened when technology was involved in the process of learning. Therefore, it is crucial to learn how to influence students' perspectives on mathematics.

The National Council of Teachers of Mathematics (NCTM) has said that pupils now have access to a potentially game-changing resource that might aid their mathematical inquiry, reasoning, and problem-solving. The National Council of Teachers of Mathematics (NCTM) recognises that students require many technology tools to excel in 21st-century math. According to Regan (2014), instructors may use technology to teach students about diverse mathematical techniques and tie them to their own talents and interests. Children who grow up in an information- and technology-based culture may benefit from learning about the potential of modern devices via integration. This is particularly important for youngsters who are growing into the digital era. Tablets, and the iPad in particular, have been demonstrated to have enormous potential (Hill, 2011). The United States of America could do a better job of ensuring that all kids reach their full academic and emotional potential if schools are better able to understand how to use iPads effectively in teaching elementary-level mathematics.

II. BACKGROUND OF THE STUDY

Researchers have always been fascinated by high-tech tools and technology, even as young boys. Academics first joined education with numerous questions about how technology might enhance teaching and learning. The Hofstra University Mathematics, Science, & Technology (MST) course gave them their first master's degree. This programme was created for teachers who wish to use technology to improve math and science. This course was made for instructors. Throughout the curriculum, researchers encouraged the use of devices in the classroom to relate 21st-century learning abilities to the subject. This has become a driving obsession of mine. Initially, researchers who also double as instructors had access to a library of loanable iPods. After using iPods wherever possible, it became apparent that researchers would need to modify the resources they used in the classroom to remain relevant as technology continued to advance in other areas. The iPad is Apple's next market-ready revolutionary device (Regan, Volume 9, Issue 5, May - 2024

2014). They collaborated on an iPad implementation strategy for classrooms in the hopes of maintaining our organization's tradition of technological innovation. The district's technology director and the assistant superintendent of education both thought the project should go ahead, so that's what happened. One classroom in the school district where the researchers work began implementing a trial programme in the 2013–2014 school year. The reactions obtained from the children, their lecturers, or their parents were virtually uniformly good. The researcher's school district's Board of Education has decided to implement the iPad pilot project district-wide for the 2014-2015 school year. Students' mathematical ability and their attitudes towards the topic are being studied in this research (Regan, 2014), hence the results are anxiously expected.

Only 21% of pupils in the sampled district in this study scored at or above the competent level in mathematics on New York State exams administered during the 2012-2013 school year. Engage NY. org's data show that the elementary school where they worked had a far lower rate of student success than the statewide average in New York. Student proficiency levels are also much lower in the district where the researchers work compared to those in neighbouring districts. Because the results that are being generated by the approaches of teaching that are presently being employed are not sufficient, it is important to transition to novel ways of learning and instructing our youngsters (Regan, 2014).

III. PROBLEM STATEMENT

This research examined how NPS School used iPads in third-grade math classes and how it influenced students' attitudes and performance. This case investigation examined how iPads affected primary school students' math performance and perspectives. Quasi-experimental qualitative data were also included into the design to aid in the generation of these conclusions.

IV. LITERATURE REVIEW

It is imperative that schools take advantage of and accept the benefits that mobile devices may bring into classrooms now that they are more affordable for educational institutions (Cobcroft, Towers, Smith, and Bruns, 2006). This is because mobile technology gadgets have the ability to improve students' learning experiences. Evidence from (Barone and Wright, 2009) backs up the claim that getting students ready to utilise new technologies as they become available is crucial. Using iPads, kids may learn about and participate in cutting-edge social and technological movements from an early age.

As if the exposure's benefits weren't enough, (Barone & Wright, 2009) argue that the devices' ability to interact and share information quickly and easily also leads to an increase in interaction between teachers and students, as well as among students themselves. Research of young people's usage of the Internet found that 41% of students discuss assignments with teachers via electronic mail & instant messaging (Oblinger, 2003). Dhir, Gahwaji, and

Nyman (2013) claim that the iPad facilitates more sophisticated means of collaboration and communication between students and teachers in the classroom. Technology has capabilities built into it that encourage collaboration among students, as stated by (Dhir et al., 2013). These technologies include communication programmes & emailing capabilities.

Students in the 21st century interact differently from students of past generations because of the drastically altered nature of their growing-up environment (Berk, 2010). Modern students would want to learn in a classroom that emphasises visual literacy and visual content rather than relying only on writing and reading of written text. Students are more comfortable with visual content that can be easily shared and moved across technological devices, such as images, photos, and graphics. According to (Berk, 2010), students may be better able to share knowledge and ideas with one another via photographs and other visual media thanks to the widespread usage of technological devices in the classroom. According to (Berk, 2010), this may help to promote dialogue and understanding as students of the twenty-first century work to integrate many approaches to their education. Incorporating technology in the classroom is a concept that has garnered widespread support because it has the potential to better prepare today's youth for the complex world they will soon enter (Huneycutt, 2013). Many individuals have voiced their approval for this. Skills relevant to the 21st century, which students will need to succeed in their future endeavours, were made available to them.

V. RESEARCH OBJECTIVES

- To find the impact of tablets and I-PADs on young students in education sectors.
- To examine the uses of tablets and I-PADs in developing oral and listening skills.
- To determine the ways to implement tablets and I-PADs for developing oral and listening skills for young students.
- To evaluate the influence of electronic gadgets on young students.
- To understand how to overcome the negative aspects of electronic items in education sectors.

VI. RESEARCH METHODOLOGY

This study aimed to determine whether or not supplying third-grade pupils with iPads improved their performance in and enthusiasm for schoolwork. In the next section, researchers were talking about the methodology that was used throughout this investigation. Case studies using an exploratory methodology were used to provide results pertinent to the study's aims. This approach used qualitative as well as quantitative data from a quasi-experimental setting. The strategy at hand consists of "collecting information that is qualitative as well as quantitative consecutively in two phases, without one form of data collection following & influencing the other". Because it

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improves students' understanding of a subject, this design is often used in academic studies. This is why this layout is so well-liked. A similar approach was useful in learning about the impact of the iPad intervention and the perspectives of both the involved educator or the coordinating administrator.

> Population and Sampling:

The NPS Elementary School served as the location for this study's data collection and was an elementary school that accommodated students in kindergarten through fifth grade. The National Park Service (NPS) headquarters may be found in a suburban setting roughly forty miles east of New York City. The following is a breakdown of the student body's demographics at the school: Forty percent of pupils are black or of African American heritage, while fifty-seven percent are Hispanic or Latino, two percent are Asian or Pacific Islander, and one percent are Caucasian. 69% of the pupils are eligible for either a free or a reduced-price meal. There are 22% of pupils that are considered to have a Limited English Proficiency (LEP). The following is a breakdown of the results for the New York State Mathematics Assessment for the 2012-2013 academic school year, based on the responses of 134 third-grade children who were tested. 42.5 percent received a level one score, 39.6 percent received a level two score, 13.4 percent received a level three score, and 4.5 percent received a level four score. According to "New York State Testing Programme Grade 3 Common Core Mathematics Test", published in 2013, page 600, 17.9% of children were successful in passing the state examination. The descriptions of the various performance levels may be found in Table one, which can be seen below. Because the location where the research was conducted is now debating whether or not tablet computers should be allowed in classrooms, the findings of the study are relevant to the procedures that are currently being followed by the organisation.

The 119 third graders who were enrolled in this primary school for the 2013-2014 academic period and the 114 third graders who were registered for the 2014-2015

school year were the target demographic. The entire population of the school is around 750, but the target audience was the third graders who were enrolled in this school for the 2013-2014 and 2014-2015 school years. In the school that was utilised for the research during the 2013-2014 academic year, there were 86 kids enrolled in kindergarten, 131 children enrolled in first grade, 126 students enrolled in second grade, 119 students enrolled in third grade, 123 students enrolled in fourth grade, and 142 students enrolled in fifth grade. 779 students are enrolled at this school for the 2014-2015 academic year; more precisely, there are 124 kids enrolled in kindergarten, 124 students enrolled in first grade, 146 students enrolled in second grade, 114 students enrolled in third grade, 133 students enrolled in fourth grade, and 138 students enrolled in fifth grade. Both the control group of students from the 2013-2014 school year and the experimental group of students from the 2014-2015 school year consisted of nineteen kids in the third grade who took part in the study.

> Data and Measurement:

Primary data for the research study was collected through a questionnaire survey and the semi-constructed interview. The questionnaire was divided into two parts – (A) Demographic information (B) Factor responses in 5point Likert Scale for both the online and non-online channels. Secondary data was collected from multiple sources, primarily internet resources.

Statistical Software:

MS-Excel and SPSS 25 were used for Statistical analysis.

Statistical Tools:

Descriptive analysis was applied to understand the basic nature of the data. Validity and reliability of the data was tested through Cronbach alpha, the researcher applies logistic regression model, T-test, and ANOVA.



Fig 1 Conceptual Framework

VII. RESULTS

> ANOVA Test Result:

After ensuring the data was normally distributed and conducting a battery of assumption tests on the listed quantitative data, the actual learning results were measured and assessed. The purpose of this ANOVA was to test the hypothesis that students with access to iPads would outperform their peers who did not have this resource by a significant margin. Using an analysis of variance, it was shown that students who were taught using iPads did not earn significantly higher marks than students who were

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taught using more traditional means of education when compared for children who were taught using iPads. Furthermore, based on the findings of this research, there was no statistically significant difference seen between the two cohorts of children in terms of their reliance on iPad devices, as determined by the conventional threshold of .05 (F (1,35) = 3.779, p = .060, partial η^2 = .097). This conclusion was reached because researchers found no statistically significant difference in iPad use between the two student groups. The results of the ANOVA are shown in Table 1.

Source	Type III Sum of Squares	df	Mean Square	F	Sig.				
Corrected Model	2087.509 ^a	2	1043.755	8.274	.001				
Intercept	4162.782	1	4162.782	32.999	.000				
Pre-Test	1829.588	1	1829.588	14.503	.001				
Type of Instruction	476.674	1	476.674	3.779	.060				
Error	4415.254	35	126.150						
Total	220703.000	38							
Corrected Total	6502.763	37							
a. R Squared = .321 (Adjusted R Squared = .282)									

Table 1 ANOVA Test Results

A t-test was performed to see whether there was a statistically significant difference between the means of the two groups' Attitudes Towards Math Inventory answers. When comparing the means of the data gathered from the two groups, it was revealed that the group means on the Attitudes Towards Mathematics Inventory were not significantly different from one another. When evaluating statistical significance, a p value of less than 0.05 is often accepted as the cutoff. Table eight presents the results of the t-test that was done. According to the standard p-value, the less likely it is that there is a difference between the number of samples and there is no difference among the population. When comparing the ATMI scores of the control group with the experimental group, the.954 p-value suggests that there is little to no difference. There is a 95% likelihood that the difference shown in the sample is attributable to random variation rather than accurately reflecting the whole population (t=.058, df=36, p=.955). The fact that 95% of samples are statistically similar to the whole population suggests this is the case.

Independent Samples Test													
		Levene's Test for Equality of Variances		t-test for Equality of Means									
		F	Sig.	t	đf	Sig. (2- tailed)	Mean Difference	Std. Error	95% Confidence Interval of the Difference				
									Lower	Upper			
Scores	Equal variances assumed	1.854	.182	.058	36	.954	.36842	6.38218	-12.57524	13.31208			
	Equal variances not assumed			.058	35.00 7	.954	.36842	6.38218	-12.58799	13.32484			

Table 2 ATMI T-Test Results

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VIII. CONCLUSIONS

This study suggests several themes and subjects for future educational application. The literature analysis and student responses show that technological improvements are quickly spreading into human lives and conflicting with literacy. Literacy has changed and adapted to new technology, so students read more digital texts than before. Digital writing and reading should be taught in classrooms alongside traditional literacy skills, but how best to do so? The market for tablet and cell phone compatible mobile apps is getting crowded as more users buy smartphones and tablets. This study examined whether mobile apps may enhance pupils' reading and spelling. That question had a more difficult answer. Using an iPad app instead of paperbased resources may boost students' interest and reading results, but not always. This study found that iPad apps did not boost pupils' interest or spelling results. The opposite was true: pupils scored higher on paper than on the iPad app.

LIMITATION

This examination focused on one kindergarten in one New York school district. Thirty-eight children and two adults provided the data. This means the results cannot be applied to all municipality instructors or other elementary schools. The more people in the sample, the more precisely the group's conclusions may represent the total population. If the sample size had been larger, this study would have been more representative of the population and less affected by outliers. A more large-scale study would assist in confirming these conclusions. As mentioned in previous chapters, this study was unable to randomly assign youngsters since they all attended the same elementary school. Using a prior test as a covariate does not replace a good experimental design, even if variables were put up to generalise sample findings to the population. If a real experimental design randomly assigned to both treatment and control groups had been adopted, the results may be more generalizable. The study's elementary school instructor has taught over twelve years in the nearby educational system. Her capacity to incorporate new educational methods and components may have been greater than anticipated from a less seasoned educator. Skill might have helped the instructor adopt iPad tablets into classes, fostering student success.

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