A Study that Compare Traditional Classroom Teaching with Online Learning and Using Traditional Textbooks with Online Learning in Middle Schools

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Abstract:- Due to its apparent centrality in several conceptualizations of how to address the digital divide, this study highlights the heterogeneous development of so-called online abilities. Three major performance evaluations look at how age, gender, educational attainment, and the effectiveness and regularity of using the Services affect results. Knowledgeable with the ways of the Internet. There seems to be a generational deterioration in one's proficiency with any given media. However, when comparing ages on content-specific talents, the older age bracket always comes out on top. Their inexperience with the medium is holding them back and will have disastrous results. Studies of digital literacy have paid little attention to this result, if they are aware of it at all. The capacity to make productive use of the Internet in technological and material settings seems to be strongly impacted by educational level. Previous research has shown that people learn digital capabilities best via a combination of classroom teaching and hands-on practise. Time spent online only benefits non-medium-specific skills. This would imply that prolonged exposure to digital media does not lead to gains in skill related to processing digital material, regardless of how long one spends doing so or how often. The latter has a smaller effect on general skill levels. The study examined the performance of male and female students in both virtual and brick-and-mortar classrooms. The research found that regardless of the kind of instruction used, there was a statistically significant variation in the GPAs of the participants based on gender. Male and female students had similar perspectives on virtual and conventional classrooms.

Keywords:- *Online Learning, Traditional Textbook, Traditional Classroom, Traditional Learning.*

I. INTRODUCTION

The incorporation of distance learning into today's university curriculum is as enthusiastic as the incorporation of more traditional forms of education. Several schools and universities across the world now offer complete degree programmes online owing to the popularity of online education, which has both good and bad features. The success of online courses depends heavily on the efficiency of remote learning. The study's authors hoped their findings would add to the discussion over distant learning's usefulness. In order to find out, the professors in the Department of Information Management Studies (IMS) in the College of Applied Science and Arts (CASA) at Southern Illinois University Carbondale (SIUC) compared the final letter grades students in two sections of IST 483: Real-Time Text recognition Technology I received. To that end, this course will introduce students to the concepts and terminology common to a broad range of software, both operating system and application. Students learned how to utilise computer-assisted transcribing software for a range of activities, including document creation, formatting, editing, storage, retrieval, and printing, all while strengthening their captioning talents. Not only did the students detail the features of the connected programme, but they also showcased more advanced features of the desktop transcribing software, such as real-time techniques and litigation support. In order to register in IST483, students needed to have completed IST 288: Transcript Proceedings Preparation and be enrolled in IST482 at the same time. (Information Reporting Procedures). WebCT's organisation and navigation features were put to use in one of the classes, allowing for content to be hierarchically structured, linked to learning objectives, discussed in class, reinforced with self-tests and quizzes, and accessed via a glossary, reference materials, and other resources. IST483 also had a classroom component, however just for that specific part of the course. The purpose of this study was to get insight into the benefits of distant education. Two IST 483 courses were compared to determine their parallels and distinctions. Students' final letter grades were utilised to draw comparisons between the two classes. Student satisfaction with the course delivery method was utilised as a proxy in the study. Comparing online education to the gold standard of classroom instruction was the purpose of this study. If there is no difference between online and traditional education in terms of students' final letter grades, then online education is effective. Final grades from both halves of the course were averaged, and then a two-tailed t-test was run to derive conclusions (Eksail, 2020).

➢ *Background of the Study:*

E-learning refers to the process of providing education via electronic means. Visuals, words, animations, video, and audio are all used in these approaches. Collaborative learning and access to experts in a certain field are two benefits of online education. In this analysis, "online learning" refers to interactions between instructors and students using electronic methods such as "WhatsApp," "Zoom," and "Google Classroom." The advantages of online education much outweigh those of traditional classroom settings. Online learning means completing all instructor-provided assignments and activities online. Educating students for

success in the modern digital economy, according to one study, necessitates the use of ICT. Therefore, the greatest option to keep students on track during the COVID-19 epidemic is via online instruction. Researchers argue that students need to adjust to the new methodology that online education represents (Harrison E., 2018).

The author discovered that the rise of globalisation and ICT enhances the use of technology in education. Management of the learning process should be imaginative and experimental if it is to increase teacher-student communication. Teachers may maintain contact with their students using online means of communication. Universities and colleges, both public and private, need to adopt teaching methods that make use of technology. Continuous effort is required while studying digitally rather than in-person. Teachers should use a variety of digital resources to increase student participation and level the playing field between online and classroom instruction. Digital libraries and websites may assist students learn online. Due to technological advancements, remote education is rapidly becoming an indispensable medium for the dissemination of information across the world. She argues that online courses are crucial since they facilitate independent study. In an autonomous learning environment, students are free to choose their own study times, topics, and paths. Students may repeat classes until they comprehend. The ability to remain anonymous online makes submitting questions in online classes much more comfortable. A study found that even preschoolers might benefit from exposure to age-appropriate digital content and applications. Photos, films, YouTube, and interactive and participatory digital activities are provided. Having grown up with cutting-edge computing and networking tools, members of Generations Y and Z will have a leg up on their college studies. Students may benefit from reading, researching on the internet, and reviewing previously recorded lectures. Whether using the meeting software's built-in chat feature, WhatsApp, Telegram, or video/audio calls, teachers and students may have real-time conversations (Abdul, 2020).

➢ *Problem Statement:*
"Teachers are able to more effectively interact with students, parents, and administrators via the use of technology. Most teachers reported feeling at ease while using computers for pedagogical purposes. Technology is being used by many educators to provide students individualized lessons and additional opportunities to apply what they're learning."

Most people only perceive a single use for technology. Assigning work to a computer is only the beginning. Students may use the Internet to interview specialists and put up reports, while instructors may use technology to watch students and uncover areas for progress. NCLB requires the use of technology to help students achieve. It also suggested that teachers be given technology education. Many states now demand technical education as a prerequisite for teacher licensure. Teachers in California must either complete a foundational course in educational technology or get a passing score on a statewide exam. Online courses are only

one example of the widespread use of technology by educators. Online learning is available from a variety of public, charter, and private institutions. Students taking lessons online have the flexibility to attend school on a daily basis if they so want, or to meet with their teachers once or twice a week. Traditional schools feature labs or classroom computers for online instruction. Some charter schools include on-campus computer labs, while others are entirely online and require students to complete their assignments from home. Parents of charter schools want alternatives to the status quo. Charter school students aim to close the achievement gap by improving their academic performance. Conventional educational institutions use time-tested practises. Charter schools are more flexible and can respond more quickly to the demands of their students. By providing additional support and a more relevant curriculum, charter schools have attracted students from traditional schools with high dropout rates. Students now have a third option in the form of online education. Classes at charter schools are smaller and more technologically advanced **(Hazwani, 2020).**

II. LITERATURE REVIEW

According to their findings, community colleges are the most trustworthy institutions offering online courses. The number of community colleges that offered online courses was much more than 60%. The majority of today's lectures may be seen on YouTube or cable television. One survey indicated that one-third of higher education institutions offered travel time courses, colleges have been required to address copyright problems by amending their trademark policy. It was a significant departure from prior practises for Fairleigh Dickinson University to require all students to take at least one online course each academic year. Even if a student chooses to live on campus, they are still subject to this rule. There has been an increase in the usage of online education by both two- and four-year colleges and universities. Students may utilise online classes as a stepping stone to a four-year university education **(Hussin, N., 2017).**

Traditional higher education institutions like universities and colleges now routinely use computers and the Internet in their classrooms. Their biggest fear was if the technology was too sophisticated for their purposes. The author argues that widespread adoption of such programmes would have far-reaching effects on the educational system as a whole. When replacing teacher-led lectures with more creative methods, educators face a number of challenges. It may be difficult and need fresh ideas to make the transition from traditional classroom instruction to online learning. Researchers have proposed that pupils would fare better academically if their instructors were open to and able to implement novel approaches to education while also being cognizant of their own unique qualities. **(Irfan, 2020).**

Researchers suggest substituting online instruction for traditional on-campus techniques to accommodate the doubling of the number of part-time college students. The study evaluated the academic performance of students who completed the identical participation course either on campus

or online, controlling for characteristics such as age, gender, and overall academic accomplishment. The findings suggested that distance learning, especially for older women, might be beneficial. Overall, students' achievement in both online and conventional classroom environments was similarly excellent. This information proves that students' performance in class was not negatively impacted by technological difficulties. The author conducted research on the viability of two-way interactive television for use in higher education business programs. There were 34 students enrolled at the main campus, while 16 more took the course from one of three satellite locations. There were no statistically significant differences between the two groups of fifty pupils on the standardized tests. In fact, the study's findings showed that remote learners fared better than their on-campus counterparts. The author also noted that, across all three exams for the Principles of Cost Accounting course, distance learners performed better than their on-campus counterparts. Furthermore, researchers observed no statistically significant disparity in academic achievement between regular school and distant students according to the median ending GPA as well as the American Arrangement of Collegiate Business Degree Schools and the Enterprise Basic School Appraisal Exam **(Almanthari, 2020).**

➢ *Research Objective:*

- To examine traditional teaching and online teaching.
- To explore online learning differs from classroom learning either online or in a traditional classroom.
- To determine like online method or traditional classroom method for learning.
- To analyse traditional classroom teaching and online learning.

III. RESEARCH METHODOLOGY

The researcher's overall approach to carrying out the study is what is known as the research technique. So, in order to make conclusions, a quantitative research method entails counting and analysing data. Questions like "who," "how much," "what," "where," "when," "how many," and "how"

may be addressed by the use of numerical data and the application of particular statistical processes. Researchers may extend on this idea by saying that quantitative research methods are used to provide a numerical or statistical description of a problem or phenomenon. The second defining feature of quantitative research is its reliance on statistical methods for the gathering and interpretation of numerical data. On the other side, however. Gathering data that can be quantified and statistically processed is essential to quantitative research, which is used to confirm or refute competing assertions about the state of knowledge. In addition, experts emphasise that the first steps in quantitative research include identifying a problem, developing a hypothesis or research question, reviewing the appropriate literature, and doing a statistical analysis of data.

SPSS 25.0, Statistical Analysis Programme

➢ *Sampling:*

The questionnaire was piloted with a group of 20 Chinese consumers, and the whole research was completed using the same questionnaire and a sample of 658 customers. Customers were picked using a random sample strategy, and from them, a total of questionnaires were sent out. No unfinished surveys were included in the analysis, but the researcher did not use them either.

In order to get an accurate read on people's thoughts and feelings, surveys and questionnaires often use a rating system based on the Likert scale. Respondents are typically offered a choice between five possible answers, such as "strongly agree," "agree," "did not respond," "disagree," and "strongly disagree," in response to a question or statement. The values for each response category must be specified if the study use numeric coding, such as 5 for "strongly agree," 4 for "agree," and so on. Researchers may learn about consumers' preferences for both online and brick-and-mortar shopping by using the above-described Likert scale. Several "control" questions on the respondent's demographics and familiarity with online vs. offline shopping came early in the survey.
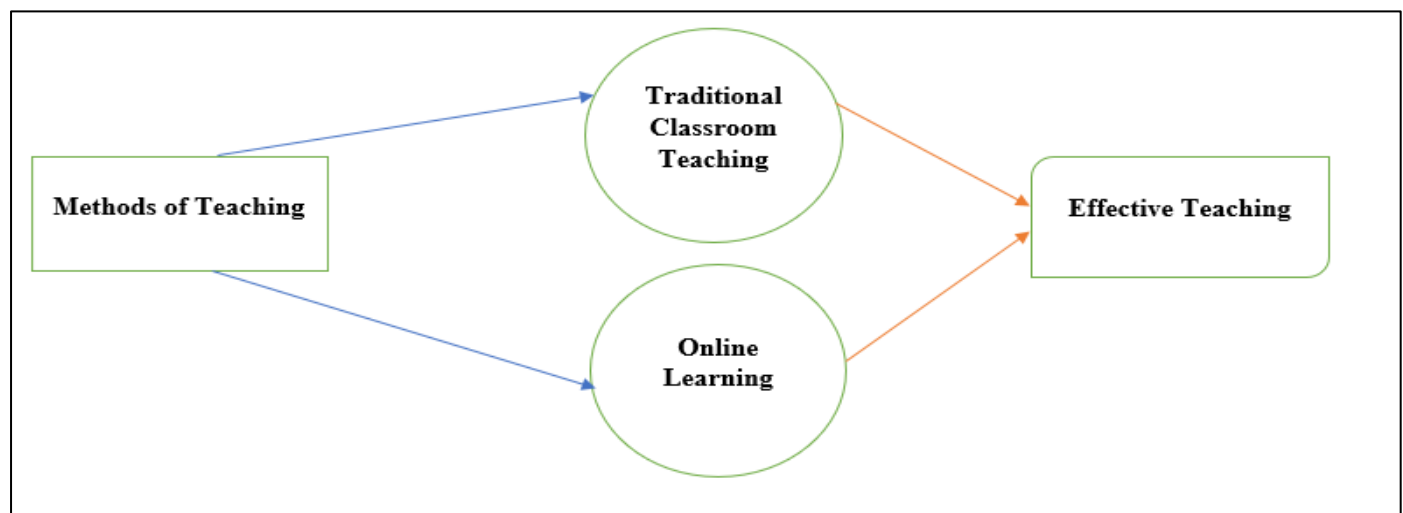
➢ *Conceptual Framework:*

Fig 1 Conceptual Framework

IV. RESULTS

Rao-soft software was used to estimate the sample size of 810. A total of 975 questionnaires were distributed to the respondents. Out of this number 756 sets of the questionnaire were returned, and 658 questionnaires were analysed using the Statistical Package for social science (SPSS version 25.0) software.

➤ *Factor Analysis:*

Factor Analysis is often used to validate the latent component structure of observable data (FA). As visible or diagnostic markers cannot be directly measured, regression coefficients are commonly used to provide scores. FA success needs models. Modeling targets observable connections, intrusion detection, and error. Multiple regression data sets may be assessed using the Kaiser-Meyer-Olkin (KMO) Test. The sample and model variables are assessed for representativeness. The statistic indicates data overlap. Lower proportions indicate data that is easier to interpret. KMO returns 0–1. The sample size is enough if the KMO values are between 0.8 and 1. Kaiser's cutoffs for acceptability are as follows:

➤ *Kaiser's Cutoffs for Acceptability are as Follows:*

- A dismal 0.050 to 0.059.
- 0.60 - 0.69 below-average
- Typical range for a middle grade: 0.70–0.79.
- Having a quality point value between 0.80 and 0.89.
- The range from 0.90 to 1.00 is stunning.

Table 1 KMO and Bartlett's Test

KMO and Bartlett's Test		
Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.941
Bartlett's Test of Sphericity	Approx. Chi-Square	6524.517
	df	190
	Sig.	.000

This demonstrates the validity of assertions for sampling purposes. To further verify the relevance of a correlation matrices, Bartlett's Test of Sphericity was performed. Kaiser-Meyer-Olkin Sampling Adequacy Value is 0.941. The p-value for Bartlett's sphericity test was determined to be 0.00. Bartlett's test of sphericity showed that the correlation matrix isn't an identity matrix, with a significant test result.

➤ *Online Learning:*

The term "e-learning" is used to describe any educational process that takes place online. Visual components such as photos, text, animations, videos, and music are employed in these techniques. One of the many benefits of online education is the possibility of group study under the direction of specialists in the field. As this study progresses, references to "WhatsApp," "Zoom," and "Google Classroom" will be made to indicate the study's focus on three of the most common modes of online communication between teachers and students. Alternatives to traditional lectures are an integral part of online education. All assignments and labs made accessible by the teacher in the digital classroom are considered part of the online learning experience. The author contends that by using modern technologies, today's students may acquire the 21st-century skills necessary for professional success. Furthermore, online education is the best approach to keep students' educations continuing strong during the COVID-19 epidemic. Researchers suggest that online education is an alternative pedagogy for the information and communication technology era, and that students must adapt to this new standard (Mansor, 2021).

In the midst of ICT advancement and globalization, researchers found that technology-based and online learning has widespread acceptance. Creative and creative educational process management is required to promote teacher-student communication. Online communication allows teachers to keep in touch with their pupils regardless of their physical proximity. Both public and private universities benefit from adopting a more technologically-based approach to teaching and learning. These methods need to be modified so that online learners are continually interacting with one another in order to be effective. To maintain student interest and remove discrepancies between students' online and in-person learning experiences, educators should make use of a wide range of technological tools. Students now have easier access to new resources for studying because to the proliferation of digital libraries and websites. Technology advancements in the field of education are expanding access to distance learning opportunities for students all around the globe. She contends that self-study is enabled by online education to a larger degree. A student's study time, focus, and ultimate destination are all within their control. Once they have a firm grasp of the topic, students may revisit any parts of the course they found challenging. In addition, children may feel safe enough to express questions without fear of reprimand while doing so online. Researchers have shown that even very young children are able to understand and utilise age-appropriate digital media, including online games and other digital apps (Dawi, 2016).

Generations Y and Z have grown up with advanced networks of computers, phones, and other electronic devices, making it easier for them to take advantage of online education. The author contends that students might benefit from rewatching recorded lectures, as well as from reading books and undertaking internet research, to help solidify what they've learned. The chat component of the meeting software, instant messaging applications like WhatsApp and Telegram, or even video or phone calls may all facilitate two-way communication between instructors and their students in real time. Didact provides access to educational television so that students may review concepts from past lessons. This will be

of great assistance to students taking the Primary School Assessment Test (PT3), Form 3 Assessment Test (SPM), or Standard 6 Primary School Assessment Test (**Negara, 2020).**

➢ *Traditional Teaching with Textbook:*

The textbook is a crucial instrument for learning. It specifies the most important skills that students are expected to acquire during their courses. A 21st-century education must include new pedagogical and scholastic approaches. Due to its distinct advantages over traditional classroom instruction (individual control over learning pace, schedule, and content), e-learning has been rapidly growing in popularity over the last several years. The proliferation of digital materials in the modern classroom is largely attributable to technical advancements. In order to successfully use technology in the classroom, teachers must have a firm grasp on both technology and pedagogy. The debut of the Apple iPad in early 2010 signalled the beginning of a worldwide proliferation of portable electronic devices known as tablets. Tablets are lightweight, portable electronic gadgets with large touch displays that are easy to use and operate. Since the iPad's release, tablet computers have seen explosive development across all areas of electronic communication, and they have earned a central role in the classroom as a result. The majority of governments are making concerted efforts to introduce tablet computers and other forms of ICT (information and communication technology) into the classroom. The backbone of electronic education is electronic books and other electronic resources, as well as numerous remote learning systems. Does this mean that kids would rather study from a computer than from a book or in a classroom? The goal of this research is to evaluate the general criteria of quality textbooks and to compare them to the quality standards of both print and digital textbooks. Both theoretical analysis and content analysis were used in the research process. According to recognised standards (Amro, 2015), the quality of the researched digital textbook is good.

➢ *Computation of Test Statistics:*

The first stage in these tests is to compute the test statistics, commonly known as the calculated value (t value in student's t test and F value in ANOVA test). The samples are used as inputs in a statistical test algorithm, and the result is then determined.

Analyzing variance (ANOVA) calculates the difference between the means of the treatment levels and the overall mean of the dependent variable to determine if the groups produced by the levels of the independent variable are statistically distinct.

The null hypothesis is rejected if the mean of any group is significantly different from the mean of all groups.

The F test is used to determine statistical significance in ANOVA. Since the error is computed for the entire suite of comparisons as opposed to for each pairwise comparison, this method permits the simultaneous comparison of multiple means.

Table 2 ANOVA Sum

ANOVA					
Sum					
	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	39936.307	450	3993.631	2485.825	.000
Within Groups	145.083	749	1.630		
Total	40081.390	1199			

In this study, the result is significant. The value of F is 2485.825, which reaches significance with a *p*-value of .000 (which is less than the .05 alpha level). This means the *"H₂: "There is a significant relationship between Mutual trust and Employees Performance"."* is accepted and the null hypothesis is rejected.

V. CONCLUSION

A new educational environment that fosters high-quality online learning is crucial to the long-term success of unbundling. Changes of a fundamental kind will be required in that world. Step one is to begin the process of forming smaller learning communities inside each institution. Second, they should begin judging the effectiveness of schools by the rate of improvement in students' lives that each dollar spent produces. Finally, keep in mind that both parents and educators benefit from economical and productive choices for their pupils' education. Finally, they need to provide both parents and educators a set of consistent, actionable indications by which to evaluate the efficacy of different strategies. The challenges of implementing these adjustments are both well-known and unprecedented. Educators and politicians have been battling identical difficulties for decades, but the remedies they've found have essentially stayed the same. However, in their current iteration, they can only be tackled with a granularity, agility, and precision that is unprecedented in the realm of primary and secondary schooling. Many people start the era of digital learning with the misconception that education is a single "thing" that takes place in "a building," rather than a collection of services that may be delivered in a number of contexts. Thus, initiatives to improve specific services or components of a school are typically discouraged, and "better schools" becomes the de facto standard of evaluation. American education is basically a public service, leaving it susceptible to the demands of partisans and interest groups; this leaves parents and teachers in the dark about true costs, while also giving them little reason to prioritize efficiency. All these persistent characteristics interact together to impede the development of cutting-edge instruments, decrease excitement for efficiency improvements that involve less human labor, and diminish worry about saving money. As a result, it shouldn't come as

much of a surprise that instructional technology has generally fallen short.

VI. LIMITATION

There are several key educational and intellectual repercussions of this study's results. It contributes to existing information by demonstrating the complex interplay of factors that impact the well-being and achievement of distance learners during the 2009 COVID-19 epidemic. This study was different in numerous significant ways from previous studies. None of the studies looked at how students' mood affected their predicted grades. Previous empirical study has indicated that it is crucial to explore what aspects impact students' levels of satisfaction. There has been no research conducted during the pandemic on how variables such course design, instructor quality, timely feedback, and student expectations affect online learner satisfaction. To help fill up this informational vacuum, we undertook this research. Finding that the instructor's level of competence affects the students' level of enjoyment is the first key revelation from this study. Online educators took on extra duties during the pandemic. They would have to learn to adapt to new circumstances, improve their skills, and instruct different students in this environment. Findings from this study demonstrate that student satisfaction with online courses is still strongly influenced by instructor quality, even in the midst of a worldwide pandemic.

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