

## Students Perception towards Digital Teaching in Higher Education Institution

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**Abstract-**In recent years, there has been a notable transformation in the educational landscape, marked by a significant shift towards digital teaching methodologies driven by technological advancements. The significance of digital teaching became especially evident during the pandemic era, where educators and students faced challenges in adapting to online teaching and learning. This study aims to explore the impact of digital teaching on the effectiveness of students' learning experiences, focusing on three main objectives: (i) examining students' perceptions towards digital learning, (ii) identifying factors influencing students' engagement in digital learning, and (iii) exploring the relationship between student perception and engagement in digital teaching. Data collection involved a self-reported survey administered to 150 respondents from Polytechnic Seberang Perai. Results revealed a higher mean in student perception (2.97) and student engagement (2.81), indicating majority agreement with the survey items. Correlation analysis demonstrated a significant relationship between student perception and engagement towards digital teaching, as evidenced by a Pearson correlation coefficient with a p-value < 0.001. However, the correlation was moderate, accounting for 43.7% of the variance. This study suggests that future research should delve deeper into the issue of engagement in digital teaching by not only considering institutional and student perceptions but also focusing on appropriate instructional design models and associated learning theories and principles for effective utilization of digital teaching methods.

*Keyword: Student's Perception, Digital Teaching, Online Learning, Effective Online Learning, Online Teaching Strategies.*

### I. INTRODUCTION

Digital teaching and learning, also known as e-learning, refers to the use of technology to deliver educational content and instruction. The literature on digital learning is vast and diverse, covering topics such as the effectiveness of online education, the use of educational technology in the classroom, and the impact of digital learning on student engagement and achievement.

One of the key findings in the literature is that online education can be as effective as traditional classroom instruction [1] found that students in online courses perform just as well, if not better, than their peers in

traditional courses. Furthermore, according [2] online education can provide greater flexibility and access to education for students who may not have been able to attend traditional schools.

The use of educational technology in the classroom, such as interactive whiteboards, tablets, e-platforms has also been found to have a positive impact on student engagement and achievement. These tools can enhance students' learning experiences by providing interactive and multimedia-rich content which includes videos, e-quizes, and e-notes. However, it is important to note that the effectiveness of these tools is largely dependent on how they are implemented and used by educators. However researchers such as [3] in their research concludes that the effectiveness of these tools largely depends on how the educators implemented it to their students. Digital learning has also been found to have a positive impact on student engagement. Studies by researchers such as [4] concluded that students who are actively engaged in the learning process through the use of digital tools and resources, tend to have higher levels of motivation and more positive attitudes towards learning.

The current merging trends is the use of artificial intelligent in digital teaching. The advantage these technologies are such as personalize learning experiences and provide real-time feedback to students, these would greatly enhance the effectiveness of digital learning. However, more research is needed to fully understand the implications of these technologies and how they can be effectively integrated into educational settings [5].

Overall, the literature on digital learning suggests that the use of technology in education can be an effective way to deliver instruction and enhance student learning. However, it is important to note that the effectiveness of digital learning depends on how technology is implemented and used in the classroom.

### **Research Objectives and Research Questions**

#### *Research Questions :*

- What is the student's perception towards digital learning?
- What are the factor's influencing student's engagement in digital learning?
- Is there any relationship between relationship between student perception and student engagement towards digital teaching?

#### *Research Objectives :*

- To examine student's perception towards digital learning
- To identify factor's influencing student's engagement in digital learning
- To examine whether there is a relationship between student perception and student engagement towards digital teaching

### **Digital teaching strategies**

Current digital teaching strategies suggest that technology can enhance students' educational experience by providing new and innovative ways for them to learn. Studies have shown that the use of technology in the classroom can increase student engagement, motivation, and learning outcomes.

One effective digital teaching strategy is the use of online resources such as videos and interactive simulations to supplement traditional classroom instruction. For instance,[6] found that the use of interactive videos in science education led to improved student understanding of complex concepts.

Another study by [7] found that students who used videos to supplement their instruction had higher test scores and were more engaged in the learning process.

Another digital teaching strategy is the use of virtual classrooms, which allow for synchronous and asynchronous communication between students and teachers. [8] found that virtual classrooms were effective in promoting student interaction and collaboration, and that students who participated in virtual classes had a more positive attitude towards online learning.

The use of formative and summative assessments that can be digitally delivered can also be an effective teaching strategy. As according to [9] found that formative assessments, when used in combination with other teaching strategies, have a positive impact on student learning. Furthermore, the use of educational games and gamification have been found to be an effective way to increase student engagement and motivation. For example, [10] found that gamification in business education led to increased student engagement and motivation.

Overall, the literature suggests that digital teaching strategies have the potential to enhance the educational experience for students and to improve learning outcomes. However, it is important to note that the effectiveness of digital teaching strategies can depend on factors such as the quality of the resources and the level of teacher training and support.

One of the main benefits of digital teaching strategies is the ability to provide students with immediate feedback and support, as noted in a study by [11] Through the use of online assessments, quizzes, and other interactive tools, teachers can quickly assess student understanding and provide personalized feedback to help students overcome any challenges they may be facing. This can help to promote more efficient and effective learning, as students are able to receive feedback in real-time, rather than having to wait for traditional methods such as written assignments or in-person meetings.

Another key benefit of digital teaching strategies is the ability to incorporating digital tools into the classroom can help to tap into this interest and engagement. This can be particularly useful for students who may struggle with more traditional methods of learning, as the use of technology can help to make learning more interactive, fun, and relevant to their lives.

In addition to these benefits, digital teaching strategies also offer opportunities for teachers to collaborate and share resources with other educators around the world. For instance, a study by [12] highlights the benefits of online platforms and communities for teachers. Through the use of these resources, teachers can access a wealth of information, and connect with other teachers to share best practices and ideas. This can help to promote more effective teaching and learning, as teachers are able to stay up-to-date with the latest developments in their field and collaborate with others to develop new and innovative teaching strategies.

There are also a number of challenges that come with implementing digital teaching strategies. One of these challenges is ensuring that all students have access to the technology and digital tools needed to participate fully in the learning process, as highlighted by

A study by [13] found that the use of flipped classroom instruction, where students watch video lectures outside of class and engage in interactive activities during class time, led to improved learning outcomes and increased student engagement. Another study by [14] investigated the effect of technology integration on student motivation and found that technology use led to increased student motivation and engagement.

In 2020, a study by [15] examined the impact of digital storytelling on student learning and motivation and found that the use of digital storytelling led to improved learning outcomes and increased student motivation. Additionally, a study by [16] conducted a comprehensive examination of the use of

gamification in education and found that gamification led to improved student engagement and learning outcomes.

Finally, a study by [17] explored the use of artificial intelligence in education and found that AI has the potential to revolutionize the way we teach and learn, by providing personalized and adaptive learning experiences for students.

These studies provide evidence of the potential benefits of digital teaching strategies, such as increased student motivation and engagement, improved learning outcomes, and the use of personalized and interactive learning experiences. However, it is important to note that while technology can greatly enhance the teaching and learning process, it should be used in a responsible and effective manner to ensure that its benefits are fully realized.

### **The impact of digital learning**

Digital learning, also known as e-learning, has gained significant attention in recent years as technology continues to advance and change the way education is delivered. A literature review on the impact of digital learning would include an examination of various studies and publications that have been conducted on the topic.

Another study,[18] found that online learning can be as effective as traditional classroom-based instruction, but that student engagement and motivation are key factors in determining the success of online learning.

A more recent study, [19] found that digital technologies can enhance student engagement and motivation, but that it is important to consider the specific context and goals of the learning environment. Additionally, [20], found that digital learning can have a positive impact on student achievement, but that the effectiveness of digital learning varies depending on the specific type of technology and the way it is used in the classroom.

These studies and others demonstrate that while digital learning can have positive impact on student learning, engagement and outcome, it is important to use technology in a strategic and effective way, in conjunction with other effective teaching practices. It is important to note that this is just a sample of studies and publications on the topic, and a comprehensive literature review would include a more extensive examination of the available research.

### **Student engagement in digital learning**

Engagement is a critical factor in effective education, and digital teaching has both positive and challenging implications. [21]) found that interactive and collaborative features in digital platforms positively correlated with student engagement. Conversely, concerns about screen time, digital distractions, and a lack of face-to-face interaction have been raised as potential challenges to engagement [22].

Technological tools play a crucial role in shaping the digital learning experience. A study by [23] explores the impact of various digital tools on student engagement. The research highlights the positive influence of immersive technologies, such as virtual reality and gamification, in enhancing student motivation and participation. However, challenges related to the appropriate integration of these tools are also acknowledged.

Ensuring equitable engagement opportunities for all students is a growing concern in digital learning. Research by [24] investigates inclusive practices that address diverse learning needs. The study emphasizes the importance of designing accessible digital content, providing multiple pathways for engagement, and

considering socio-economic factors influencing technology access to promote equity in digital learning engagement.

Instructor presence is a critical factor influencing student engagement in digital learning environments. A study by [25] explores the impact of instructor involvement, communication, and availability on student engagement. The findings underscore the importance of fostering a sense of community, clear communication, and personalized interactions between instructors and students to enhance engagement in digital courses.

## II. RESEARCH METHODOLOGY

A quantitative descriptive research design has been used for the purpose of this study. The number of respondent is 150 from Polytechnic Seberang Perai . Mean and correlation analysis was used fort this study. A self-reported survey was used to collect primary data. The engagement factors identified in the literature review were grouped into a self- reported questionnaire with 27 items having a Likert scale ranging from 4 (strongly agree) to 1 (strongly disagree) was used to identify the degree of satisfaction on the students perception and student engagement was tested .

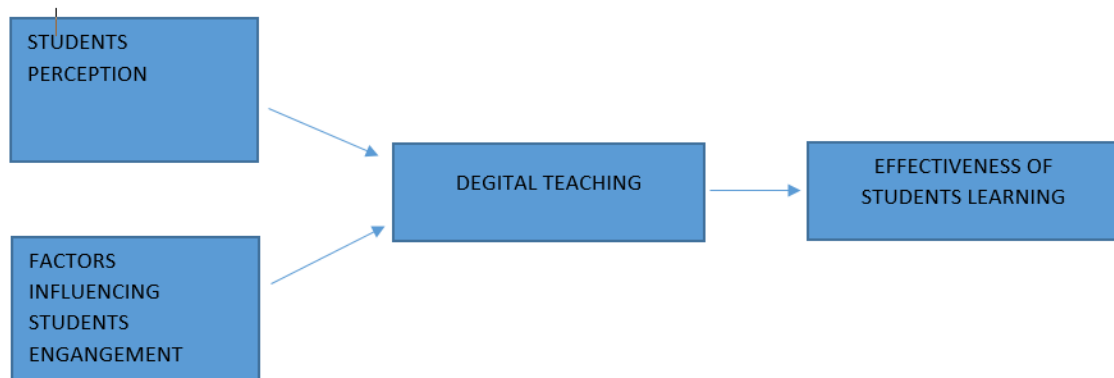


Fig. 1. Research framework

### III. RESULTS

Demographic		n	%
Gender	Female	105	70%
	Male	45	30%
Disciplines	Business Management	120	80%
	Accounting	10	6.6%
	Logistics	20	13.3%
Level of Study	Semester 1	55	36.6%
	Semester 2	15	10%
	Semester 3	40	26.6%
	Semester 4	29	19.33%
	Semester 5	11	7.33%

Fig. 2. Demographic table

The study population consisted of all diploma students of commerce department, Polytechnic Seberang Perai, Pulau Pinang, Malaysia through out the 1 2023/2024 academic session. The population comprised all 151 student consist of Business Management, Accounting and logistics department students from semester 1 to semester 4. The number of female respondent is 105 while Male respondent is 45. Simple random sampling was used to select the students from the 3 options of programme was used. Thereafter, the selected options were randomly assigned to the three experimental groups. Students in the three groups received either, video, interactive e books or Microsoft teams -based courseware.

The questionnaire used consist of 2 part (i) student perception which includes perceive usefulness of E-learning, Perceived self efficacy of using E-learning, Perceived Ease of use of e-learning, Behavioral intention of using e-learning, Behavioral intention of using e-learning and (ii) student engagement which includes factors influencing students engagements which is technical factors, design factors, learning experience factors and psychological factors. Two instruments were used in the study: treatment instruments and test instruments. The treatment instruments were the printed, video, and teams based courseware. Students answered the questionnaire from their experience daily elearning platform from various subjects. The test instruments were the the satisfaction inventory. The achievement test was made up of 27 items, rated on a five-point Likert scale.

Table 1: Mean on student perception and engagement towards digital teaching in enhancing effectiveness

	Mean	Std. Deviation	N
Student perception	2.97	.33	151
Student engagement	2.81	.37	150

The mean of two responds, student perceptions and engagement in digital education, is shown in the table above. Student perception had a higher mean where the majority of respondents agreed with the items on the questionnaire (mean 2.97 in student perception vs. 2.81 in student engagement). The higher mean in

student perception may indicate that students find the aspects measured by the questionnaire more agreeable or satisfactory. This could include factors such as the clarity of instructional materials, ease of use of digital platforms, or overall satisfaction with the learning experience in the digital format.

Table 2: Pearson correlation between student perception and engagement towards digital teaching in enhancing effectiveness

		Student perception	Student engagement
Student perception	Pearson Correlation	1	0.437**
	p-value		<0.001
	N	150	150
Student engagement	Pearson Correlation	0.437**	1
	p-value	<0.001	
	N	150	150

The correlation above indicate a significant correlation exists between two outcomes, student perception and student engagement towards digital teaching in enhancing effectiveness. Pearson correlation indicates, there was significant correlation between both variables (p-value<0.001). However, the correlation showed a moderate correlation since the percentage was only 43.7%.

#### IV. DISCUSSION

In general, engagement in digital teaching requires appropriate training, effective design of the learning experience design, and behavioral patterns for classroom management compared to those in traditional classrooms.

This research acknowledges that involvement in online education comes with a mix of factors that can either enhance or hinder the experience. Students found it valuable when they had the opportunity to interact freely with their peers and instructors, and when teachers provided immediate feedback to meet their ongoing need for recognition. Both students and educators expressed gratitude for the opportunity to become proficient in using virtual classrooms before actively participating in them.

Overall, the study found that digital teaching and learning could replace traditional learning in some cases, but important factors must be considered. First, learning with digital instructional tools must be well-designed and include features that allow free interaction among all participants. Technical glitches, inefficient design of the learning experience, and poor classroom management could ruin the educational process. The ability for students to access the digital teaching platform from home, communicate

The overall results show that engagement in digital teaching is influenced more by behavioral factors and factors related to the learning experience design factors, and less by technical-psychological factors.

In general, engagement within digital teaching requires proper training, effective learning-experience design, and behavioral patterns for classroom management compared to those of traditional teaching.

## V. CONCLUSION

Future researchers are encouraged to conduct a comprehensive analysis of the engagement challenges within digital teaching. This inquiry should extend beyond merely considering the perceptions of both the educational institution and the students. Instead, it should delve deeper into the examination of instructional design models specifically tailored for digital mediums, as well as the underlying learning theories and principles crucial for ensuring the effective utilization of these models.

In exploring the dynamics of engagement in digital education, researchers should scrutinize not only the surface-level perceptions but also the intricacies of instructional design. The choice and implementation of instructional design models play a pivotal role in shaping the learning environment, influencing student participation, and ultimately affecting engagement levels. By dissecting the effectiveness of various instructional design approaches in the digital realm, researchers can uncover insights into optimizing engagement.

Moreover, it is imperative for future studies to intertwine their investigations with pertinent learning theories and principles associated with digital education. Understanding how cognitive processes, motivation, and information processing align with digital teaching methods can provide a holistic perspective on engagement. This deeper exploration may uncover nuanced factors influencing student involvement and contribute to the development of targeted strategies to enhance engagement in digital learning environments.

By adopting a multi-faceted approach that considers institutional perspectives, student perceptions, instructional design models, and learning theories, future researchers can contribute valuable insights to the ongoing discourse on digital education. Such a comprehensive analysis is crucial for not only identifying existing challenges but also for formulating evidence-based recommendations and solutions that can foster meaningful engagement in the evolving landscape of digital teaching.

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