RESEARCH ARTICLE

USING TECHNOLOGY-BASED ACTIVITIES TO IMPROVE STUDENT ENGAGEMENT

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ABSTRACT— This paper explores how using technology-based activities can make students more interested and involved in school. It starts by discussing why it is important for students to be engaged in their learning. Then, it reviews researches on how technology can help improve student engagement and gives outlines of research methodology. The paper also looks at what students think about engagement and their perspectives. It shows how technology can change the way teachers teach and how students learn. Furthermore, the paper suggests specific activities that teachers can employ with technology to increase student engagement, foster exploration, creativity, and collaboration among students

Keywords— engaging students, technology-based activities, teaching approaches.

I. BACKGROUND

Improving how students stay interested and involved in learning is a big challenge for teachers today. Many students find it hard to connect with traditional teaching methods, which can make them feel bored or disconnected from what they're learning. This makes it tough for teachers to help students learn and progress in their studies. [1]

Student engagement in Vietnamese universities has emerged as a significant concern, drawing attention from various studies and reports that offer insights into the prevailing challenges and potential avenues for improvement. In Vietnamese universities, many teachers still use old-fashioned methods like lectures and memorization [2]. These methods often make students passive and less interested in learning actively. Trang T. [3] found that big class sizes and teachers who do most of the talking make it hard for students to join in. They say we need more creative ways of teaching to get students more involved. Cultural Factors play a crucial role in shaping student engagement, as highlighted by research from Lam L. [4] on "Cultural Factors Affecting Students' Engagement in Learning English in Vietnam". Lam's study underscores the influence of hierarchical relationships in Vietnamese society, which may inhibit students from expressing their opinions or engaging in critical discourse in the classroom. Finally, varied levels of motivation among students are identified as a significant determinant of engagement, as demonstrated by a study conducted by Nga P. and Thao D. [5] on "Factors Influencing Student Engagement in Vietnamese Universities". The research emphasizes that when students are interested in what they're learning or have activities they like, they're more likely to take part. Many Vietnamese students feel left out of decisions about their education, as shown in a survey by the Center for Education Accreditation under MOET in 2019 [6]. This survey reveals that students often feel marginalized in academic decision-making. It suggests that there's a need for ways to ask students for their opinions and include them in planning what they learn. According to the Vietnam Ministry of Education and Training's (MOET) report on "The Development of Information Technology in Vietnamese Universities" [7] some universities in Vietnam are slowly starting to use technology more, but not all of them. Some schools use computers and internet to help students learn, but others are still behind.

In conclusion, the current situation of student engagement in Vietnamese universities reflects a complex interplay of traditional teaching methods, limited interactive learning opportunities, technological integration, cultural factors, and individual motivation. Addressing these challenges and capitalizing on opportunities for improvement, such as integrating technology, fostering student participation, and addressing cultural barriers, are crucial steps towards creating a more engaging and enriching learning environment for Vietnamese students.

II. OVERVIEW OF THE RELATED RESEARCHES

A. THE IMPORTANCE OF STUDENT ENGAGEMENT IN STUDENT ACEDEMIC IMPROVEMENT.

In the world, researches on student engagement started over 70 years ago with Ralph Tyler's work on coursework time and learning [8]. Since then, many researchers like Pace [9] and Astin [10] have studied how engagement affects learning. The National Survey of Student Engagement (NSSE) shows that engaged students get better grades, stay in school, and graduate [11]. Student engagement is crucial for academic improvement. Using technology helps students think critically, communicate better, and work together on problem-solving[12]. Studies show that students in classrooms with technology, like lecture recordings and podcasts,

perform better than those without it. They do better on exams, papers, and assignments. Technology also helps students stay motivated to learn. [13]

B. THE IMPACT OF TECHNOLOGY ON STUDENT ENGAGEMENT.

Studies consistently find that using technology in teaching makes students more interested and involved in learning [14]. With technology, students engage more in their lessons both emotionally and mentally. They put more effort into learning, develop a liking for learning, and spend more time understanding the material. Whether they're using technology in class or outside of school, it gives students more chances to talk to their teachers, work with their classmates, and be active in their learning. Some examples of technology that really get students involved include video calls, blogs, websites where they can share information, social media, and educational games.[12]

C. USING TECHNOLOGY TO IMPROVE STUDENT ENGAGEMENT

Studies have shown that bringing technology into classrooms can really help students learn better. It can make learning more meaningful, use what students already know, help them organize their thoughts better, encourage them to think deeply, and let them try out new ways of doing things [15]. This kind of technology use also changes the classroom so that it focuses more on what students need and lets them take charge of their learning [14]. When teachers bring technology into their lessons, they need to make sure that it actually helps students learn and that both teachers and students can use it easily. Teachers generally feel good about using technology in class. They think that with the right training, they can make learning better for students [16]. To do this, teachers need to be good at using technology, know how to mix it with what they teach, create activities that use technology, give feedback on how students are doing, get students to work together using technology, and be open to using technology in class [17]. It's also important to know what students think about using technology. If students like the technology they use in class and find it helpful, they'll use it more to understand what they're learning [18]. In Vietnam, several authors have emphasized the significance of leveraging technology to enhance students' engagement in learning [19], [20], [21]. They underscore the pivotal role of technology in fostering students' interest and active participation in the learning process.

III. RESEARCH METHODOLOGY

This study aims to make learning more engaging in universities by using a survey which helps us understand how students feel about their engagement and what they think about teaching methods. Students from Ho Chi Minh University of Foreign Languages and Information Technology (HUFLIT) and Sai Gon Technology University (STU) were chosen to participate. We made sure to include different types of students to get a good mix of opinions. After collecting the responses, the author used simple statistics to summarize them. It's important to remember that some people might answer differently, and the findings might not apply to everyone. In short, by employing a quantitative approach through survey questionnaires, this study aims to offer valuable insights into student engagement levels and preferences in higher education, and provide strategies for enhancement.

IV. RESULT AND DISCUSSION

Student Engagement Overview: The findings from Table 1 reveal that a significant portion of students, approximately 72%, participate in various learning activities. However, it's concerning to note that only 15% of students actively engage in the learning process.

Table 1*. The level of student engagement*

How would you describe your level of engagement in your current educational pursuits?		
Level of engagement	Answers	Percentage (%)
Highly engaged	16/108	15
Moderately engaged	62/108	57
Somewhat engaged	24/108	22
Not very engaged	6/108	6

Impact of Teaching Methods: According to Table 2, a majority of students reported that teaching methods play a crucial role in determining their level of engagement. Specifically, 45% of students identified the use of technology as a significant factor in enhancing student engagement.

Table 2. *The factors contributing to student engagement.*

What factors do you believe contribute most to student engagement in the classroom?		
Facts	Answers	Percentage (%)
Relevance of the content	24/108	22
Teaching methods and techniques	22/108	20
Interaction with classmates	14/108	13
Use of technology	49/108	45

Opportunities for Interaction: Another key aspect investigated in the survey (Table 3) was the availability of opportunities for students to interact and engage with their peers and teachers. The results indicate that 27% of students feel that there are limited opportunities for meaningful interaction in the learning environment.

Table 3. *Barriers hindering student engagement.*

What barriers or challenges do you face that hinder your engagement in the learning process?		
Frequency of engagement	Valid answers	Percentage (%)
Lack of interest in the subject matter	25/108	23
Difficulty understanding the material	35/108	32
Limited opportunities for interaction and participation	29/108	27
Personal distractions or external factors	19/108	18

Student Perspectives.

Table 4. *Student Engagement: Perspectives*

Questions	Answers	Answers	Percentage (%)
How important is the role of the teacher in fostering student engagement?	Extremely important	58/108	54
	Very important	45/108	42
	Moderately important	4/108	4
	Slightly important	0/108	0
What strategies or approaches do you think would be most effective in improving student engagement in educational settings?	Incorporating more hands-on activities and projects	28/108	26
	Providing opportunities for student choice and autonomy	26/108	24
	Creating a supportive and inclusive classroom environment	11/108	10
	Using technology to enhance learning experiences	43/108	40
Have you ever experienced a learning environment where you felt exceptionally engaged? If so, what made it different?	Yes	56/108	52
	No	52/108	48

How do you think the current educational system can better address the diverse needs and interests of students to promote engagement?	Offering more personalized learning experiences	33/108	31
	Providing additional resources and support for struggling students	16/108	15
	Encouraging more student-centered approaches to teaching and learning	35/108	32
	Creating opportunities for real-world application of knowledge and skills	24/108	22
How do you believe student engagement contributes to overall academic success and achievement?	It fosters deeper understanding and retention of material.	19/108	18
	It encourages active participation and critical thinking skills	18/108	17
	It promotes a positive learning environment and student well-being	25/108	23
	It enhances motivation and persistence in academic pursuits	45/108	42

The survey looked into what teachers can do to get students more involved and effective ways to make learning better. Table 4 showed that most students (54%) said teachers play a big role, with 42% saying it's very important. Using hands-on activities (26%) and technology (40%) were seen as good ways to make learning more interesting.

More than half (52%) said they've been in classes where students were really engaged, but reasons varied. To help different students, ideas included letting students take the lead (32%) and tailoring lessons to each student (31%).

The result revealed that student engagement affects how motivated students are (42%), how positive the learning atmosphere is (23%), how well students understand (18%), and how they think critically (17%). When asked about the best technology activities for engaging students, many liked games from Kahoot and JeopardyLabs and online discussions and assignments using platforms like Moodle.

In summary, the survey findings underscore the importance of fostering active student engagement through effective teaching methods and providing opportunities for interaction and collaboration in the learning process. The survey findings also emphasize teacher importance, effective strategies like hands-on activities and technology, and the need for student-centered education to foster academic success.

It is apparent that incorporating suitable technological tools into educational practices holds the potential to significantly increase students' interest and engagement during classroom sessions. By integrating technology effectively, teachers can create dynamic and interactive learning environments that resonate with students' interests and preferences. As a result, this enhanced engagement can lead to improved learning outcomes, as students become more actively involved and invested in their education. Therefore, embracing technology as a tool for teaching has the capacity to transform traditional learning experiences into more dynamic and impactful educational journeys for students.

V. TECHNOLOGY-BASED ACTIVITIES TO INCREASE STUDENT ENGAGEMENT

Here are beneficial ways teachers can incorporate educational technology into their classrooms:

A. EDUCATIONAL GAMES
Platforms like Kahoot and JeopardyLabs engage students through interactive learning experiences that captivate students' attention and foster active participation in the educational process. These platforms leverage gamification techniques to transform traditional learning activities into engaging and enjoyable challenges. Through Kahoot, students can participate in quiz-based competitions where they answer questions on their devices, fostering healthy competition among peers while reinforcing learning objectives. JeopardyLabs, on the other hand, enables teachers to create customized Jeopardy-style games tailored to specific topics or subjects, encouraging critical thinking and problem-solving skills in an entertaining format. By incorporating educational games into the curriculum, teachers create immersive learning environments that promote collaboration,

critical thinking, and retention of key concepts. Moreover, these platforms offer immediate feedback, allowing students to track their progress and identify areas for improvement in a supportive and interactive setting. Overall, educational games serve as valuable tools for enhancing student engagement and facilitating meaningful learning experiences in the classroom.

B. THE FLIPPED CLASSROOM MODEL

The Flipped Classroom Model changes how students learn by using technology. Before class, students watch videos or read materials online at home. This helps them understand the lesson better when they come to class. In class, instead of just listening to lectures, students talk about what they learned and work together on projects. This makes learning more interactive and fun. It also helps students think more about what they're learning. But, for this model to work well, students need to have access to computers and the internet at home. Some students might not have these things, which can make it harder for them to keep up with the class. Overall, the Flipped Classroom Model is a new way of learning that focuses on students being more active in their learning. It helps students understand lessons better and work together with their classmates.

C. GOOGLE CLASSROOM

Google Classroom is a powerful tool that simplifies how teachers manage their classrooms and interact with students. It's like a digital hub where teachers can create virtual classrooms, assign tasks, and give feedback, all in one place. With Google Classroom, teachers can easily set up classes for different subjects or groups of students. They can share resources, such as documents, presentations, and videos, with the entire class or specific individuals. Assignments can be posted directly to the platform, along with due dates and instructions. One of the great features of Google Classroom is its integration with other educational tools like Classcraft and Quizlet. This means teachers can seamlessly incorporate activities and assessments from these platforms into their lessons. Another advantage of Google Classroom is its flexibility. Students can access the platform from any device with an internet connection, whether they're at school, at home, or on the go. This ensures that learning can continue even if a teacher is absent or if there are school closures due to weather events or other emergencies. Overall, Google Classroom streamlines classroom management and enhances communication between teachers and students. It provides a centralized platform for organizing materials, delivering instruction, and assessing student progress, ultimately enriching the learning experience for everyone involved.

D. ONLINE QUIZZES

Online quizzes, facilitated by platforms like Quizlet and Quizizz, revolutionize how students engage with course material outside of the traditional classroom setting. These platforms provide interactive quizzes that cater to diverse learning styles and preferences, making studying more dynamic and enjoyable. With Quizlet, students gain access to a vast array of study sets covering various subjects and topics. They can review vocabulary, concepts, and key information through flashcards, matching games, and practice tests. The interactive nature of Quizlet allows students to customize their study experience, focusing on areas where they need the most practice. Similarly, Quizizz offers engaging quizzes that students can complete individually or in teams. The platform features a diverse range of quiz formats, including multiple-choice questions, true/false statements, and open-ended responses. Students receive instant feedback on their answers, promoting active learning and self-assessment. Online quizzes promote independent learning and encourage students to take ownership of their academic progress. They provide a flexible and accessible means for students to review material at their own pace and reinforce their understanding of key concepts. Additionally, the collaborative features of these platforms foster teamwork and peer learning, as students can compete against each other or work together to achieve common goals. By incorporating online quizzes into their study routine, students develop essential study skills, such as critical thinking, problem-solving, and information retention. These platforms not only make learning more engaging but also empower students to take control of their education journey, ultimately contributing to improved academic performance and success.

E. STUDENT RESPONSE SYSTEMS

Student Response Systems, exemplified by apps like Socrative and Verso, revolutionize classroom engagement by providing students with interactive platforms to actively participate in learning activities. These apps empower students to respond to questions, complete quizzes, and engage in friendly competition with their peers. With Socrative and Verso, students can use their own devices, such as smartphones or tablets, to join classroom activities. These apps offer a variety of question formats, including multiple-choice, short-answer, and true/false, allowing for diverse forms of assessment and interaction. One of the key benefits of Student Response Systems is their seamless integration with electronic whiteboards and other classroom technologies. This enables teachers to display student responses in real time, facilitating discussions and fostering collaborative learning environments. Additionally, teachers can track individual student progress and assess comprehension levels instantly, providing timely feedback and intervention as needed. By leveraging Student Response Systems, teachers can create dynamic and engaging learning experiences that cater to the diverse

needs and preferences of their students. These apps promote active participation, critical thinking, and peer interaction, enhancing overall classroom dynamics and student engagement. Overall, Student Response Systems serve as invaluable tools for promoting student involvement and facilitating meaningful learning experiences in the modern classroom. They empower students to take ownership of their learning journey while providing teachers with valuable insights to inform instructional strategies and support student growth and development.

F. TECHNOLOGY-BASED ASSIGNMENTS

Technology-based assignments offer students a platform to express their learning through innovative mediums such as podcasts and videos. By leveraging the cameras and voice recording apps available on smartphones, students can create multimedia content that showcases their understanding of the material. Platforms like Moodle, Microsoft Teams, YouTube, and Soundcloud provide accessible avenues for students to share their creations with their peers and instructors. These platforms offer a wide reach and enable students to engage with a broader audience beyond the confines of the classroom. Assignments that incorporate technology encourage students to think creatively and develop valuable skills such as communication, digital literacy, and presentation abilities. By producing podcasts and videos, students not only deepen their understanding of the subject matter but also enhance their ability to articulate and convey complex ideas effectively. Moreover, technology-based assignments promote active learning and student-centered approaches to education. By allowing students to take control of their learning process and express themselves through digital media, educators empower them to become active participants in their educational journey.

In conclusion, technology-based assignments represent a dynamic and inclusive approach to learning that fosters creativity, collaboration, and skill development among students. By embracing digital tools and platforms, educators can inspire students to explore new modes of expression and engage with course material in meaningful and relevant ways. These strategies empower teachers to harness the potential of technology, creating dynamic learning environments that cater to diverse learning styles and preferences.

VI. CONCLUSION

The integration of technology into educational settings represents a transformative approach to enhancing student engagement and academic achievement. When teachers use technology, they can create exciting classrooms where students can explore, be creative, and work together on projects. Technology in classrooms has many benefits. It can make learning more interactive and fun. With things like videos, interactive apps, and online tools, teachers can teach in new and interesting ways that suit different types of learners. This way of teaching lets students be more involved in their learning and feel like they own their education. Also, technology helps students work together on projects and solve problems as a team. They can use digital tools to share ideas and talk to each other, no matter where they are. This teamwork helps them develop important skills like thinking critically and communicating well, which are really useful for jobs in the future. But we also need to make sure everyone can use technology, no matter their background or where they live. Teachers should make sure all students have the same access to technology and the help they need to use it. Teachers themselves also need to keep learning about new technology and teaching methods to help their students succeed. Overall, by using technology and focusing on what students need, teachers can make learning more exciting and help students love learning for life. When teachers and students work together and use technology wisely, they can prepare for the future and succeed in a world that's always changing.

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SỬ DỤNG CÁC HOẠT ĐỘNG DỰA TRÊN CÔNG NGHỆ NHẰM CẢI THIỆN SỰ THAM GIA CỦA SINH VIÊN

Tôn Thị Thiết

TÓM TẮT — Bài báo tìm hiểu về cách sử dụng các hoạt động dựa trên công nghệ có thể làm cho sinh viên hứng thú và tham gia nhiều hơn vào việc học ở trường. Trong phần mở đầu, bài viết đề cập đến tầm quan trọng của việc sinh viên tham gia vào quá trình học tập. Bên cạnh đó, tác giả nêu ra các nghiên cứu về cách công nghệ có thể giúp cải thiện sự tham gia của sinh viên và đưa ra các phương pháp nghiên cứu. Bài báo cũng tìm hiểu suy nghĩ của sinh viên về sự tham gia trong giờ học và quan điểm của sinh viên về vấn đề này. Kết quả cho thấy công nghệ có thể thay đổi phương pháp giảng dạy của giảng viên và cách học của sinh viên. Cuối cùng, bài báo đề xuất các hoạt động cụ thể mà giảng viên có thể sử dụng với công nghệ để tăng cường sự tham gia của sinh viên trong giờ học, từ đó khuyến khích sự khám phá, sáng tạo và hợp tác giữa các sinh viên với nhau.

Từ khóa: sự tham gia của sinh viên, các hoạt động giảng dạy dựa trên công nghệ, phương pháp giảng dạy.

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