

Undergraduate Students' Engagement: A Case of Padlet

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Received: 15 January 2024

Accepted: 25 February 2024

Date Published Online: 1 January 2024

Published: 1 January 2024

Abstract: Student engagement plays a critical role in shaping students' educational experiences and outcomes. It refers to the degree of attention, interest, curiosity, and emotional connection displayed by students while learning, whether in the classroom or independently. Ultimately, student engagement serves as a cornerstone of effective education, impacting student achievement, motivation, and overall well-being. This study explores the use of Padlet, a collaborative on-line tool widely employed to enhance student engagement in on-line learning. We investigate a total of 170 undergraduate students' perceptions of Padlet's ease of use and their preferences for utilizing it, aiming to understand its effect on student engagement. Students from UiTM enrolled in three different courses were selected to be the respondents of this study. Data distribution was assessed using Structural Equation Modeling-Partial Least Squares (SEM-PLS) to examine the relationship between Padlet's ease of use, student's preferences, and their engagement levels. The research findings reveal that the first hypothesis has a significant positive effect, indicating that an easy-to-use interface positively influences student engagement with a moderate impact. The second hypothesis findings demonstrate a significant positive association, implying that when students

have a preference for utilizing Padlet, their engagement levels increase, with the effect size indicating a moderate effect. Notably, both ease of use and student preference for Padlet emerged as significant predictors of higher student engagement. These results hold valuable implications for educators and institutions, emphasizing the benefits of incorporating user-friendly tools and understanding student preferences to foster more effective on-line learning experiences. By leverage such insights, educators can better support students' engagement and create a more enriching and productive learning environment.

Keywords: *Undergraduate students, Padlet, Ease of Use, Students' Preferences, Students' Engagement*

1. INTRODUCTION

In the aftermath of the COVID-19 pandemic, the global higher education sector confronted unprecedented challenges. The sudden shift to mandatory on-line learning created immediate obstacles in student retention and engagement, with the potential for long-lasting effects (Ploj-Virtič et al., 2021). This rapid transition sharply contrasts with the gradual integration of online modalities like distance courses, hybrid programs, and blended learning formats, underscoring the complexity of the situation (Hodges et al., 2020).

In contrast to situations where the transition from in-person to online learning occurs gradually, the COVID-19 pandemic caused a sudden shift to online classes. These abrupt changes did not result from a planned educational decision to make learning easier or better. Instead, it was driven by external circumstances, such as the pandemic, as Blumenthal and Blumenthal (2020) discussed. This swift change presented challenges for students, requiring them to adapt to various digital

platforms for lessons, resource access, and class participation. These challenges were especially pronounced among students with limited information technology proficiency (Al-Balas et al., 2020).

As we navigated the return to traditional in-person learning, it became evident that the educational landscape had undergone a profound transformation. This shift emphasized the pressing need for effective strategies to reignite student engagement. Among the heap challenges faced by educators, fostering active participation in undergraduate classrooms proved particularly formidable (Dorssom, 2023). The complexity of this task was further amplified by the transition back to traditional in-person education from a period of remote teaching and learning, necessitated by the COVID-19 pandemic (Dorssom, 2023).

In response to these challenges, educators have chosen to integrate educational technology tools like Padlet into traditional classrooms to enhance student engagement. This study aims to explore whether students prefer to continue using online learning tools after the university's physical reopening. Specifically, we investigate the correlation between Padlet's usability and students' preferences, with a strong emphasis on their levels of engagement.

2. PADLET

Padlet is a versatile web-based collaborative platform serving multiple purposes, including education, collaboration, organization, and brainstorming. This tool enables users to create digital boards, known as 'Padlets,' where they can incorporate various types of content such as text, images, videos, links, music, and files, including those from Photoshop, Illustrator, Autocad, and documents. It also allows embedding content from various web sources, including YouTube, Instagram, Twitter, Vimeo, The New York Times, and over 400 other applications (Padlet, 2022). One of its notable features is that it does not require users to register for an account, allowing them to create, collaborate on, and manage their boards (Fiester & Green, 2016).

The integration of technological tools like the Padlet application plays a vital role in actively engaging students in the learning process, influencing behavioural, cognitive, and emotional dimensions of engagement. Padlet finds extensive use in educational settings to enrich learning experiences. It is employed for collaborative projects, brainstorming sessions, resource sharing, and student presentations. Both teachers and students can interact with content in real time, making it invaluable for both virtual and traditional classrooms. Padlet has proven to enhance student engagement by reducing the time lag between student participation in discussions, whether individually or in groups (Fisher, 2017). Therefore, the integration of technology, particularly the Padlet application, acts as a catalyst in elevating student engagement, spanning behavioural, cognitive, and emotional aspects, as substantiated by numerous academic research studies.

Moreover, Padlet makes classes more engaging by fostering live interaction between students and instructors. It simplifies the communication of assignments and essential course materials by adding posts to Padlet boards, providing students with easy access to course content from any location. It accommodates both real-time and asynchronous engagement, enabling collaborative content embedding on Padlet boards, resulting in visually appealing and multimodal sharing. Additionally, Padlet serves as an effective brainstorming tool, where instructors can create open Padlet boards for students to contribute ideas and comments during brainstorming sessions, fostering collaborative idea generation and active participation (Luke, 2022)



Figure 1: Live Interaction among students using Padlet

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Figure 2: Brainstorming activities using Padlet



Figure 3: Teaching and learning materials embedded in Padlet for courses taught

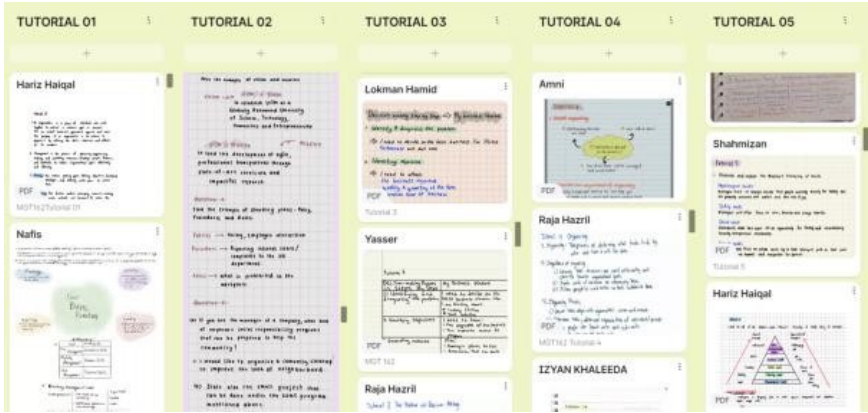


Figure 4: Class activities were collected and pooled together in a Padlet

2.1 STUDENT ENGAGEMENT

Engagement in the context of learning encompasses a student’s motivation, needs, desires, and success within the learning process (Bomia et al., 1997). It involves the level of effort students invest in meaningful learning tasks that directly contribute to achieving their desired outcomes, as Hu and Kuh (2001) suggested. Engagement is multidimensional, consisting of cognitive, emotional, and behavioural aspects. Studies have demonstrated that using Padlet in academic courses enhances learning experiences and student engagement (Freeman et al., 2014; Korkealehto & Siklander, 2018). Specifically, the incorporation of Padlet promotes student interaction and collaboration, thereby improving classroom engagement and creating a positive emotional and cognitive environment (Dewitt et al., 2015; Korkealehto & Siklander, 2018; Majid, 2014; Siklander et al., 2017). Such active engagement has been found to enhance the learning environment and increase student motivation (Shernoff et al., 2003; Freeman et al., 2014). As explained by Hansen (2011), active participation in learning plays a pivotal role in developing independent, responsible, and lifelong learners. It also facilitates the acquisition of 21st-century skills, including creative thinking, effective communication, efficient collaboration, and proficient problem-solving.

The selection of Padlet as a tool for various tasks is justified by its ability to facilitate knowledge development and construction, content aggregation and organization, and provision of a multi-user interface. These capabilities enable adaptable and self-directed learning while promoting active student engagement (Park, 2013). An intellectually stimulating educational environment can be cultivated through a well-designed curriculum delivered using active learning activities. This approach fosters active engagement, creativity, discourse, and exploration, resulting in high-quality education. This study focuses on emotional engagement resulting from the incorporation of Padlet in the classroom. Padlet fosters a sense of community and teamwork due to its user-friendly interface and accessibility, allowing students to actively participate in group activities, express their ideas, and engage in peer-to-peer feedback, strengthening social bonds within the classroom. Furthermore, Padlet's versatility enables educators to create interactive and visually appealing content that captures students' attention and stimulates discussions. Padlet's multifaceted capabilities significantly improve students' social engagement, creating a more interactive and vibrant learning environment.

2.2 STUDENTS' PERCEPTIONS AND PREFERENCES OF PADLET

In the realm of learning, students' opinions about digital tools are crucial in determining their acceptance and engagement (Venkatesh, 2000; Venkatesh and Davis, 2000; Taylor and Todd, 1995). Students value Padlet for its ability to enhance engagement by fostering active learning and providing positive assessment experiences, ultimately making classes more interactive and enjoyable (Nadeem, 2021). Additionally, Padlet's privacy settings are highly appreciated by students, as they can control who accesses their content, ensuring a secure and comfortable learning environment. Customization features in Padlet allow students to tailor their digital spaces to their specific needs, facilitating personalization and organization aligning with individual learning preferences (Shernoff et al., 2003). As students' perceptions of a tool can influence their level of involvement, this study aims to comprehensively understand how students perceive the ease of use and preferences of Padlet concerning engagement in classes.

2.3 EASE OF USE OF PADLET

Padlet’s ease of use is attributed to its user-friendly interface and intuitive design, catering to both teachers and students. Users can create digital boards or spaces effortlessly, where they can post various content types such as texts, images, links, documents, videos, and voice recordings. Customization options allow users to tailor the boards to their specific needs and preferences by easily adding media resources like videos, images, and links. This user-friendliness is particularly beneficial in educational settings, where teachers and students can adapt Padlet for various learning activities, including brainstorming, discussion boards, project collaboration, and more. Padlet’s ease of use, customization options, and versatility make it a popular choice among educators and collaborators seeking to create interactive and engaging digital spaces (Kleinsmith, 2017).

3. CONCEPTUAL FRAMEWORK

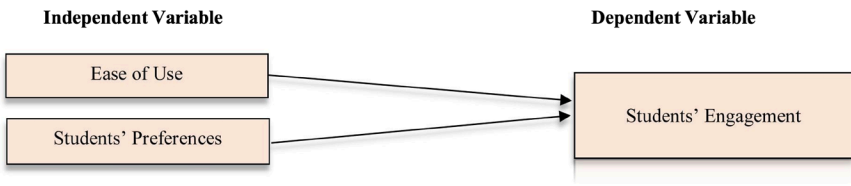


Figure 6: Conceptual framework proposed for this study

Based on Figure 6, the conceptual framework emphasizes that the ease of use of Padlet and students’ preferences, serving as independent variables, may exert a positive influence on the dependent variable, namely, students’ engagement. It is posited that an enhanced ease of use of Padlet as an educational tool could lead to heightened levels of students’ engagement in the classroom. When students perceive Padlet as user-friendly and straightforward, they are more likely to express satisfaction with its usability. Students who find Padlet to be user-friendly, visually appealing, and intuitive are more inclined to engage actively with the platform. Therefore, this conceptual framework underscores the significance of Padlet’s ease of use and students’ preferences in shaping students’ engagement.

4. METHOD

In an academic context, we selected 170 students enrolled in three distinct elective courses at UiTM, namely the “Fundamental of Entrepreneurship,” “Fundamental of Marketing,” and “Fundamental of Management.” These students were chosen as respondents because they had utilized Padlet for the mentioned courses throughout the semester. Data collection was carried out through a questionnaire designed to assess two dimensions of satisfaction: ease of use and students’ preferences. Inspired by Kleinsmith’s work in 2017, the questionnaire was created using Google Forms and distributed through Telegram classroom channels. Data analysis was conducted using Structural Equation Modeling-Partial Least Square (SEM-PLS), with responses rated on a 6-point Likert Scale, ranging from 1 (Strongly Disagree) to 6 (Strongly Agree).

5. RESULT AND DISCUSSION

The results presented in Table 1(Hypotheses Assessment) confirm the support for both hypotheses, indicating significant positive relationships between Students’ Preferences and Ease of Use with Students’ Engagement:

Hypothesis H1 (Ease of Use -> Student Engagement):

The standardized beta coefficient for this hypothesis is 0.443, signifying a substantial positive relationship between “Ease of Use” and “Student Engagement.” The t-value of 4.563 indicates that this relationship is statistically significant at a conventional significance level (e.g., $p < 0.05$). The “Supported” decision means there is compelling evidence to back Hypothesis H1. Additionally, the effect size (f^2) of 0.179 suggests a moderate effect, and the VIF of 2.593 is within an acceptable range, indicating a lack of significant multicollinearity.

Hypothesis H2 (Student Preference -> Student Engagement):

Hypothesis H2’s standardized beta coefficient is 0.36, indicating a notable positive relationship between “Student Preference” and “Student Engagement.” The t-value of 3.255 demonstrates statistical significance. Like Hypothesis H1, H2 is “Supported,” signifying strong evidence in its

favour. The effect size (f^2) of 0.118 suggests a moderate effect, and the VIF of 2.593 remains within an acceptable range, indicating no significant multicollinearity concerns.

In summary, the analysis of Table 1’s hypotheses reveals that both Hypotheses H1 and H2 are supported. These findings underscore the meaningful and positive relationships between “Ease of Use” and “Student Engagement” and between “Student Preference” and “Student Engagement.” This indicates that factors related to Padlet’s ease of use and students’ preferences for Padlet substantially impact students’ levels of engagement in the educational context.

	Hypothesis	Std. beta	Std. Error	t-value	Decision	LL	UL	f^2	VIF
H1	Ease of Use -> Student Engagement	0.443	0.097	4.563	Supported	0.3	0.614	0.179	2.593
H2	Student Preference -> Student Engagement	0.36	0.111	3.255	Supported	0.167	0.525	0.118	2.593

Table 1: Hypotheses Assessment

Table 2 (Analysis of Result) presents the analysis of loadings, composite reliability (CR), and average variance extracted (AVE) values for the Confirmatory Factor Analysis (CFA) model used to evaluate the validity and reliability of the measurement instrument developed for this study.

All items display notably high loadings for the Students’ Engagement construct, ranging from 0.769 to 0.857, indicating robust relationships with the latent construct. The CR is an excellent 0.906, and the AVE is 0.662, denoting good convergent validity.

In the case of the Ease of Use construct, all items also exhibit strong relationships, with loadings between 0.928 and 0.943. The CR remains high at 0.928, and the AVE is substantial at 0.874, indicating solid convergent validity.

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For the Students' Preferences construct, loadings range from 0.877 to 0.902, reflecting relatively strong relationships with the construct. The CR is notably high at 0.932, while the AVE, though slightly lower than other constructs at 0.819, still suggests reasonable convergent validity.

These results affirm that the measurement instrument demonstrates strong internal consistency and convergent validity for the Students' Preferences and Ease of Use constructs. Although the Students' Emotional Engagement construct also exhibits acceptable internal consistency, the AVE value implies that some items may have room for enhancing convergent validity.

Construct	Item	Loadings	CR	AVE
Ease of Use	I find Padlet easy to navigate and use for communication and learning activities	0.943	0.928	0.874
	The features and functions of Padlet are user-friendly and exciting	0.933		
	I can easily adapt to new tasks and activities on Padlet	0.928		
Students' Emotional Engagement	Padlet helps me build connections and relationships with my classmates	0.769	0.906	0.662
	Padlet promotes active collaboration and discussion among classmates	0.848		
	I value and appreciate the contribution and perspectives shared by others on Padlet	0.842		
	Padlet creates a supportive and inclusive learning environment	0.734		
	Padlet promotes collaboration and knowledge-sharing among <u>classmates</u>	0.826		
	Padlet creates a sense of belonging and community in the classroom	0.857		
Student Preference	I find Padlet to be a useful tool for communication and collaboration	0.902	0.932	0.819
	Using Padlet enhances my learning experience in the classroom.	0.919		
	I am satisfied with the overall use of Padlet as a communication tool	0.92		
	I feel connected to my classmates when we use Padlet in the classroom	0.877		

Table 2: Analysis of the Result

This research delved into the interplay between Padlet's user-friendliness, students' preferences, and their engagement levels within the context of three elective courses at UiTM involving 170 undergraduate students. The study hypotheses were rigorously examined by employing Structural Equation Modeling (SEM-PLS) to analyze comprehensive survey data. The findings strongly support that both the ease of using Padlet and students' preferences significantly impact their overall engagement.

Throughout the study, students actively embraced Padlet as a dynamic teaching tool, fostering their participation by providing a platform to share ideas, insights, and perspectives comfortably. Padlet's design eliminates the discomfort and anxiety often associated with active participation, addressing a critical psychological aspect. However, to harness Padlet's full potential, comprehensive training programs may be necessary to empower students to overcome any remaining participation-related challenges.

Survey respondents consistently praised Padlet for its user-friendly nature, highlighting its utility for communication and learning activities in an educational context. The platform's attractive features and accessible functionalities, coupled with its capacity for personalized learning experiences, resonated with students. These attributes align with previous research, such as Awaludin et al. (2017) study, which found that integrating Padlet improved academic outcomes in public universities. In sum, Padlet's intuitive interface, straightforward navigation, and accessible features played a pivotal role in enhancing learning experiences, boosting student satisfaction, and promoting engagement with the platform.

In conclusion, the integration of Padlet in undergraduate academic activities proved inspirational, enabling the effective exercise of critical thinking skills and the utilization of diverse assessment tools. This research paves the way for future investigations, particularly in exploring the lasting impact of Padlet on students' educational journeys. Our findings contribute to understanding the optimal use of Padlet in education, shedding light on its advantages and potential challenges in enhancing students' learning outcomes.

6. CONCLUSION

This study delves into the influence of students' preferences and the user-friendliness of Padlet on their emotional engagement levels. The results explicitly affirm that both these factors significantly impact emotional engagement when Padlet is used as a collaborative tool. Furthermore, Padlet emerges as a versatile and effective instrument, affording students the flexibility to tailor their learning experiences.

In addition, this research underscores the pivotal role Padlet plays in elevating students' engagement with learning materials and fostering productive interactions between students and educators. This enhancement ultimately contributes to a dynamic learning environment that promotes greater student engagement. These findings emphasize the imperative of embracing student-centred teaching approaches to fully harness the potential for enhanced student engagement within the classroom. Moreover, this study highlights the critical importance of integrating various tools that facilitate communication, group discussions, and collaborative learning. Such an approach has the potential to yield substantial benefits in terms of student engagement. To realize these benefits, educators must remain updated with the latest digital tools and undergo appropriate training to incorporate them into their teaching methodologies effectively. This approach enriches students' learning experiences by promoting interactive learning and empowers educators to create enhanced learning environments through seamless technology integration.

7. ACKNOWLEDGEMENT

I wish to convey my profound appreciation to all the dedicated members of our research group. Your unwavering support, insightful contributions, and collaborative endeavors have undeniably enriched this academic journey, rendering it both exceptionally productive and thoroughly enjoyable. I genuinely value and am sincerely grateful for your unwavering commitment and diligent efforts.

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