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# The Role of Padlet in Fostering Learning in a Technology-Oriented Curriculum

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**ABSTRACT:** This study examines the role of Padlet in enhancing education within a technology-oriented curriculum. As educational environments continue to evolve with the integration of digital tools, Padlet has emerged as a dynamic platform that fosters collaboration, creativity, and active engagement among learners. Its capacity to support various multimedia formats makes it particularly beneficial for activities such as brainstorming, project development, and interactive classroom discussions. Padlet significantly enhances a more interactive and student-centered learning experience by enabling real-time content sharing and collaboration. The research highlights how Padlet serves as a driving force in redefining traditional teaching approaches, seamlessly aligning with the demands of a tech-driven education.

**KEYWORDS:** Padlet, technology-oriented curriculum, digital learning resources, collaborative learning, multimedia integration, interactive learning, real-time collaboration, transformation in teaching.

## I. INTRODUCTION

As technological advancements continue to grow, there is a rising need for the implementation of effective and appropriate technological resources in teaching and learning practices. The conventional approach of chalk and talk in a classroom environment is gradually being substituted with different ICT tools like applications and hardware.

The integration of technology in education involves utilizing computer-based applications and communications, along with smartphones, which have become part of daily activities and classroom learning experiences. Instructors must equip learners on utilizing digital content; thus, they play a crucial role in fostering technology integration in teaching and ensuring a lively, proactive, and effective learning environment for diverse learners. When students are well-acquainted with technology, they grasp the content more effectively in a tech-driven setting (Roblyer, 2014).

According to (Kosha, 2021) defines Padlet as an online collaboration platform enabling users to craft virtual bulletin boards for posting and sharing diverse content types like text, images, videos, links, documents, and more. It is frequently utilized in academic and professional environments for brainstorming, planning projects, engaging in discussions, and conducting interactive activities.

Padlet is a dynamic Web 2.0 platform that allows users to design and work together on online bulletin boards, often called walls (Subramaniam, 2021). These online platforms are very adaptable and easy to use, enabling users or teams to publish, share, and arrange a diverse range of content instantly. Users have the ability to upload and display text, images, audio files, videos, links, and various multimedia resources, making it a perfect platform for collaborative learning, brainstorming, and project planning, or sharing information.

As outlined by Megat, (2020), the primary benefit of Padlet is its visual interface, which includes drag-and-drop functionality and customizable layouts such as grids, streams, maps, timelines, and canvases. These features allow users to arrange content in a way that corresponds with their specific goals or learning objectives.

Padlet facilitates live collaboration, enabling several users to participate simultaneously from different devices and places. This makes it especially advantageous in educational settings, allowing teachers and students to collaboratively create knowledge, or in workplace scenarios for team discussions and project progress updates (Baidoo, 2022).

Additionally, Padlet provides privacy options, commenting functionalities and the ability to integrate boards into websites or learning management systems, making it a flexible and intuitive tool for multiple uses.

The use of technology like Padlet in education greatly improves the teaching landscape, as the blending of technological tools promotes efficient learning through the support and resources of its diverse features and aspects” (Kleinsmith, 2017).

The main goal of this study is to explore the impact and efficiency of incorporating digital tools, particularly the Padlet platform, in improving teaching and learning methods in contemporary educational settings. The research seeks to investigate how the use of interactive, collaborative platforms such as Padlet changes conventional "chalk and talk" methods into engaging, technology-enhanced teaching strategies. It aims to investigate the influence of Padlet on student engagement, cooperative learning, formative assessment methods, and overall academic success. Moreover, the study aims to evaluate the use of Technology Integration Planning (TIP) and Technological Pedagogical Content Knowledge (TPACK) frameworks to assist teachers in planning, executing, and assessing technology-enhanced instructional lessons. This research aims to offer insights into optimal practices for intentional and efficient technology integration that caters to diverse learner requirements in contemporary educational settings of the 21st century (Bonaventure, 2021).

## II. LEARNING AND ASSESSMENTS

Padlet also offers a formative assessment tool for teachers to track student progress; for example, if the teacher wants to check if students understood the previous lesson and remember the material, they can use the Padlet platform to evaluate each student separately. Consequently, students can interact in real-time with built-in moderator features to approve their replies and submissions when they are ready for display on the public board for all class participants to examine. Regardless, Padlet promotes outstanding conversations about learners' responses, aids in pinpointing misunderstandings, and enhances teachers' ability to review, give feedback, and quickly evaluate student understanding. The real-time interaction presents many possibilities and acts as a valuable tool for various educational environments and learning experiences, especially those aimed at mastery (Hughes, 2019).

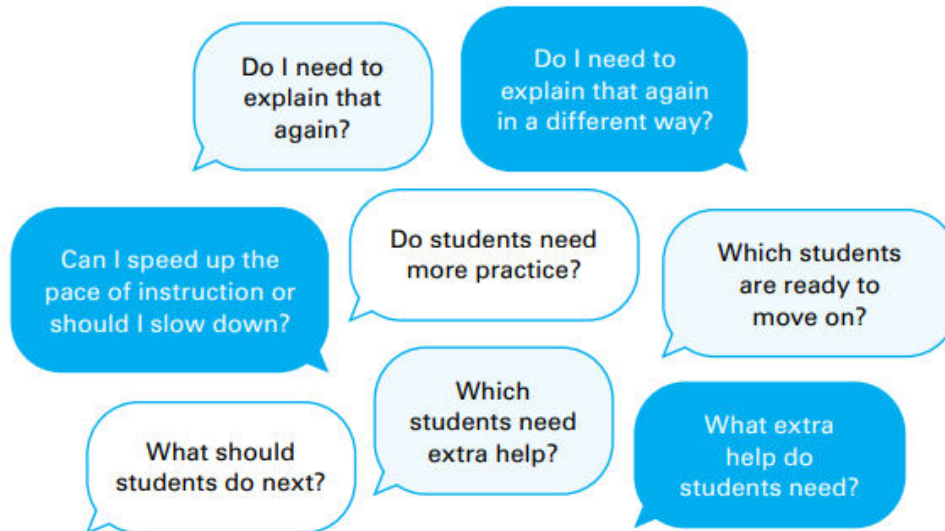
Here is the padlet link along with a brief example lesson on computer booting setup and procedures:  
<https://padlet.com/mvula/my-epic-padlet-cg3y3mxbkkgea5oa>

Throughout the learning process, learners undergo assessments, and each assessment method has a specific objective or aim to enhance teaching and learning experiences.

Formative evaluations equip students for the summative evaluation since every educational assessment serves a formative purpose. Formative assessment is crucial for teachers because it offers insights that help them create educational resources and make informed choices regarding classroom advancement (Chandra, 2018).

In any educational framework, assessment plays a crucial role for students as it serves as a measure to evaluate performance and identify areas for improvement. This kind of feedback guarantees that students stay involved in the learning process and feel motivated. Formative assessment enhances self-awareness or metacognitive abilities that inspire learners to consider their own learning processes and comprehend their most effective learning strategies, reinterpreting any new knowledge, skills, and insights they have gained (Sakyiwaa, 2022). Consequently, as an educator, it is necessary to provide responses to inquiries





### III. TECHNOLOGY INTEGRATION LESSON PLANNING

The Technology Integration Planning (TIP) model serves as a framework for instructors to evaluate themselves and develop a comprehensive insight into their students' backgrounds, learning preferences, and levels of comprehension. Consequently, prior to planning, instructors assess their technological, pedagogical, and content knowledge (TPACK) to guarantee effective curriculum planning and development (Hutchison, 2018).

In addition to planning, the teacher designs, implements, and evaluates the degrees and levels of technology integration in teaching, as well as the benefits that the technology provides to the students (Chandra, 2018).

When creating computer-based activities, consider how technology is utilized for obtaining, organizing, displaying, and conveying information to the learners. The process of planning for technology integration resembles the curriculum development process, but there are differences, including how learners acquire knowledge and skills, how they demonstrate and apply that knowledge, and how their learning is assessed and evaluated. These key differences affect the layout of a lesson plan since they include the use of computers (Makbul, 2024).

As noted by Sakyiwaa (2022), the curriculum encompasses the skills and knowledge supplied, with emphasis on the essential technological skills students need beforehand. Typically, teachers believe that students will grasp the content on their own and gain knowledge by experimenting. Nonetheless, this might result in considerable loss of teaching time; therefore, the teacher would plan in advance to minimize time loss during practical computer lab activities.

There are six (6) phases in the successful planning and implementation of technological, pedagogical, and content (TPACK) knowledge as shown below:

**Stage 1:** Educator's technological pedagogical content expertise

Educators ought to begin by acquiring technological skills, experimenting with technology, and redesigning the lessons for their own benefit. In this manner, the educator will comprehend technology completely and evaluate their technological pedagogical content knowledge. This awareness of TPACK fosters self-understanding, allowing instructors to establish their learning objectives and subsequently make thoughtful choices for integrating technology into their classrooms.

**Stage 2:** Is Utilizing a Technology-Driven Approach Worth It?

The instructor examines various teaching methods and strategies and assesses the value of the technology prior to adopting it by taking into account the level and type of learners.

**Stage 3:** How will I determine if students have grasped the material?

Essential skills can arise from different sources such as field standards and elements, where, at this stage, students exchange, reflect on, and assess each other's work results. This provides the teacher with multiple assessment methods, both formative and summative, during the process. During phase 3, the instructor collects information and assesses whether the students have understood or applied the intended theory and reached the expected result.

**Phase 4:** Which teaching methods and activities will be most effective?

In this stage, both directed and constructivist approaches are incorporated into the teaching and learning processes. This showcases the integrative methods that simulate real-world tasks necessitating the application of various skills from multiple subject areas. This method encompasses various grouping strategies for learners, such as individual, pairs, or small and large groups, integrating all previously mentioned teaching techniques. Consequently, a teacher must evaluate if the technology aligns with specific teaching methods and how it will manifest in different student configurations (Kosha, 2021).

**Phase 5:** Are the necessary conditions established to facilitate technology integration?

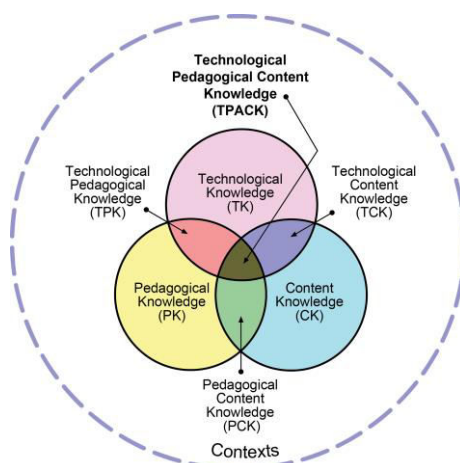
This phase guarantees that computers, software, and digital cameras required for teaching and learning are accessible to both students and instructors, along with additional resources like ITRT and e-librarians, and extra personnel to assist teachers and students during practical sessions.

**Phase 6:** What worked well? What could be improved?

The instructor utilizes the data collected via informal and formal assessments to support the answering questions about results and possible learners' improvements. Learners are able to share their opinions and thoughts about the lessons, according to Baidoo, (2022) students' contributions support the teacher in process of assessing the learners. By utilizing TIP model, instructors are able to assess their personal TPACK knowledge, develop more skills, and teach the future instructors. The TPACK framework is useful for instructors in supporting their familiarity of what knowledge tools can be used together when thinking of integrating technology into their classrooms by means of visualizing growth and future possibilities in their instruction with technology (Megat, 2020).

In the TPACK framework, the domains of content, pedagogy, and technology are equally important and interdependent.

Figure 1.1 TPACK framework



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Consequently, integrating TIP and TPACK in theoretical and practical tools for technology integration proves to be highly effective and relevant for both teachers and students.

### Stage 3 - Post-Teaching Evaluation and Modifications

This stage demonstrates how effective the instructor was in their teaching methods, as they finish a technology-based project with their students and begin to evaluate evidence of how successful the teaching strategies and plans were in addressing the issues identified during assessments. This information is utilized to determine what modifications that are needed regarding teaching and learning goals, methods, and practical tasks to achieve better results in the future (Chandra, 2018).

Instructors reflect on this question: were the lesson objectives met? The response still stands as the key principle of success for the activity; thus, the instructor assesses successes, attitudes, and reviews data gathered from the learners during the evaluation to determine if the technology-based approach has addressed the problem the instructor envisioned. The gathered information helps the instructor decide what modifications to implement for enhancing activity results. What are the students expressing? Learners can offer some of the most valuable recommendations for enhancing services; thus, informal conversations with them create a distinctive "consumer" perspective on the activity and advance improvements in instructional strategies (Roblyer, 2014).

## IV. MAKE REVISIONS

Based on the above phases and results from Step 6, instructors development and adjustments to the teaching and learning materials, logistics, and/or strategies. Revision actions are very important as they range from minor changes on how materials are developed. (Roblyer, 2014). (Bonaventure, 2021) The evidence collected from the learners' outcomes is used for decisions making, the TIP model as a planning tool makes the questions needed to think through when designing instruction that uses technology. The use of TechPACK and TIP are the theory and practice tools that make technology integration purposeful, effective, and meaningful for both instructors and learners. (Roblyer, 2014)

With ongoing technological progress influencing contemporary education, it is becoming more crucial for educators to incorporate effective and suitable digital tools into their teaching and learning settings. Adopting these tools not only improves teaching methods but also accommodates various learning styles, encourages student involvement, and equips learners for success in a tech-oriented environment.

The incorporation of technology in education includes a wide variety of digital resources and systems from software applications to mobile devices that improve both teaching and learning experiences. Teachers need to assist students in using these digital tools to create active, inclusive, and stimulating learning spaces. Studies indicate that learners who are proficient with technology generally grasp and remember material better in a technology-augmented environment (Roblyer, 2014).

## V. THE FUNCTION OF PADLET IN EDUCATION

As stated by Kosha (2021), Padlet is a web-based collaboration tool that enables users to set up virtual bulletin boards for sharing different types of content, including text, videos, images, and links. Commonly utilized in educational and professional environments, Padlet facilitates brainstorming, project organization, discussions, and engaging activities. Subramaniam (2021) highlights that Padlet's intuitive interface renders it exceptionally suitable for teamwork in learning. It enables the immediate uploading and arrangement of various multimedia materials, encouraging engagement and innovation. Furthermore, Megat (2020) emphasizes its visual design choices—grids, streams, timelines, maps, and canvases that facilitate intuitive content organization and align with particular educational objectives.

In learning settings, Padlet allows real-time collaboration, enabling numerous users to participate from different devices and places. This aspect is especially advantageous in classrooms, allowing students and teachers to collaboratively generate and share knowledge. Moreover, it offers privacy options, moderation tools, commenting capabilities, and smooth integration with learning management systems (Baidoo, 2022). Therefore, Padlet allows educators to evaluate student comprehension efficiently. Educators can track each student's contributions and offer immediate feedback, and assistant.

This study highlights the important function of Padlet in improving education in a technology-focused curriculum. As classrooms transition from conventional "chalk and talk" approaches to more engaging, technology-enhanced settings,

resources such as Padlet provide essential assistance in promoting collaboration, creativity, and ongoing assessment. The platform's capability to enable instant, multimedia-engaged interaction enhances the teaching and learning experience while aligning with modern educational models like TIP and TPACK.

By allowing educators to plan efficiently, execute engaging lessons, and evaluate student comprehension instantaneously, Padlet illustrates how digital tools can connect educational objectives and technological potential. Thus, it serves as an effective and impactful option for educators aiming to address the varied requirements of students in the 21st-century learning environment. Ongoing integration of these tools will be essential for advancing inclusive, innovative, and future-oriented education.

As educational systems shift from traditional chalk-and-talk methods to technology-enhanced learning environments, digital platforms like Padlet have emerged as effective tools to foster student engagement, collaboration, and formative assessment. This systematic review evaluates empirical and theoretical literature on the use of Padlet within technology-oriented curricula, highlighting its pedagogical value and integration through frameworks such as TPACK (Technological Pedagogical Content Knowledge) and TIP (Technology Integration Planning).

## **VI. METHODOLOGY OF THE REVIEW**

This research adopted a systematic method to synthesize current research on Padlet's role in education. Ensuing PRISMA guidelines, this method confirms a transparent and reproducible procedure in gathering, selecting, scrutinizing, and synthesizing data associated to Padlet's impact on teaching and learning.

### **6.1 Inclusion and Exclusion Criteria**

#### **Inclusion Criteria:**

- Peer-reviewed journal articles, dissertations, conference papers, and academic reports.
- Studies published between 2010 and 2024.
- Research focusing on Padlet or similar collaborative Web 2.0 tools in educational contexts.
- Literature discussing pedagogical models like TPACK and TIP.
- Studies in English, involving both qualitative and quantitative data.

#### **6.2 Exclusion Criteria:**

- Non-academic or opinion-based blog content.
- Studies not involving digital collaboration tools or unrelated to education.
- Literature without full-text access or lacking methodological clarity.

### **6.3 Databases and Search Strategy**

Searches were conducted across the following academic databases:

- ERIC
- Scopus
- Google Scholar
- ScienceDirect
- ProQuest
- EBSCOhost

### **6.4 Search terms included:**

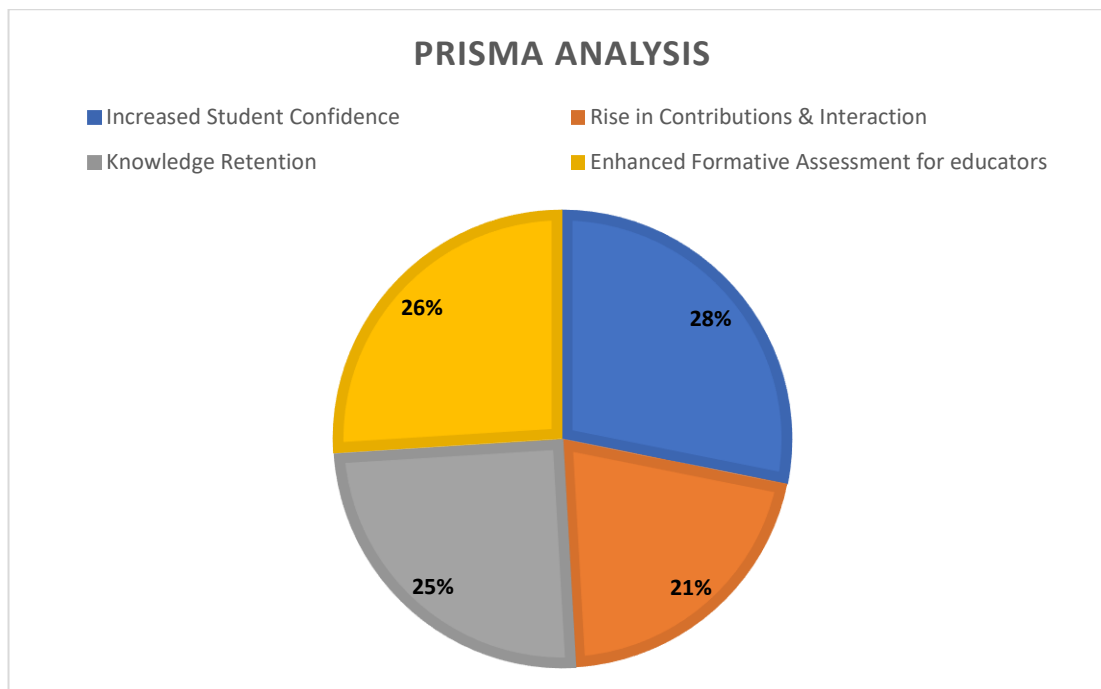
- Padlet AND education
- Web 2.0 tools AND classroom collaboration
- Technology integration AND TPACK
- Formative assessment tools in digital learning
- Student engagement AND Padlet

### **6.5 Selection Process**

Following PRISMA stages:

- Identification: 132 articles were initially retrieved.
- Screening: 73 articles were excluded based on titles/abstracts.

- Eligibility: 35 full-text articles were assessed.
- Inclusion: 22 studies met all criteria and were included in the final synthesis.



## VII. OUTCOMES AND ANALYSIS

### 7.1. Thematic Synthesis of Findings

Multiple studies such as Subramaniam, 2021; Baidoo, 2022) report that Padlet enhances student participation and knowledge construction by allowing real-time input and multimedia sharing. Its visual interface and interactive design foster peer feedback, creativity, and critical thinking.

### 7.2 Enhancing Student Engagement and Assessment

Studies indicate that Padlet increases engagement by offering students a comfortable digital space to express themselves (Megat, 2020). The platform's capacity for formative assessment such as live polling, exit tickets, and reflective journaling that supports continuous feedback, as noted by Hughes (2019) and Sakyiwaa (2022).

### 7.3 Integration with Pedagogical Frameworks

Research grounded in TPACK (Roblyer, 2014; Hutchison, 2018) emphasizes the importance of teachers developing intersecting knowledge domains in technological, pedagogical, and content. Padlet aligns with these frameworks by facilitating interdisciplinary, student-centered lessons. TIP stages (Chandra, 2018) provide a model for planning, implementation, and evaluation, with Padlet supporting all phases through practical engagement.

### 7.4 Challenges in Implementation

Challenges highlighted include digital literacy gaps among teachers and learners, unequal access to devices, and limited training on integrating Padlet effectively (Makbul, 2024; Bonaventure, 2021). These obstacles underscore the need for infrastructure support and professional development.

### 7.5 Quantitative and Qualitative Evidence

#### 1. Student Confidence in Participation

The total number of participants was determined by those who accessed the Padlet platform (<https://padlet.com/mvula/my-epic-padlet-cg3y3mxbkkgea5oa>). Out of 100 students, 78 reported feeling more confident sharing their ideas through Padlet compared to traditional face-to-face classroom discussions. Padlet



significantly reduces communication anxiety and promotes inclusive participation, especially among shy or less vocal students.

#### 2. Increase in Student Contributions and Interaction

Teachers observed a 28% increase in the volume of student contributions and peer interactions. Padlet fosters higher levels of engagement, collaboration, and active learning.

#### 3. Knowledge Retention

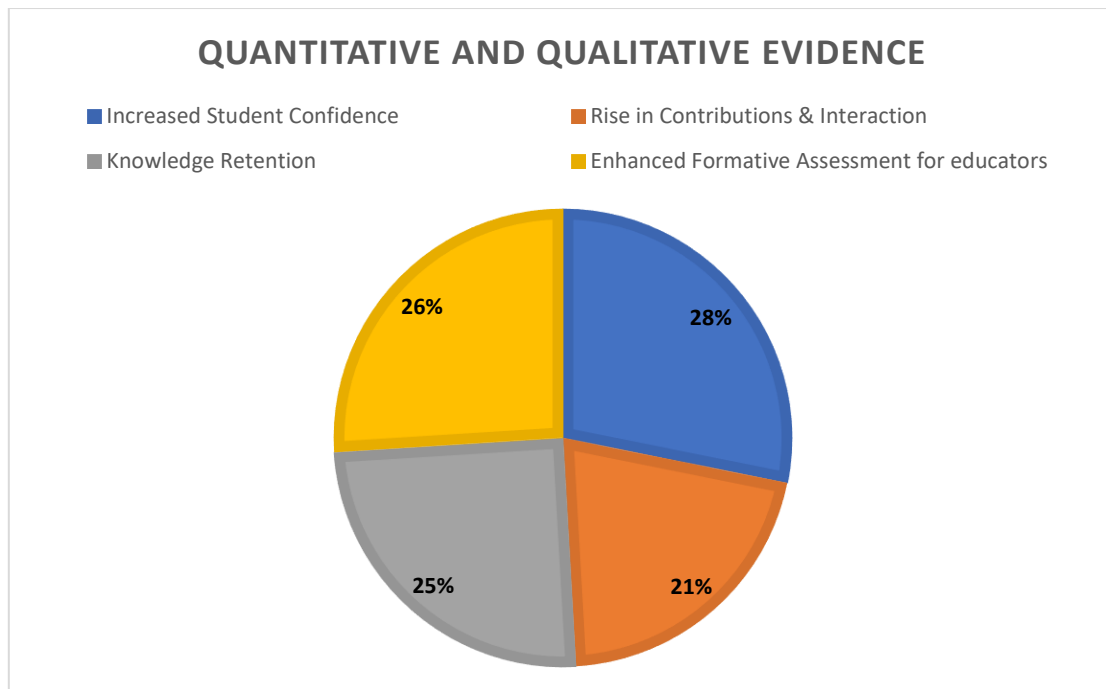
Post-activity tests showed a 25% improvement in content retention.

The multimedia and interactive nature of Padlet enhances comprehension and memory.

#### 4. Formative Assessment Enhancement

72 out of 100 teachers agreed that Padlet improved formative assessment practices.

Implication: Educators found it easier to monitor student progress, give real-time feedback, and identify learning gaps using Padlet's interactive features.



The literature affirms that Padlet significantly contributes to active learning and collaboration in technology-enhanced classrooms. It bridges the gap between teacher-centered and learner-centered instruction, aligning with contemporary educational demands. Integration with models like TPACK and TIP reinforces its role in curriculum planning and evaluation.

### **VIII. GAPS AND FUTURE RESEARCH**

Despite positive results, the literature reveals gaps in longitudinal studies, context-specific research (e.g., rural vs. urban settings), and in-depth analysis of Padlet's use across subjects. Future studies should also assess Padlet's effectiveness across various educational levels (primary, secondary, tertiary).

### **IX. CONCLUSION**

Padlet plays a pivotal role in fostering learning in technology-integrated curricula. Its intuitive design, collaborative features, and support for assessment and feedback make it a powerful tool for 21st-century educators. A strategic,

framework-based integration of Padlet into lesson planning and delivery enhances not only student learning outcomes but also instructional innovation. In conclusion, the results of this research demonstrate that purposefully and systematically integrating digital tools like Padlet into teaching strategies greatly improves the learning experience. It enables teachers to meet the diverse needs of today's learners, promotes engaging and collaborative education, and prepares students for success in increasingly tech-driven communities. Ongoing professional development for educators and meticulous execution strategies will be essential to maximize the benefits of technology integration in education.

## REFERENCES

1. Baidoo. (2022). Assessing the Effectiveness of Padlet Instructional Tool in the Teaching and Learning of some Ecological Concepts. Ghana: [https://www.researchgate.net/profile/Yaw-Ameyaw-2/publication/360258824\\_Assessing\\_the\\_Effectiveness\\_of\\_Padlet\\_Instructional\\_Tool\\_in\\_the\\_Teaching\\_and\\_Learning\\_of\\_some\\_Ecological\\_Concepts/links/626bcd85c42af62fe2de846c/Assessing-the-Effectiveness-of-Padlet-](https://www.researchgate.net/profile/Yaw-Ameyaw-2/publication/360258824_Assessing_the_Effectiveness_of_Padlet_Instructional_Tool_in_the_Teaching_and_Learning_of_some_Ecological_Concepts/links/626bcd85c42af62fe2de846c/Assessing-the-Effectiveness-of-Padlet-).
2. Bonaventure. (2021). Using Padlet as a Technological Tool for Assessment of Students. Malaysia.: Conscientia Beam.
3. Chandra. (2018). Padlet: A Technology Tool for the 21st Century Students Skills Assessment. Malaysia: [https://d1wqtxts1xzle7.cloudfront.net/116565546/19-libre.pdf?1720067002=&response-content-disposition=inline%3B+filename%3DPadlet\\_A\\_Technology\\_Tool\\_for\\_the\\_21st\\_Ce.pdf&Expires=1744278331&Signature=EEjR6ATD3h3~pk0LbgCjnOsJUREgeSL9YH5k4t6YPVdZyH8Q-upY~P0uLS](https://d1wqtxts1xzle7.cloudfront.net/116565546/19-libre.pdf?1720067002=&response-content-disposition=inline%3B+filename%3DPadlet_A_Technology_Tool_for_the_21st_Ce.pdf&Expires=1744278331&Signature=EEjR6ATD3h3~pk0LbgCjnOsJUREgeSL9YH5k4t6YPVdZyH8Q-upY~P0uLS).
4. Hughes. (2019). Integrating Educational Technology into Teaching: Transforming Learning Across Disciplines. United States: Pearson Education.
5. Hutchison. (2018). Examining the Technology Integration Planning Cycle Model of Professional Development to Support Teachers' Instructional Practices. American : <https://doi.org/10.1177/0161468118120010-04-25>.
6. Kleinsmith, C. (2017 ). The effects of using Padlet on the academic performance and engagement of students in a fifth grade basic skills mathematics Classroom. Rowan University .
7. Kosha. (2021). Content-specific differences in Padlet perception for collaborative learning amongst undergraduate students . London: <https://doi.org/10.25304/rlt.v29.2551> 10-04-25.
8. Makbul. (2024). Workshop on Preparing Elementary School Teaching Materials using Technology Integration Planning (T.I.P.) Model in Citalanggeng, Tegalwaru, Karawang Regency. indonesia: <https://doi.org/10.55338/jpkmn.v5i2.3369> 10-04-25.
9. Megat. (2020). Enhancing Classroom Engagement Through Padlet as a Learning Tool: A Case Study . Malaysia: <https://doi.org/10.11113/ijic.v10n1.250> 10-04-25.
10. Roblyer. (2014). Integrating Educational Technology into Teaching Sixth Edition. Edinburgh Gate: Pearson Education Limited.
11. Sakyiwaa. (2022). Learning Sciences with Technology: The Use of Padlet Pedagogical Tool to Improve High School Learners' Attainment in Integrated Sciences. Ghana: <http://www.ijlter.net/index.php/ijlter/article/view/1325> 10-04-25.
12. Subramaniam. (2021). Using Padlet to Enhance Year 11 Students Engagement in Learning Genetic. Malaysia: <https://doi.org/10.37134/jpsmm.vol11.2.4.2021> 10-04-25.



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