

# Class Dynamics, Learning Performance and Students' Perceptions of Using Padlet for Learning: a Literature Review

Siti Musayaroh\*

*Special education, Sultan Ageng Tirtayasa University, Indonesia*

*Email: [sitimusayaroh17@untirta.ac.id](mailto:sitimusayaroh17@untirta.ac.id)*

## ABSTRACT

Padlet is a platform where users can create discussion walls by uploading text and various media such as videos, images, documents, and audio. Padlet is becoming more widely known when people switch to online activities due to the Covid-19 pandemic. Since its establishment in 2012, many studies have discussed the impact of using Padlet for learning, but so far, no systematic analysis of the results. This article presents the results of a literature review on how Padlet affects class dynamics, learning performance, and students' perceptions. This literature review includes 16 journal articles published from 2017 to 2022. The main result is that using Padlet for learning has a positive effect on class dynamics, learning performance, and students' perceptions. However, some studies state that Padlet has little effect on learning. Students mentioned that Padlet did not assist them in learning the content as Padlet only accommodates simple activities, is less easy to use when there is too much content, causes misunderstanding or receiving erroneous information due to lack of face-to-face communication, and has limited access to non-paying basic plans.

*Keywords: padlet, class dynamics, learning performance, students' perceptions*

## 1. INTRODUCTION

Keeping students active and involved in the learning process is a challenging thing for teachers to do. A quiet class where the teacher is more dominant in explaining the material in the classroom is less attractive to students. Moreover, the classroom is carried out monotonously with lectures without involving student activity. Whereas involvement in learning makes students better understand the content of the studied material. Other studies also revealed that active learning keeps students attached during the learning process, plays an active role, and provides an atmosphere for the development of their creative potential (Kazakova et al., 2020).

Due to the Covid-19 pandemic, face-to-face learning is closed. As a result, difficulties in involving students in virtual or distance learning are increasing from time to time because there is no direct face-to-face instruction (Schwartz et al., 2020). Whereas involving students in the learning process could increase students' satisfaction, enhances student motivation to learn, reduces the sense of isolation, and improves student performance in online courses (Martin & Bolliger, 2018).

Today's development of science and technology impacts the availability of interaction and discussion on online platforms without requiring face-to-face meetings. Each platform user can set their time to use and respond to upload. One platform that offers an online discussion feature is Padlet. Padlet provides facilities to upload text and other media such as images, videos, documents, and audio. Furthermore, other users can reply by leaving comments on the upload or react by pressing the like or heart button. As of 2022, Padlet already has more than 50 million active users and is used in 200 countries. Padlet is used by people from school children to professionals.

Since Padlet's release in 2012, some studies have discussed the effect of Padlet on learning. However, there has not been any analysis of the results published by these studies. This article aims to see the impact of using Padlet for learning, specifically when viewed from various aspects such as class dynamics and learning performance. Furthermore, this literature study also looks at students' perceptions based on students' experiences using Padlet in the learning process.

## 2. METHODS

### *Research goal, questions and approach*

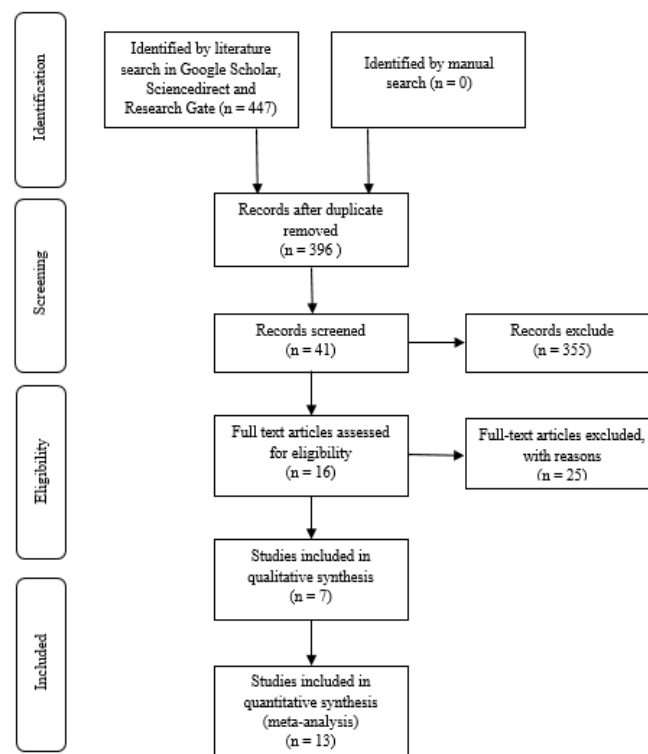
This study investigates the impact of using Padlet on class dynamics, learning performance, and students' perceptions. The Goal, Question, Metrics (GQM) approach was used as the research method because it provides a framework for the transition from research objectives to research questions and metrics and provides a framework for presenting research results. In this study, the metric used to deliver answers is data from a literature review.

The research questions in this study are, 1) How does Padlet affect classroom dynamics? 2) How does Padlet affect learning performance?, and 3) What are the students' perceptions of Padlet?

### *Research Methodology*

This research is a literature review study conducted comprehensively. The stages carried out in this research are: 1) Development of review protocol, 2) Identification of criteria, 3) Searching for relevant studies, 4) Critical Appraisal, 5) Data extraction, and 6) Synthesis.

Figure 1 shows the PRISMA flowchart for the literature review providing an overview of the process starting from the literature search (447 articles), screening (41 studies), critical appraisal (16), and studies generated in qualitative and quantitative analysis.



**Figure 1. Flow diagram of systematic review process based on PRISMA approach (Moher et al., 2009)**

#### a. *Identification of Criteria*

Identification criteria are to identify as many relevant articles as possible. Those are the article that refers to Padlet in the title or abstract.

#### b. *Search for Relevant Studies*

The search for relevant studies conducts in some ways, such as entering the keyword “Padlet” in the three research databases, setting a relevance studies filter, and limiting the search for review articles only. The three research databases used to search for relevant articles are Google Scholar, Science Direct, and Research

Gate. Table 1 shows the results of the search in the three research databases. There are 41 downloaded articles in total.

c. *Critical Appraisal*

The focus of the critical appraisal was on relevance (only articles classified as an experiment, survey case study, or similar with focusing on Padlet), rigor (appropriate research approach including research context, number of subjects, scope, design, methods, and execution), and credibility (conclusions based on sound analysis and reasoning).

d. *Data Extraction*

Data were extracted from the 16 published articles by reading the whole article in detail. The data was input into a Microsoft excel, revealing the title, the article theme, the type of article, the number of subjects in the study (N), a description of the results, and the main contribution.

**Table 1. Search results from digital research databases**

Research Database	Number of Articles Found	Number of Articles Added to The Review
Science Direct	111	5
Google Scholar	236	12
Research Gate	100	24
<b>Total</b>	<b>447</b>	<b>41</b>

**Table 2. Results from critical appraisal**

Group of Articles	Total	Description
Accepted studies	16 (39,02 %)	Articles with relevance, rigor and credibility
Presentation	3 (7,32 %)	Only presentation
Review	5 (12,20%)	Literature review
Rejected studies	17 (41,46 %)	Too limited scope, lack of description and analysis
<b>Total</b>	<b>41 (100 %)</b>	

*Synthesis*

This study needs attributes to classify all articles according to the type of research (see table 3).

**Table 3. Attributes Used in The Synthesis of Data**

Attribute	Description
CD	Studies investigating how Padlet affects classroom dynamics
LP	Studies measuring the learning performance from using Padlet
SP	Studies investigating students' perceptions of using Padlet

The three attributes above represent the research questions in this study. The purpose of the attribute is to classify articles according to the three research questions and for what type of results they provide. All attributes and results that match the study are marked and written in the columns. Furthermore, all the information obtained is collected and categorized. Then, the researcher summarized the results according to the three research questions and the types of results reported.

### 3. RESULTS AND DISCUSSION

The results of this study come from the synthesis of articles published from 2017 to 2022. Appendix A (see table 4) presents the synthesis of the accepted studies, including the title, type of study, three attributes, number of research subjects (N), and citations. Most of the studies analyzed respectively focused on student perceptions (88%), class dynamics (50%), and learning performance (50%).

### ***Class Dynamics***

Nine of the sixteen accepted studies focused on using Padlets in learning impacts classroom dynamics. The results of a study conducted by (Megat Mohd. Zainuddin et al., 2020) showed that Padlet can help students improve their learning by intensifying engagement in activities inside or outside the classroom. Further, the software supports many features and allows students to work in their own space for individual and group assignments.

Padlet supported a learning process for distance learning and outside the classroom while increasing student attention, responsiveness, interest, engagement, and participation. (Baidoo et al., 2022b; Boateng & Nyamekye, 2022). Padlet allowed teachers to engage students in interactive virtual sessions, where they instantly submitted shared classwork and group assignments (Baidoo et al., 2022a). In addition, comments and suggestions in the Padlet made students interact with each other and make learning more active (Susanti & Ayuni, 2018). The use of Padlet also developed students' new ideas and knowledge from activities and shared ideas with friends (Mahmud, 2019). The collaboration built student involvement (Haris et al., 2017).

Furthermore, as many as 30 subjects in a mixed-method study conducted by (Affendi et al., 2020) found that most respondents recognized the benefits of using Padlet, namely 1) meaningful learning activities including visual mapping, vocabulary improvement, and gaining new knowledge and 2) unifying and enhancing cognitive experiences that include thought organization and longer retention.

### ***Learning Performance***

In this sub-chapter, we will discuss how Padlet impacts learning performance. The results of two studies indicated that Padlet can help improve students' understanding of the learning topic (Megat Mohd. Zainuddin et al., 2020) and significantly improve assessment achievement (Boateng & Nyamekye, 2022). Four of the eight studies measured learning performance in aspects of language and writing skills. The results stated that Padlet effectively improves students' performance in language learning (Haris et al., 2017), and enriches vocabulary knowledge (Alabbad & Huwamel, 2020). It also helps students generate ideas, encourages them to write long essays (Affendi et al., 2020), and improves student writing outcomes (Etfita & Wahyuni, 2021).

Furthermore, two other studies conducted by the same author (Baidoo et al., 2022b, 2022a) revealed the impact of learning performance in learning ecological concepts. The research involved 102 subjects consisting of three second-year biology classes from three different schools. The subjects were selected and assigned to the Padlet instructional group 1, the Padlet instructional group 2, and the control group (conventional lecture-based instructional group). Both studies concluded that using Padlet effectively in teaching and learning (biology class) can improve student performance more than conventional lecture-based approaches.

### ***Student's Perception***

The majority of the articles in this study discussed students' perceptions of Padlet in learning (87.5%). Generally, students have positive perceptions about using Padlet in learning (Affendi et al., 2020; Ahmad et al., 2022; Alabbad & Huwamel, 2020; Anwar et al., 2019; Baidoo et al., 2022b). Using Padlet in learning was also recognized by students as useful for independent and collaborative learning (Dianati et al., 2020) and learning the subject such as language (Haris et al., 2017). One study stated that 39 subjects (82.1 %) agreed they felt more active working in groups and less stressed when using Padlet (Megat Mohd. Zainuddin et al., 2020). Several studies showed that students are happy using Padlet because of its impressive and varied features (Anwar et al., 2019; Boateng & Nyamekye, 2022; Susanti & Ayuni, 2018). Not only were they happy, they also enjoyed using Padlet (Boateng & Nyamekye, 2022) and mentioned that Padlet was valuable for their learning process (Sætra, 2021). Another study also stated that Padlet was suitable (26 of 53 subjects) and very suitable (16 of 53 subjects) to use in university learning (Zaman et al., 2017).

One of the things to consider in choosing an online learning platform is that easy to use. In this case, there are differences in the results of various studies. One study stated that Padlet is easy to access and use (Susanti & Ayuni, 2018). On the other hand, Padlet is considered less easy to use if there is too much content (Dianati et al., 2020). Although studies generally stated that students have a positive perception of learning, some studies also reveal the shortcomings of Padlet. One of the shortcomings felt by the subjects was that their interaction with Padlet's message was unclear (Haris et al., 2017). Notification on Padlet was unavailable and caused other

team members to lose updated progress or respond later. It also requires a stable internet connection and compatible laptop, restricted access to non-paying basic plans, and can cause misunderstandings between teachers and students (Gawin, 2021). Interestingly, one study revealed that Padlet could not help students learn the content as Padlet only accommodates simple activities (Mahmud, 2019).

### **Discussion**

The results of our literature review show a positive impact on the effects of using Padlet in learning. The basic concept of Padlet display resembles social media like Facebook and Instagram. Social media is a powerful instrument for social interaction (Latif et al., 2019). That's why Padlet can increase social interaction for its users without having to meet face to face. The availability of a comment column like social media also adds breadth for users to interact with each other by providing opinions, criticisms, and constructive suggestions. The social media-liked concept helps them build collaboration and participation, thereby increasing learning outcomes.

Padlet provides services for users to be able to upload text and various media in the form of images, audio, video, and documents. Two impressive features in Padlet are the reaction buttons and the comment box. Such Facebook and Instagram, Padlet provides reaction features such as hearts, thumps-ups, and thumps-downs (likes and dislikes). The like button shows positive social feedback on the uploaded post, and the number of heart or like it gets is a form of appreciation. The power of feedback is real neuroscientifically. An uploaded post with lots of "hearts" elicit stronger activity in the ventral striatum (an area involved in reward processing). (Montag et al., 2019).

The challenge in Padlet is that there are no notifications when there are suggestions and comments updates or the latest uploads. Students who log in to the Padlet link without logging into the account will be anonymous users. Furthermore, they can be set as anonymous by themselves as well. This anonymous feature provides convenience for students to dare to give opinions, ideas, suggestions, and comments without wanting their identity known. Unidentified users can also reduce student anxiety and stress levels, free to take risks and unafraid of making mistakes and encourage students' confidence (De Los Arcos et al., 2009). Unfortunately, anonymous makes it difficult for teachers to assess the student's performance as individual.

### **4. CONCLUSION**

To sum up, using Padlet for learning has a positive effect on class dynamics, learning performance, and students' perceptions. However, some studies state that Padlet has little effect on learning. Students mentioned that Padlet did not assist them in learning the content as Padlet only accommodates simple activities, is less easy to use when there is too much content, causes misunderstanding or receiving erroneous information due to lack of face-to-face communication, and has limited access to non-paying basic plans.

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## APPENDIX

## Appendix A. Synthesis of Accepted Studies

Title of Article	Type of Study	CD	LP	SP	N	References
The Effectiveness Of Using Padlet In ESL Classroom	Experiment	√	√	√	30	(Haris et al., 2017)
An Overview on Students' Understanding and Adoption of 21st Century Learning Methods in Computer Programming Course	Survey Research			√		(Zaman et al., 2017)
The Students' Perception towards the Use of Padlet in L2 Writing	Qualitative Research	√		√	41	(Susanti & Ayuni, 2018)
Students' Perceptions of Using Padlet as a Learning Tool for English Writing	Mixed-Method	√		√	60	(Mahmud, 2019)
Students' Perception at the Use of Padlet in Linguistics Clas	Qualitative descriptive design			√	28	(Anwar et al., 2019)
Advantages Of Integrating Padlet As A Pre-Writing Strategy	Mixed-Method	√	√	√	30	(Affendi et al., 2020)
Enhancing Classroom Engagement Through Padlet as a Learning Tool: A Case Study	Case Study	√	√	√	39	(Megat Mohd. Zainuddin et al., 2020)
Student perceptions of technological tools for flipped instruction: The case of Padlet, Kahoot! and Cirrus	Focus Group Interview			√	10	(Dianati et al., 2020)
The Effect of Using Padlet as a Vocabulary Knowledge Enhancement Application on Saudi EFL Female Learners, and their Attitudes toward its Value in Learning	Experiment		√	√	30	(Alabbad & Huwamel, 2020)
Collaborative Discussion Using Padlet-based Materials in Writing for ESP Course	Pre-experimental design		√		40	(Etfita & Wahyuni, 2021)
Padlet for Project-based Learning in an Entrepreneurship Course	Mixed-Method			√	82	(Gawin, 2021)
Using Padlet to Enable Online Collaborative Mediation and Scaffolding in a Statistics Course	Survey Research			√	117	(Sætra, 2021)
Assessing the Effectiveness of Padlet Instructional Tool in the Teaching and Learning of some Ecological Concepts	Quasi-experimental Design	√	√		102	(Baidoo et al., 2022a)
Efficacy of Padlet Instructional Tool on Students' Engagement and Perception in the Teaching and	Quasi-experimental design	√	√	√	102	(Baidoo et al., 2022b)

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Learning of some Ecological Concept								
Learning Sciences with Technology: The Use of Padlet Pedagogical Tool to Improve High School Learners' Attainment in Integrated Sciences	Mixed-Method	√	√	√	120	(Boateng & Nyamekye, 2022)		
Students' Perception of Online Learning-based Padlet during Pandemic	Case study			√	79	(Ahmad et al., 2022)		

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