



UNIVERSITI  
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Institute  
Of Continuing  
Education &  
Professional Studies

# *INTERNATIONAL JOURNAL ON* **E-LEARNING** *AND* **HIGHER EDUCATION**



VOLUME 15  
JUNE 2021  
ISSN 2229-8223



## **Assessing Padlet for Management Information Systems course during Open and Distance Learning**

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*Abstract: Open and distance learning (ODL) has been used in most higher education institutions in Malaysia and abroad since the Covid-19 outbreak. The learning process must continue, and engaging students is vital in the teaching and learning process. Thus, technologies are on the verge of this situation to substitute traditional face-to-face classes with virtual classrooms. Students and lecturers are the main stakeholders where they need to be mutually connected. For the Management Information Systems course, in particular, the learning environment must be engaging and fun. Therefore, this study proposes Padlet as a learning tool for a comprehensive learning experience that is suitable for both synchronous and asynchronous teaching and learning. This study seeks to examine the usability of Padlet in teaching and learning. It also investigates students' experience when they use Padlet for learning. The nature of Padlet itself offers interesting and fun learning. Based on the survey conducted among students enrolling in this course, Padlet appears to be engaging, interesting, and easy to use as it provides a shorter and quicker way to access learning materials. Its simplicity offers a great way for teachers and students to collaborate.*

*Keywords: Blended Learning, Open and Distance Learning, Management Information System, Padlet, Usability.*

## INTRODUCTION

Open and distance learning (ODL) is the term used to describe the teaching and learning process that utilizes and relies on Information and Communication Technology (ICT), as opposed to conventional, face-to-face learning. ODL has been fully implemented since March 2020 for most tertiary institutions in Malaysia when the world is battling against the virulent Covid-19 pandemic. This phenomenon has created a new perspective where the use of technology is inevitable. Technology is the only way that allows lecturers and students to stay connected.

Prior to ODL, lecturers have been conducting blended learning (BL) as part of curriculum delivery in every academic semester. Blended learning has been defined differently by many scholars (Hrastinski, 2019). The implementation of blended learning can be done in many ways for as long as it uses ICT platforms to accomplish objectives of learning. Ideally, BL provides students with some leeway in education, rather than experiencing tight and rigid processes in learning. As for the Management Information Systems (MIS) course offered in all FSPPP programs in UiTM Negeri Sembilan, Kampus Seremban, blended learning was implemented in such a way that students were given tasks or assignments based on a particular chapter from the entire syllabus. Pizzi (2014) suggests that BL requires flipped classrooms as in fifty percent face-to-face meetings while the remaining are self-instructed learning. However, the fifty percent physical meetings will no longer be possible under the pandemic situation. Hence, ODL has taken over the system temporarily.

There are various platforms that can be used in ODL, depending on the suitability of the course taught. However, if too many platforms are used at the same time it might be overwhelming to the students and it is hard to manage as well. Online course materials can be hosted in one “place” for easy accessibility, and this helps achieve both asynchronous and synchronous learning. Besides, a learning process requires an environment where lecturers can contribute, and students can absorb the knowledge altogether (Hunt, 2005). Therefore, this study proposes Padlet as a learning tool for comprehensive learning experience as it is suitable for both synchronous and asynchronous teaching and learning particularly for the MIS course. This study seeks to examine the usability of Padlet in the MIS

course teaching and learning, as well as to assess students' satisfaction while using Padlet for learning. It also gathers students' experience when they are using Padlet. Based on a small survey conducted with students enrolling the course, Padlet appears to be engaging (Lowe & Humphrey, 2018), interesting and easy to use as it provides a shorter and quicker way to access learning materials. Its simplicity offers a great way for teachers and students to collaborate with each other.

The remaining sections of this study are organised as follows. Section 2 provides available online tools for teaching and learning, followed by the concept and features of Padlet in the existing literature and Padlet used in the MIS course. Section 3 discusses the methods used to achieve the research objectives. Section 4 explains the findings and outcomes of this research. This paper concludes in Section 5.

## **ONLINE TOOLS FOR TEACHING AND LEARNING**

There are many established and non-established teaching tools available for online teaching. The tools have been introduced in the education sector for a period of time and are used under situations when both learners and educators are unable to have face-to-face meetings. The whole idea is to supplement conventional ways of teaching. However, as the global pandemic looms, education sectors are left with no other choice than to make full use of these tools.

This section entails mostly about online tools and its usability in general where these tools are categorized as Learning Management Systems (LMS) that are dynamic and are widely used by the new generation (Martins et al., 2019). Most online tools are acceptable, and lecturers pick the most suitable platform within the course nature to help them with their teaching processes. Choosing wrong tools will end up with disappointed students (Bettinger, Fox, Loeb, & Taylor, 2017). Therefore, it is important to adapt the right tools at everybody's disposal so that no one is left behind and learning can be fun and engaging. Ideally, the suitability will be depending on the mode of online learning including synchronous and asynchronous learning.

Online learning can be categorised as synchronous and asynchronous eLearning. Asynchronous means students' learning is beyond class hour

without direct interaction with teachers. Synchronous on the other hand provides real-time online classes instructed by teachers, assisted by suitable communication tools. Table 1 tabulates supported communication tools available for both online learning (Lim, 2017).

**Table 1 Mode of online learning and communication tools (Lim, 2017)**

<b>Communication Tools</b>	<b>Synchronous Learning</b>	<b>Asynchronous Learning</b>
Video conferencing	Yes	No
Web conferencing	Yes	No
Audio conferencing	Yes	No
Live chat	Yes	No
White boarding	Yes	No
Application sharing	Yes	No
Discussion forum	No	Yes
Web logs	No	Yes
e-mail messaging	No	Yes
Social media messaging	No	Yes

Each communication tool has its own usability and limitations. Lim (2017) analyses usability and limitations for each tool used for synchronous and asynchronous mode. Generally, communication tools used for synchronous learning mode imitates traditional classrooms where learning is guided between teachers and students which makes it interactive. In addition, it allows students to engage and participate (Lim, 2017). Through the use of communication tools students feel a real sense of belonging in the classroom (Hrastinski, 2019) as compared to asynchronous lessons. However, it is not an easy task when managing a large group of students, especially when there are technical failures during real-time sessions (Lim, 2017).

## 2.1 Padlet

Padlet is a Web 2.0 tool widely used in teaching and learning. It's a free online tool that supports open and distance learning (ODL), and it provides a platform for lecturers to share class materials as well. The platform is useful for brainstorming ideas and sharing opinions on various topics. Padlet is portrayed as 'Padlet: You are beautiful' as its concept and usage are very simple and straightforward. As simple as its name is, Padlet can be seen as a collaborative software for everyone to share their contents (Sese, 2021), digital 'post-it-notes' (Ellis, 2015)

and a virtual wall (Luftova, 2015).

There are many features of Padlet for lecturers to choose from - online bulletin board, wall, canvas, etc., where lecturers can create a wall with so much information about teaching course such as ideas, images, videos, links, and documents and collaborate by sharing with their students (Edwards, 2020). This wall will then provide a one-stop kiosk for classroom discussion. Sharing collection of course materials with students in a single platform would help them manage a course better, compared to having multiple platforms at the same time. Students can simply click the Padlet link provided by their lecturer, and they can immediately begin to collaborate during lecture (Ellis, 2015). Padlet helps improve students' engagement in the classroom and it is suitable for synchronous and asynchronous eLearning (Ellis, 2015), while Anwar, Nugroho, & Nurhamidah (2019) suggests that Padlet can be effective for all types of courses.

## 2.2 Padlet and Management Information Systems (MIS)

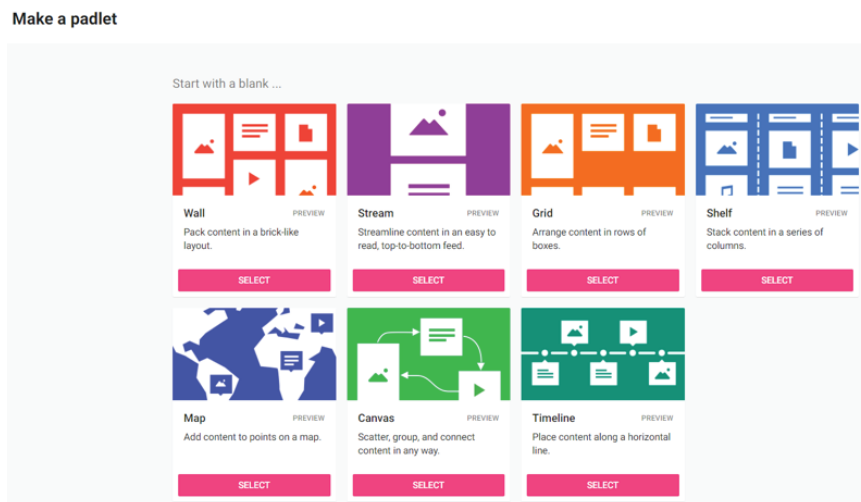
Management Information Systems is one of the Information and Communication Technology (ICT) courses offered for students at the Faculty of Administrative Science & Policy Studies, Universiti Teknologi MARA. This course consists of nine chapters altogether, covering basic concepts and theories of information systems (IS) in organisation, including the implementation of IS in daily activities such as ethical and social issues, telecommunication, and ecommerce. Students are provided with lecture slides for each chapter and other supporting materials such as video clips and additional notes. The nature of open and distance learning (ODL) requires lecturers to give instructions prior to or during online lectures.

For MIS, students will normally be given a meeting link beforehand, and lectures are conducted on a weekly basis for approximately fourteen weeks. Most lectures and 'meetings' with students are arranged based on the timetable set for the lecturers, albeit ODL. The session can sometimes be "boring" (Ellis, 2015), when the lecturers give lectures alone, hardly any interaction with students. It's difficult to measure students' understanding in an entirely virtual atmosphere.

However, lecturers become more creative by utilising various teaching approaches that fit ODL. Lectures can be conducted synchronously and asynchronously, beyond allocated class hours to avoid students feeling in “isolation” (Lowe & Humphrey, 2018).

### 2.2.1 Arrangement of MIS contents in Padlet

Padlet ([www.padlet.com](http://www.padlet.com)) offers various templates to choose from which include wall, stream, grid, shelf, map, canvas, and timeline. Fig. 1 shows the templates that can be used before a Padlet is created.



**Fig. 1 Padlet template ([www.padlet.com](http://www.padlet.com))**

Choosing the right template and arranging the contents is very important so that it creates a more lively atmosphere for ODL teaching and learning. Lecturers can include three padlets for free in a dashboard, technically meant for a single email account as shown in Fig. 2. The MIS course uses the shelf template that are arranged in multiple column shelves, ideally for all nine chapters. Each column in this template represents each chapter with contents stacked together. Fig. 3 shows the arrangement of the MIS course chapters and its contents. Slides can be included,

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video clips can be attached, and discussions can be done by enabling the comment feature in the setting option.

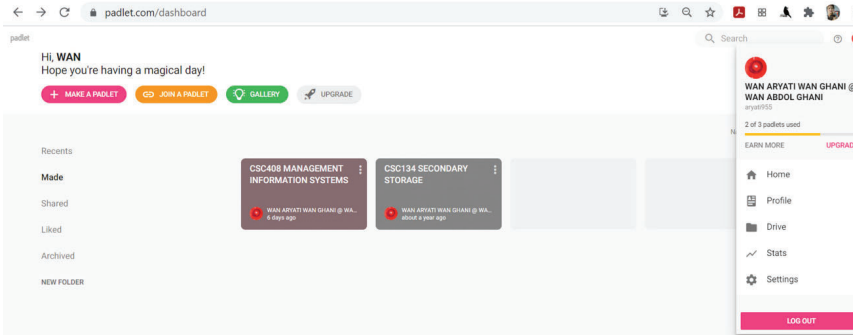


Fig. 2 A user dashboard in Padlet

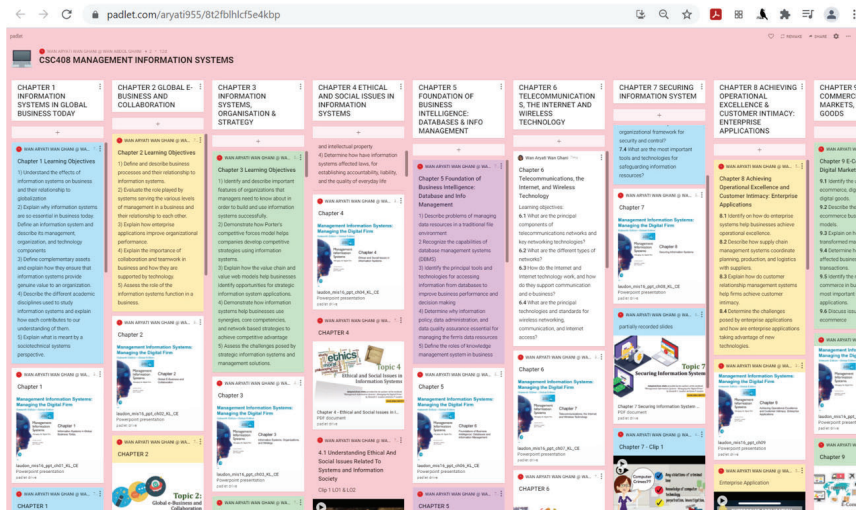


Fig. 3 Chapters and contents arrangement in the MIS course Padlet

Besides the course materials, tutorials and class projects can also be added in the same Padlet and it allows students to post and start a discussion among their fellow classmates. This tool would encourage mutual interaction (Ellis, 2015; Lim, 2017; Lowe & Humphrey, 2018) among students-to-students, and lecturer-to-students and vice versa.



## RESEARCH METHOD

A survey was conducted among students enrolling in the Management Information Systems course for the academic year March – August 2021. There were a total of 49 students who participated in this survey including male and female students from AM225 Bachelor of Corporate Administration and AM226 Bachelor of Environmental Administration. Two separate tools that were used for the survey are Google Form and Poll Everywhere to achieve the respective objectives. The first objective is to examine the usability of Padlet towards learning engagement and the second is to gather students' experience when they use Padlet.

### 3.1 Google Form survey

The first objective seeks to examine the usability of Padlet in terms of its effectiveness. It also seeks to look at students' satisfaction. A Likert scale four-point scale was used to allow the students to express how they associate the effectiveness of Padlet against its usability, namely Very Ineffective, Ineffective, Effective and Very Effective. The usability of Padlet for the MIS course is measured in four major areas: Easy to Understand, Easy to Learn, Easy to Operate as in user-friendly, and Attractive.

Besides the usability of Padlet, this study also seeks to measure students' level of satisfaction when they use Padlet. The level of satisfaction was represented with a five-point Likert scale. Generally, the scale was represented as: Very Satisfied, Satisfied, Neither Satisfied nor Dissatisfied, Dissatisfied, and Very Dissatisfied.

### 3.2 Poll survey

The second objective attempts to shed light on students' experience when they use Padlet for learning. An open-ended survey was conducted using Poll Everywhere, where students were asked to answer three simple open-ended questions related to experiencing learning the Management Information Systems course using Padlet in their studies.

The three open-ended questions were posted in Poll Everywhere for students to answer freely without any limitations. The website generated a link to be shared with the students before they can attempt the survey. The survey took place in week 13 where the students had completed all chapters in this academic semester. The open-ended questions asked are listed as follow:

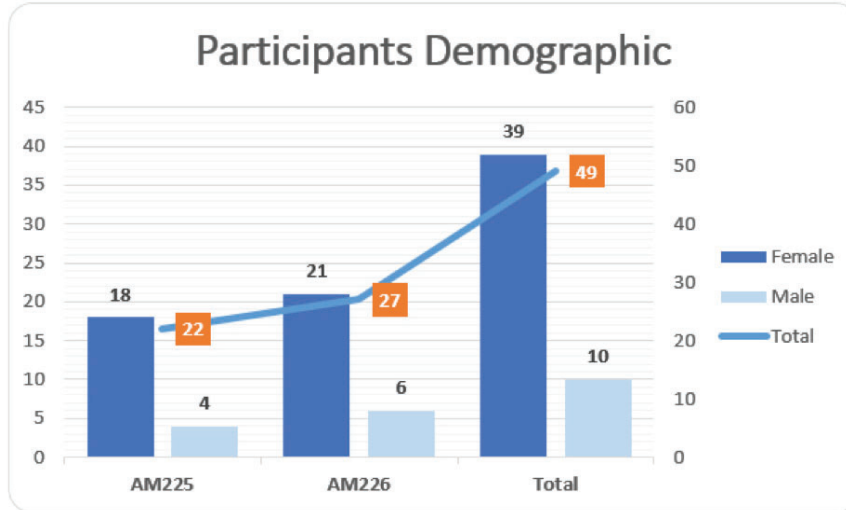
- i. Please leave your feedback regarding Padlet as one of the learning tools used in MIS course.
- ii. What do you think about the arrangement of course material in Padlet?
- iii. Share your experience when you use Padlet to do revision/study MIS course, and what do you like the most about Padlet?

## **FINDINGS**

Following the data analysis is based on the survey data collection, the results and discussion are presented as below.

### **4.1 Demographic**

This study was conducted among 49 students who enrolled in the Management Information Systems course. There were 22 students and 27 students from the AM225 and AM228 program respectively. From the analysis, students who participated in this survey are mostly female students with a total of 39 and only 10 male students participated in this survey. Fig. 4 shows the participants' demographic.



**Fig. 4 Participant Demographic**

#### 4.2 Padlet Usability in Teaching and Learning

This section discusses the findings from the Google form questionnaire regarding Padlet's usability in the MIS course. Based on the data analysis, the use of Padlet in the MIS course teaching and learning shows positive feedback among the majority of the students. Based on the descriptive analysis, the result shows students perceived usability of Padlet as generally effective. All students were able to understand the course contents for the chapters presented in the Padlet even better, on top of what they obtained from real-time online lectures. Similarly, the results for the easy to learn statement shows 100% effectiveness. Out of 49 participants, only 2.04% of the students perceived Padlet as ineffective for the statement Easy to Operate and Attractive respectively. The rest of the students showed highly positive feedback as 97.95% of the students perceived Padlet as user-friendly and attractive.

Level of Effectiveness/Padlet Attributes	Very Ineffective	Ineffective	Effective	Very Effective	Mean
Easy to understand	0	0	38.78%	61.22%	3.61
Easy to learn	0	0	42.86%	57.14%	3.57
Easy to operate as in user-friendly	0	2.04%	36.73%	61.22%	3.59
Attractive	0	2.04%	40.82%	57.14%	3.55

Table 2 tabulates the analysis which regards Padlet usability in the MIS course teaching and learning. Overall, the result suggests that the usability of Padlet is generally effective.

#### 4.3 Satisfaction on the use of Padlet for the MIS

Other than the usability of Padlet in the MIS course, this study also seeks to assess students' satisfaction when they use Padlet. Likewise, the result shows that 63.27% of the students are very satisfied when they use this tool, while 26.73% are satisfied.

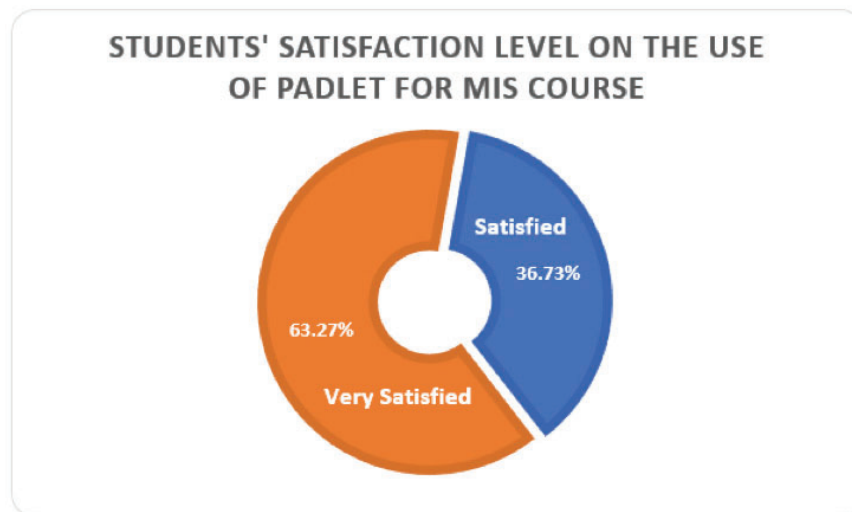


Fig. 5 Students' satisfaction on Padlet usage.

Overall, all students are happy with the use of Padlet in the MIS course as it basically complements real-time online lectures. This shows that Padlet could benefit students for both synchronous and asynchronous learning.

#### 4.4 Students' Experience using Padlet

There were 21 students who participated in this survey. The three open-ended questions as seen in Fig. 6, were analysed using a word cloud generator within the Poll Everywhere setting. Based on the responses from all of the participants, the study generated three representations of visual word frequency.

This survey started by asking the students to leave their feedback regarding Padlet as one of the learning tools used in the MIS course. The word cloud analysis shows that students' feedback were positive as there were no negative words appearing in the word's frequency. This would indirectly shed some light on students' experience when they use the Padlet tool in their learning process.

Order	Name	Last modified	Count
1	Please leave your feedback here regarding Padlet as one of CSC408 learning tools.	04:00 PM on 07/08/21	21 responses
2	What do you think about the arrangement of CSC408 learning materials/contents in this Padlet?	04:00 PM on 07/08/21	21 responses
3	Share your experience when you use Padlet to do revision/study CSC408 and what do you like the most about this tool.	04:00 PM on 07/08/21	21 responses

**Fig. 6 The three open-ended questions posted on Poll Everywhere**

The second question asked in this online poll survey was about the arrangement of the course materials in Padlet, which can be indirectly related to students' experience when they navigated through the Padlet. Poll Everywhere generated a word cloud based on this question. The word that has the highest frequency is 'organised' and 'easy'. It illustrates that the students have no problem when they use the Padlet to study the course.

The third word cloud presented in Fig. 7 is associated with the last part of this open-ended survey. It specifically asked the students to share their experience when they used the Padlet to do revision, and

what they like the most about this tool. It appears that ‘interesting’ makes the best out of other words.

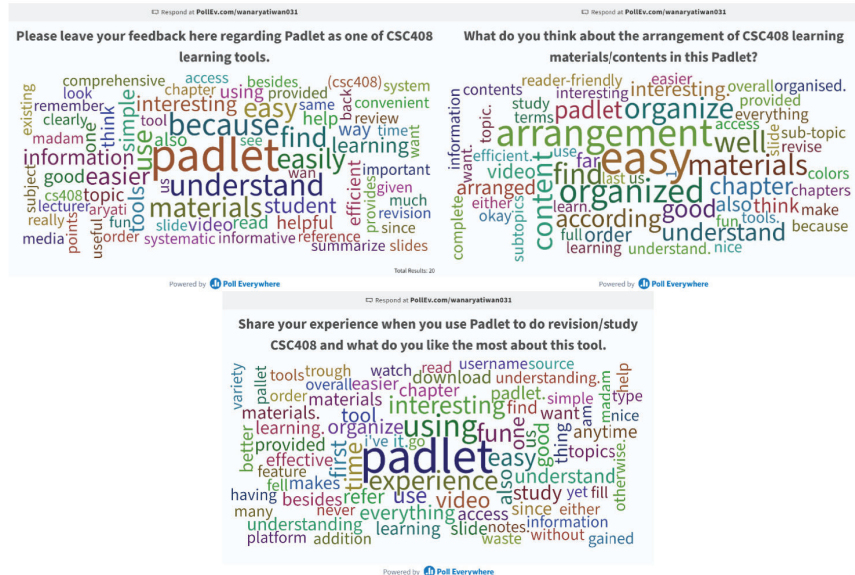


Fig. 7 Word Clouds – Visual Representation of Students’ Experience when using Padlet

From the feedback generated, this survey can profoundly describe how the students used Padlet in the MIS course to the great extent throughout the academic semester. Overall, the word frequency orchestrated in the word cloud as shown in Fig.7 could clarify that the students have had a great experience when they utilised Padlet in studying the course as they could find a collection of learning resources materials in one place.

## CONCLUSIONS

In view of all that has been mentioned in the previous section, it can be concluded that Padlet offers a great way to supplement ODL teaching and learning the Management Information Systems course. Asynchronous online meetings might not be a hundred percent effective (Iyer & Chapman, 2021). Considering its usability and knowing the fact that the students are

satisfied, Padlet would provide a better way to support both synchronous and asynchronous eLearning.

In addition, this study findings corroborate the ideas of Ellis, (2015); Fuchs, (2014); Lowe & Humphrey, (2018), who suggested that Padlet appears to be engaging, interesting and easy to use as it provides a shorter and quicker way to access learning materials. Interestingly, the students had a great experience navigating these entire chapters in a Padlet as its simplicity offers a great way for teacher and students to collaborate with each other.

The current findings add to a growing body of literature on Padlet in general. However, further research regarding the use of Padlet would be worthwhile and interesting if this study could be expanded in many other disciplines beyond the social science program.

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