Article

Online Support for International Students' Engagement in Learning: A Case Study on Padlet Usage at a University in Korea

Hyun-jin Lee [1], Eun-hwa Lee [2] and Hee-ju Kwon [3,*]

1   Yongoreum College of General Education, Yong In University, 134, Yongindaehak-ro, Cheoin-gu, Yongin-si 17092, Republic of Korea; ihj245@yongin.ac.kr
2   College of Business Administration, Konkuk University, 120, Neungdong-ro, Gwangjin-gu, Seoul 05029, Republic of Korea; tobejjang@hanmail.net
3   KU China Institute, Konkuk University, 120, Neungdong-ro, Gwangjin-gu, Seoul 05029, Republic of Korea
*   Correspondence: shiawase@konkuk.ac.kr

Abstract: The number of international students in South Korea, which dropped sharply during the COVID-19 pandemic, reached its highest level in 2023. It is predicted that the number of international students will continue to increase with the active growth in international exchange and due to diverse government support. This study introduces Padlet's canvas layout in a class for international students to organize the course and boost engagement and interactions among the students and with the instructors. A survey and interviews with 22 undergraduate students from eight different countries, studying in Korea, were conducted to comprehend how they benefited from using the Padlet platform and their experience with it. The results indicate that Padlet enhances the students' sense of belonging, expands their thinking processes through collaborative interactions and feedback from professors and colleagues, and increases their knowledge, leading to positive effects on class participation. Moreover, the use of Padlet accommodates diversity among different cultures and has a positive impact on cooperative learning in an international context. Based on these findings, several strategies for the implementation of Padlet in an educational setting can be suggested. To stimulate the participation of international students in learning, professors should consider offering the option of staying anonymous versus using real names when posting on Padlet. To improve the effectiveness of feedback, instructors should visualize their feedback. In addition, it is critical to institute guidelines to evaluate the relevance of the information in order to provide information that meets the students' level of understanding and to establish a healthy level of information exchange. However, due to the limited sample size, the findings from this study cannot be generalized. Thus, we recommend expanding the sample in future studies to enable the use of inferential statistics, such as investigating differences in student attitudes by demographics.

Keywords: Padlet; international students; student engagement; interaction; international cooperation

1. Introduction

Governments and educational institutions worldwide are fostering internationalization to draw top talent from overseas and enrich the diversity of their international student populations, thereby gaining a competitive advantage in the global arena (J.Y. Lee 2021). In 2023, South Korea witnessed a record surge in its international student numbers, with a broadening array of countries of origin, attributed to vigorous international exchange and the relaxation of COVID-19 restrictions (Korea Ministry of Justice Immigration and Foreign Policy 2023). Yet, as the number of international students increases, so does the number of students that drop out (Ministry of Education of the Republic of Korea 2022). The issue of academic adaptation in universities is the most important aspect, as it is a process of transforming psychological behavior in which individual students strive to integrate in a new academic environment and meet new academic demands (Feng and Li 2022).

Academic adjustment by international students is a critical indicator for estimating their overall adjustment to university life and how successfully they will meet the requirements of the university's curriculum (Lee and Na 2018). Korean universities have begun to offer courses intended only for foreign students to assist with their transition and adaptation (Yoon and Shim 2019). These classes encourage them to participate more actively with less pressure in contrast to mixed classes with native students, where foreign students tend to speak less (Wright and Lander 2003). However, in classrooms with international students from various nationalities, selecting the appropriate learning tools is crucial to facilitating communication and learning exchanges among the participants.

Many higher education institutions are preparing platform-based learning management systems (LMSs) for stable educational settings. LMSs provide a teaching and learning environment that is not limited to the physical space of an institution. However, each educational institution has a varied LMS operation. Since some require that users login with authentication and that uploaded files are converted, these systems can be challenging to use. Thus, for learners with a low level of computer literacy, this unfamiliar e-learning environment can be an obstacle to learning and may intensify the psychological burden (Shim and Kim 2009). The frequency of logging into and checking announcements on LMSs has been shown to significantly influence international students' success (Kim et al. 2022). Thus, enhancing the accessibility of LMSs for international students is imperative.

An increasing number of institutions are attempting to use Web 2.0-based applications for educational purposes to mitigate flaws in LMSs (Conole and Alevizou 2010). A distinctive feature of Web 2.0 is that the platform allows users to receive necessary services at any time as soon as they connect to the web (O'Reilly 2005; Kim 2018). Web 2.0 allows individuals to collaborate with each other to contribute to content creation, customize websites, and publish their thoughts instantly (Hew and Cheung 2013). One of the Web 2.0 tools used in education is Padlet, which offers a collaborative web platform for users to share their ideas with others by posting and organizing content on a virtual bulletin board in real time. Its convenient connection and accessibility are several advantages that Padlet has over other tools.

Therefore, this study introduces Padlet to a class exclusively for international students to bolster student engagement, as well as interactions between the instructors and students and among students themselves. Most of the previous studies on international students in Korea are about Korean language classes, and it is difficult to find studies on general content subjects. In order for international students to succeed in their studies, it is essential for them to be educated not only in regard to languages, but also in regard to their major subject matter knowledge and their knowledge on various liberal arts subjects. Research that effectively supports the teaching of these subjects is essential. Thus, this study introduces Padlet to a class for international students called "Understanding Korean Cultural Content" and aims to find ways to support international students' learning by analyzing the process and effectiveness of the tool from the following three perspectives:

(1) What were international students satisfied with and dissatisfied with in the class using the Padlet tool?
(2) How do international students perceive the interactions between instructors and learners and among learners in classes utilizing Padlet?
(3) How do international students perceive their learning about Korean culture in a classroom using Padlet?

2. Literature Review

2.1. Student Engagement

Student engagement has various definitions depending on the perspective of the researcher (Cleary and Skaines 2005). Student engagement is classified into behavioral engagement, cognitive engagement, and emotional engagement (Fredricks et al. 2016). Behavioral participation has three key indicators: active conduct, such as time spent on tasks and class discussions; involvement in learning and academic tasks, such as the level

of attention and timely cooperation; and previewing and reviewing activities (Wu and Zhang 2018). Cognitive engagement is a concept that addresses students' psychological investment in academic tasks, such as demands and challenges (Xu et al. 2020). It also involves learning strategies that students use in their learning activities (Teng and Wang 2021). Emotional engagement is associated not only with positive student responses to their professors and peers, but also with their sense of belonging and interest (Bond and Bedenlier 2019). These positive responses are related to interaction.

Carini et al. claimed that students who actively and cooperatively participate in class tend to concentrate more on learning and become positive influences on their peers (Carini et al. 2006). He also argued that when students participate in class with enthusiasm, they learn more because it motivates them to consider what they are learning more deeply (Carini et al. 2006). Active learning engagement significantly boosts students' cognitive development and educational enthusiasm. Furthermore, active and collaborative learning activities have a meaningful correlation with students' academic achievements (Pascarella et al. 2010). This implies that when students actively engage in the learning process, they are more likely to maintain their learning efforts and achieve their academic objectives.

Groccia and Hunter broadened the definition of student engagement beyond mere learning behaviors to encompass a wide variety of campus activities, both within and outside the classroom (Groccia and Hunter 2012). In contrast, Fletcher characterizes student engagement as the continuous connection of learners with every facet of their education, school, or overall learning experience (Fletcher 2007). The evolution of the Internet and the advent of new technologies are progressively expanding the realm of student engagement into domains that are not restricted by physical and temporal boundaries. Despite this progress, barriers that deter less vocal students from participating more actively in class persist (Fuchs 2014). Although it is impossible to remove all these barriers entirely, there is an ongoing need to develop and refine teaching strategies that foster a conducive learning environment and support an inclusive classroom atmosphere.

2.2. Interaction

Interaction is essential to education because learning is a socially mediated activity (Xiao 2017). Given that students bring a variety of educational experiences to learning tasks, interaction is an important arena for the development of individual cognitive abilities and provides opportunities for learning (Arkoudis et al. 2013).

Interaction has a positive effect on students' learning immersion and learning-related satisfaction. Students consider a class beneficial when such interaction actively occurs (Yoon and Kam 2021). As interaction is considered a vital factor that influences study-related achievements and concentration learning, it has been concluded that interactions between students have a positive effect on the learning atmosphere in particular (Abdelaziz 2015). Interactions by students and their peers fosters student-centered learning by encouraging students to challenge each other and consider alternative perspectives (Boud and Cohen 2014). Such interactions can provide learners with a greater sense of belonging and support, potentially enhancing student performance (Arkoudis et al. 2013).

Moore classified the types of interactions into student–content, student–student, and student–teacher interactions, while emphasizing the importance of diversified interactions during the learning process (Moore 1989). Hillman et al. introduced learner–interface interaction (Hillman et al. 1994), and Sutton L.A. proposed the concept of vicarious interaction as a fifth type of interaction (Sutton 2001). Vicarious interaction is defined as the occurrence of direct interaction between a learner and an instructor in a computer-mediated communication (CMC) environment. Abdelaziz asserted that the types of interactions could be expanded to student–content, student–student, and student–teacher interactions, as well as teacher–teacher, teacher–content, and content–content interactions (Abdelaziz 2015). Jung et al. proposed "three types of asynchronous interaction in web-based learning environments: content-oriented academic interactions occurring between learners and

instructors or between learners and online resources; collaborative interactions among learners; and social interactions between learners and instructors" (Jung et al. 2002). While these interactions are categorized differently and employ various types of media, Moore argued that the use of interactive mediums by instructors is pointless without the early development of a structure and the means to encourage students to interact (Moore 2001). To facilitate such a structure, a learning environment that fosters learner tolerance and encourages students to use their initiative to pursue personal goals within broader objectives needs to be created (Carr-Chellman and Duchastel 2000).

As described above, it is very important to induce active participation in the learning process and to encourage students to engage in social interactions, such as posing questions and participating in discussions with professors and fellow learners.

2.3. Education of International Students

International students are considered members of university society already, and they are talented individuals who become bridges between countries for cultural, social, and economic cooperation. International students have been subject to increasing interest in the literature, with articles focusing on intercultural adjustment, mental health issues, second language acquisition, and student migration. More recently, social integration, graduate employability, and student satisfaction are emerging research trends (Jing et al. 2020).

The teaching and learning field of research for international students has moved beyond simple "problem identification" to the need for innovative and sustainable curricula, which are respectful of diverse cultures. Every international student has their own "culture", and as the number of international students increases, students from more diverse backgrounds will sit side by side in university classrooms. This, in turn, means that the teaching and learning context is becoming more diverse and complex (Ryan 2011).

International students, who inevitably lack social connections in a new environment, are more likely to experience anxiety, depression, and a loss of self-esteem. Students in these conditions have also been reported to have lower academic performance (Trice 2004). International students tend to have lower proficiency in the language used in class, and their processing speed in regard to the language spoken and text delivered in face-to-face classes is also likely to be delayed. Hwang reported that international students with higher levels of satisfaction with their instructor reported higher levels of satisfaction with school life, and that faculty support and interest in the class were significant variables that enhanced the quality of study-abroad life (Hwang 2021).

Most international students use the following three steps when trying to solve learning difficulties (G.L. Lee 2023): solving them on their own, asking for help from friends, and asking for help from professors. Among them, the first step, the strategy of studying alone, was used the most (Zhang 2009). Therefore, instructors need to make it easy for international students to ask their peers and instructors for help when they are struggling academically. International students also need support in the areas of teaching and learning, as they often struggle with learning methods and strategies.

2.4. Lectures Using Padlet

Padlet is a Web 2.0 platform that allows users to create and share content with others (Padlet 2023). As long as the user is connected to the Internet, Word documents, images, audio files, videos, and links can be pasted in the form of notes on a virtual wall any time. Files do not require a conversion process, and all types of memos can be viewed in real time. Text and different types of files can be published in one memo, and multiple users can comment simultaneously. It can also be used either as a whiteboard with a continuous record, or as a backchannel for questions and feedback, a review of key points, summaries, applications, and after-class activities when a class is not offered (Fisher 2017).

Earlier studies using Padlet for learning can be classified into three main categories. Studies on Padlet for early-stage learning have focused primarily on writing activities. In Diab's study, 36 undergraduate sophomore students were chosen to devise a checklist of

creative writing skills in English as a foreign language (EFL), and it was evaluated through pre-exam and post-exam assessments. The results of the study showed that EFL creative writing skills and writing self-efficacy had statistically significant effects (Diab 2019). In addition, a study of female EFL learners in Saudi Arabia reported that Padlet was very effective in improving the writing skills of the experimental group using the tool as evidenced through pre- and post-testing (Algraini 2014). A study involving English as a second language (ESL) students by Rashid et al. reported that online learning tools, such as Padlet, have the potential to design an environment that encourages collaboration among learners and improve language accuracy through peer-assisted learning (Rashid et al. 2019). The significance of these findings is that they demonstrate the potential for Padlet to improve students' writing performance by introducing Padlet into writing classes and conducting pre- and post-tests (Lestari and Kurniawan 2018).

The second category is exploratory research for collaborative learning. Dewitt et al. involved 40 public university undergraduate students utilizing Padlet to work on a discussion assignment. The questionnaire and interviews revealed positive results on knowledge acquisition, knowledge internalization, knowledge creation, knowledge sharing, and knowledge application, and showed that the students were motivated to learn more effectively (Dewitt et al. 2015). Sætra's study focused on Padlet's use in the statistics field. In this study, Padlet was used to present problems that were not addressed in class or for learners to ask questions openly. Learners embraced Padlet with ease, and numerous questions of varying complexity related to statistics were posted and answered voluntarily by the learners themselves. The study also confirmed that as the number of learners visiting Padlet increased, the more valuable it became as a supplementary platform, even if the users do not ask questions (Sætra 2021). A study on collaborative learning and the perceptions of undergraduate dental and biomedical students using Padlet reported that peer learning and learning engagement were the main benefits of using Padlet (Sætra 2021). These findings suggest that as a tool for collaborative learning, Padlet can contribute to the acquisition and sharing of knowledge and can influence learning motivation.

The third aspect of the study is student engagement. Fuchs found that using Padlet provides a non-threatening space for the curation of collaborative classroom work and that learners are often attracted to the novelty of technology and want to participate in order to have the opportunity to use it; thus, it is important to explain the educational significance of the activity (Fuchs 2014). In the study by Zainuddin et al. (2020), 39 business statistics majors were surveyed using a questionnaire to measure engagement using factors such as motivation, active learning, and learning opportunities. The results showed that active learning through Padlet had a significant impact on students' engagement in classroom activities (Mehta et al. 2021). Nadeem (2021) also investigated the perception of 27 female students in a sociolinguistics course on the impact of Padlet on four aspects of engagement: behavioral, emotional, agentive, and cognitive. They reported that Padlet enhanced student engagement, promoted active learning, and created a positive learning climate (Zainuddin et al. 2020).

Most of the research focuses on the field of linguistics, and the targets of such research are typically either classes made up of domestic students or classes made up of native English speakers and some other language speaking international students. In light of these previous studies, it is important to note that this study examined the impact of using Padlet on international students' class participation, learning satisfaction, interaction, and cultural curriculum learning in a class for international students from different countries with different native languages.

3. Materials and Methodology

3.1. Research Subjects and Data Collection

The case study for this research concerned Understanding Korean Cultural Content, which was offered as a class exclusively for international students at Konkuk University in Seoul, Korea, in 2022. This is a liberal arts course in which any international student may enroll, regardless of their grade level. Most universities in Korea limit the number of

students in classes for international students only to maintain the quality of the class. In this study, a total of 22 students agreed to have their data collected online and participated in the survey.

As shown in Figure 1, the international students were from eight countries: China, East Timor, Indonesia, Japan, Malaysia, Mongolia, Uzbekistan, and Vietnam. Male students comprised 36% of the participants, while 64% were female. The details of the study subjects are shown in Table 1. Most students were in their third year, 36% were in the liberal arts department, and 32% were in the engineering department. The most frequent duration of stay in Korea was between two and three years, which accounted for 36%.
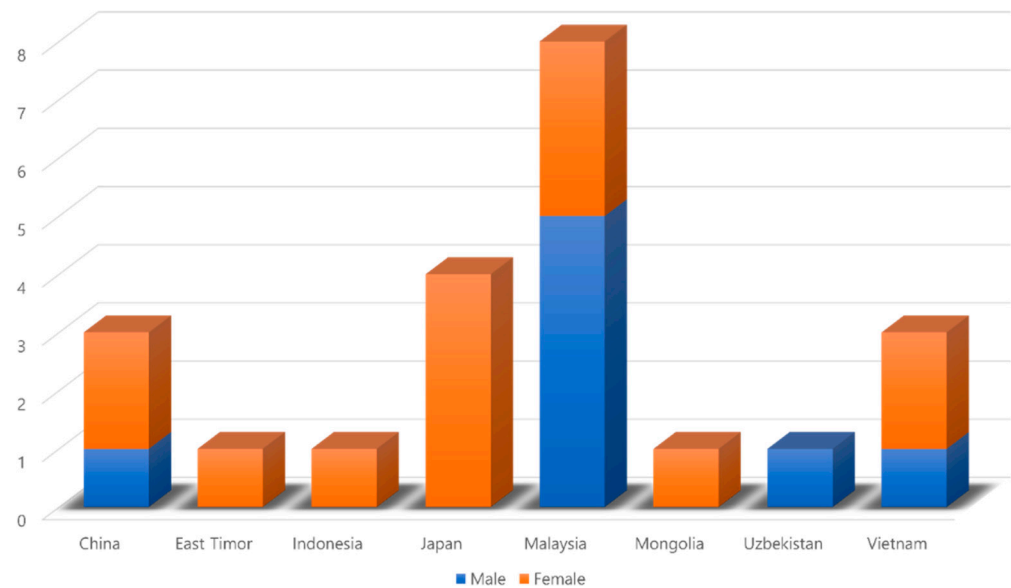

Figure 1. Gender and country of origin of the participants.

Table 1. Participants' demographics.

Characteristics		N	%
Gender	Male	8	36
	Female	14	64
Age	19–20	9	41
	21–22	7	32
	23–24	5	23
	>26	1	5
Grade Level	1st grade	4	18
	2nd grade	4	18
	3rd grade	11	50
	4th grade	3	14
Duration of Stay in Korea (years)	1–2	7	32
	2–3	8	36
	3–4	4	18
	>5	3	14

Table 1. *Cont.*

Characteristics		N	%
	College of Business	1	5
	College of Social Sciences	1	5
	College of Art and Design	4	18
Department	College of Engineering	7	32
	College of Liberal Arts	8	36
	College of Biological Sciences	1	5

3.2. Class Activities inside the Classroom

The class was conducted once a week, with a duration of two hours. As shown in Table 2, a one-week orientation was conducted in this study, followed by three weeks of Padlet classes.

Table 2. Weekly class activities.

	The Subject of a Class	Class Activity	In Class	Out of Class	Using Padlet
1	Class Orientation/Padlet Usage Announcement	General introduction to the class	○		
		Q&A session about class and how to use Padlet	○	○	○
		Professor's announcement about the class	○	○	○
		Student presentation sign-up on Padlet		○	○
2	What is Cultural Content?	Professor's announcement in class	○	○	○
		Sharing class materials		○	
		Presentation of learning content	○		
		Questions and feedback from instructors and students on learning content	○	○	○
3	Understanding Korean Films	Professor's announcement in class			○
		Sharing student presentation tasks		○	○
		Students' presentations	○		
		Questions between students and feedback	○	○	○
		Group discussion on films		○	○
4	Understanding Korean Films	Same as above			

In the first week of class, a link and QR code to access the Padlet platform were issued, along with brief instructions on how to use it. The professor's screen was shared with the students to demonstrate how to post notes on Padlet, and the students were given the chance to practice posting notes and writing their own comments. To ensure that each student acknowledged that Padlet was to be used only as an educational tool, it was explained that Korean was the only language allowed, and that profanities and derogatory expressions were strictly prohibited. Signing up for the application or logging in with Google was not required to ensure the students' autonomous expression of opinion, and the option to leave notes and comments either anonymously or with a real name was given. The voluntary participation of the students was essential because their Padlet activity was not reflected in their final grade. Postings were color coded for easier visual classification: class announcements from professors were in pink, announcements regarding student presentations were in blue, and students' opinions and feedback were in white. The students had no time restrictions on their posts and comments. This suggests that Padlet, as a broad message board, has continuity and can be infinitely expanded, allowing users to track an uncountable number of posts and comments (Sætra 2021). Mandatory analysis-based homework was reflected in their final grades, and to make their participation

accessible, they were given an option to submit their homework individually or as a two-person group.

As the second stage of theoretical learning, a theory-related class was conducted on video culture, which is the basis of learning about Korean films. Students were allowed to raise questions related to the content of the class without restriction, and both the professor and other students who were familiar with the content could answer these questions. Reading other students' posts and comments posted for others stimulated interaction among the students and between the students and the professor. Although the professor did not mandate that the students engage in Padlet activities, they were continuously encouraged to participate via announcements.

The third stage involved the actual student presentations and discussions in which the students were provided with an overview and keywords pertaining to Korean films and selected their own Korean films to present in relation to the content of the class. This deepened their understanding of Korean cinema by allowing them to reaffirm their knowledge of Korean culture and cinema through their presentations. The instructor provided additional articles or videos to study related to the students' presentations. The instructor asked appropriate questions to help the students assess their own learning and encouraged them to use the online tool, Padlet, to facilitate interactions.

3.3. Class Activities outside the Classroom

In this class, tasks outside the classroom were prepared separately and were not limited to learning in the classroom. Five groups of 4–5 people were formed to discuss the representative Korean film Parasite. The Padlet link for the discussion was shared in advance. This section was divided into groups on the Padlet platform and the students uploaded their posts voluntarily so that the discussion could take place. The instructor recommended simple writing activities, such as allowing students to organize a simple plot for the movie so that they did not feel burdened by the discussion activities. The instructor allowed any posts related to knowledge acquired about prominent figures, events, or concepts related to Korean films discussed in the class. This included summarizing the knowledge learned, providing additional resources related to the topic, sharing personal reflections on the films, and any other learning-related matters. When one student posted a brief plot of Parasite first, posts by the other students began to appear. It is important for instructors to encourage students to write their first posts without feeling burdened. In addition, when the link was shared, students did not bother to login before leaving a note. Students posted information about Bong Joon-ho, the director of Parasite; his other films; a plot summary of Parasite; and a critique of the polarization of Korean society. To prevent learners from just liking the post and not doing anything else, all posts were made as notes—not comments—so that the students could see each other's discussions at any time and reply to each other's questions as notes.

Posting in the discussion was allowed after the class had ended until the day before next week's class began. After the post was closed, the instructor prepared a page connecting the posts using a function in Padlet. After that, time was provided to share the link and review it together during the following week's class. While doing this, measures were taken to ensure that the feedback would not be checked and that it would not be passed on.

3.4. Survey Tools

In this study, a mixed methods survey and interviews were conducted with international students to explore their satisfaction with Padlet and their perceptions of cultural learning.

From a survey conducted to assess students' awareness of Padlet, it was found that only two students had prior knowledge of its existence, but none of them had any actual in-class use experience. In general, the level of experience with Padlet was very low (Figure 2).
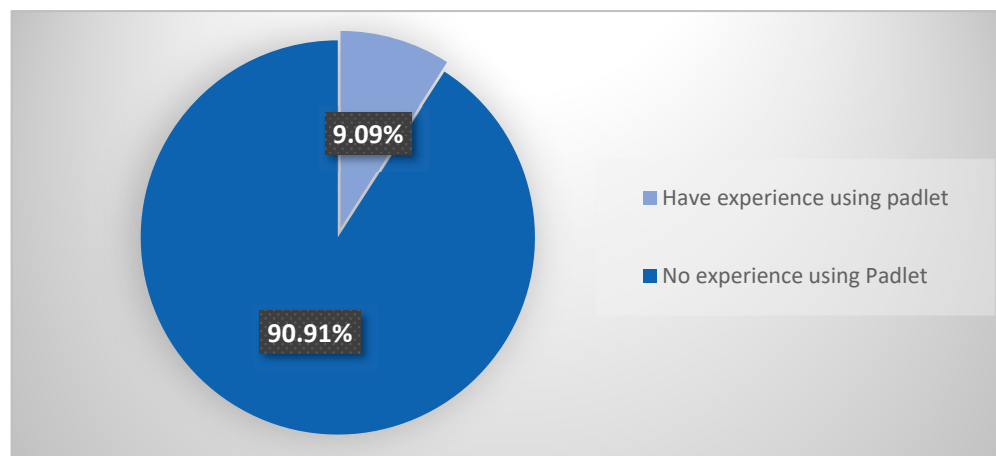
Figure 2. Preliminary survey of students' Padlet use.

3.4.1. Online Survey

After the conclusion of the course utilizing Padlet, a survey was conducted using a mixed methods questionnaire comprising open-ended and closed-ended items, as shown in Table 3. The survey form was created using Google Forms. Satisfaction levels regarding the use of Padlet during the course, satisfaction with learning about Korean culture, and satisfaction with the communication between instructors and learners and among learners themselves were measured using four Likert scale items, rated on a scale of 1 to 5. To facilitate analysis of the student reactions and qualitative analysis, essay questions were added to multiple-choice items 2 to 4, prompting students to explain the reasons for their answers. Additionally, five essay questions were designed, allowing the students to freely describe the advantages and disadvantages of using Padlet.

Table 3. Questions to evaluate students' responses.

Four Multiple-Choice and Five Essay Questions	Q1. Are you satisfied with the use of Padlet in this class? Q2. Is Padlet useful for studying Korean culture? * Q2-1. Please explain why you found it useful or not useful. Q3. Is Padlet useful for communicating with the professor? * Q3-1. Please explain why you found it useful or not useful. Q4. Is Padlet useful for communicating with your classmates? * Q4-1. Please explain why you found it useful or not useful.
	* Q5. What did you like (pros) about using Padlet in class? * Q6. What needs to be improved (cons) for in-class Padlet use?
Multiple-Choice Score	5 points: very useful 4 points: useful 3 points: moderately useful 2 points: not so useful 1 point: not useful at all

An asterisk (*) indicates an essay question.

3.4.2. Interviews

Since the learners' responses to open-ended online surveys often consisted of short comments, interviews were conducted to gather more in-depth data about learners' personal learning behaviors and thoughts about the class that may not be revealed by surveys alone.

Of the 22 students who completed the online survey, 15 participated in interviews. The interviews were conducted via the Zoom app and were one-on-one interviews. Each interview lasted an average of 15 min. Learners were informed that all the interviews were recorded, and they agreed to participate. The questions in the interview were the same as the essay questions in the questionnaire, and the students talked about the reasons

or specific situations in response to these questions in more detail. The interviews were analyzed by the authors by reading and discussing them multiple times to better understand the students' views expressed in the survey.

3.5. Data Analysis Methods

The multiple-choice questionnaire was designed to allow the students to select a score from 1 to 5. The authors analyzed the students' satisfaction with using Padlet by calculating the mean and standard deviation of these scores.

For the essay questions and interviews analyses, the authors transcribed the student interviews and analyzed the transcribed data using the constant comparison method. The transcripts were first subjected to open coding, wherein the authors read the interviews together and identified important information. Similar content was reclassified, and similar levels of categories and topics appropriate to them were derived. Following the theme identification, the categories were checked by comparing them to the interview transcripts, prior to open coding to ensure that they were well organized.

4. Results

4.1. RQ1: What Are International Students Satisfied with in the Class Using Padlet?

Table 4 shows the analysis results of the responses to the multiple-choice questionnaire. The average satisfaction rating for the students was 4.50, indicating that learners were generally satisfied.

Table 4. Class satisfaction of international students using Padlet.

Question	Average	SD
Satisfaction with the class using Padlet	4.50	0.740

These findings were further explored through open-ended questionnaire responses and interviews.

4.1.1. Participation with Reduced Psychological Pressure

First of all, it can be confirmed that participation is easy from a psychological perspective. As explained by some students:

"I am introverted, and I can't speak Korean well. But the discussion assignments were easy to understand because I can read the text after I go over the posts other students uploaded on Padlet. Postings were easier to comprehend because they use easier words and expressions. That's why I also posted anonymously." (1, Malaysia)

"At first, I didn't have the courage to write when there weren't enough posts, but after I saw one or two being posted, I felt comfortable enough to write my post." (2, Japan)

"I get nervous when I have to speak in class for presentations, but it makes me feel relaxed to post on Padlet because I can check and review what I'm writing." (3, Vietnam)

Activities in the classroom are important for students to gain understanding and engage in the learning environment. International students may be more intimidated to participate in class if they are not proficient in the language of the country they are studying in. Some of the perceived barriers that prevent students from participating in classroom activities include difficulty speaking, shyness, and fear of interacting or providing opinions (Zainuddin et al. 2020). Students may avoid making mistakes, fear that their classmates may not understand them, or fear how others may react to their opinions. Fuchs emphasized that Padlet is a valuable tool that encourages both vocal minority students and

other learners to participate in class and lowers engagement thresholds in various ways (Fuchs 2014).

4.1.2. Flexible Engagement with No Time Constraints

On Padlet, students can respond to posts anytime, anywhere, without time constraints. Students do not have to wait for their turn to speak, which allows many people to come up with many ideas simultaneously. These advantages were also reflected in the interviews.

> "I don't think about the class when it ends, but when a post is uploaded, it draws my attention. Also, it's helping my study because I can read it anytime." (4, Uzbekistan)

Such freedom promotes individual learning and communication. When students choose to participate actively in learning, they are more likely to achieve continuity and academic goals (Lambert et al. 2007).

> "I'm working part-time, and it's nice to be able to take my time reading and writing the posts after I get off work." (5, Vietnam)

The cost of living in South Korea is high, so international students often take on part-time jobs to reduce the financial burden of tuition and living expenses. Being able to work outside of class is beneficial because it allows students to continue learning.

4.1.3. Easy Learning Management

The students explained that Padlet acts, in part, as a supplementary study notebook that they can open anytime, anywhere, making it easier to organize and manage their learning.

> "It was easy to navigate because Padlet offers different colors for each category. LMS has subdivisions like announcements, discussions, and class materials, but they are not divided by week. So, it is inconvenient to look through the titles of posts and click each one to check the contents." (6, Vietnam)

This teaching approach, which allowed posts to be written by dividing them into categories, received positive evaluations. Unlike the previous e-campus system, where the content of the post could not be inferred from the title alone, requiring additional clicks, Padlet eliminated this inconvenience by not requiring such a process. This feature was positively evaluated.

> "I like to have all the contents of my classes on one screen like a large drawing paper. It can be unfolded like a map." (7, Malaysia)

This response suggests that Padlet not only serves as a valuable repository of learning, but can also provide a different perspective on learning by providing a macroscopic view of learning "like a map".

4.2. RQ2: How Do International Students Perceive the Interactions between Instructors and Learners and among Learners in Classes That Utilize Padlet?

In the case of the multiple-choice questionnaire for classes using Padlet, as shown in Table 5, a satisfaction rating of 4.73 was given for communication with professors. This is the highest average compared to the response values for other questions.

Table 5. Satisfaction with the interaction in classes using Padlet.

Questions	Average	SD
Interaction with professor	4.73	0.456
Interaction between students	4.18	0.907

4.2.1. Conversational Feedback

The following comments highlight the reasons why international students responded positively to the professor's feedback using Padlet.

> "I like it because it feels like I'm exchanging messages with the professor. It's more convenient than writing an email." (8, Japan)

> "You need to have the professor's phone number or KakaoTalk (mobile messenger) ID to chat via KakaoTalk, but I can communicate with him/her directly without it on Padlet." (9, Mongolia)

> "I can see my professor's reply right under my question so I can solve problems without missing anything." (10, East Timor)

Feedback is a key variable in teaching and learning (Panadero and Lipnevich 2022) and providing students with constructive feedback is always invaluable to improving their education. In Korea, students are socialized to think that it is polite to follow a certain letter format when writing to their professors, so they prefer to use mobile messenger apps that are less formal than email. They also appreciate the immediacy of interactive feedback.

4.2.2. Confidence in a Fair Grade Evaluation

The evaluation of grades in South Korean universities is based on the principle of relative evaluation, and international students are no exception. In many universities in Korea, the higher the academic performance, the more international students benefit from scholarships (Choi 2018). In many universities in South Korea, the higher the school's grades, the more scholarships international students receive. The international students expressed confidence that their grades will be handled fairly because the student presentations and discussions on which grades are based are all publicly available on Padlet. One student explained their experience:

> "I'm an international student, so I want to get good grades. Grades are directly linked to scholarships. All student presentation materials are disclosed on Padlet, and you can see the professor's feedback for each, along with the students' opinions. So, I think the grades will be scored fairly." (6, Vietnam)

These comments suggest that the fact that classroom activity is recorded on Padlet, and peer reviews are shared, are factors that lend credibility to the grades allocated.

4.2.3. Increased Intimacy among Peers

Fundamental difficulties in communicating with students exist, even in small classes. One student emphasized that even in face-to-face classes, where you can meet your peers in person, there are still communication challenges.

> "It's not easy to suddenly talk to each other just because we are in the same class." (11, Indonesia)

Nevertheless, international students wanted a chance to get closer to other students. The students explained that the use of Padlet helped increase intimacy with their peers because they remembered their names and became interested in them.

> "I like to see other students post using their own names on Padlet. The students in our class are international students, so some have long names, and it's not always easy to remember because they are from different countries. However, if they upload a post with their real name, you learn the person's name for sure and know who they are when the professor checks attendance in a face-to-face class. Then, I get more interested in what they say on Padlet." (12, Malaysia)

> "When you read posts on Padlet, you learn other students' names properly, so you recognize them immediately at school. You can become friends. I'd love to make lots of friends from different countries." (13, Mongolia)

> "I'm shy, so when I want to respond to my friend's posting, I click the like button anonymously. I don't have the courage to talk in a face-to-face class, but when I click the like button, I feel a little closer to the author of the post." (14, China)

Comments like these suggest that posts on Padlet can help raise students' awareness of the existence of their classmates.

4.2.4. Free Discussions Based on Anonymity

In a group learning environment, individual learners often discover how their general understanding of the material differs from those of their peers. Recognizing these differences gives each learner the opportunity to negotiate their understanding and reconcile these differences with their peers (King 1996). Another beneficial aspect of working in Padlet is that you can express your learning opinions more freely.

> "When discussing with my classmates, I leave an anonymous note on sensitive issues. I don't want to offend anyone." (15, Malaysia)

Learners are exposed to more diverse perspectives when engaging in peer learning activities than when interacting with and receiving feedback from instructors alone (Arkoudis et al. 2013). To achieve these benefits, peer interactions should be planned and organized within the learning activity. The learners' comments above suggest that Padlet can contribute to supporting interactions, creating an enabling environment, and providing a good opportunity for the exchange of ideas.

4.3. RQ3: How Do International Students Perceive Their Learning about Korean Culture in a Classroom Using Padlet?

As shown in Table 6, international students were satisfied with learning about Korean culture using Padlet. Considering that a lack of understanding of the culture of the country they are studying in is one of the causes of international student dropouts (Kim 2012), it is expected that cultural lessons using Padlet can help international students adjust to their studies.

Table 6. The satisfaction with cultural learning using Padlet.

Questions	Average	SD
Satisfaction with culture learning using Padlet	4.55	0.596

4.3.1. Providing Information Tailored to The Student's Education Level

Although the international students could get information about the culture of the country they were studying in from various media, they were satisfied with the information provided by their classmates. When engaging in peer learning activities, students constantly reorganize their cognitive processes. This approach can serve to shape thinking and secure engagement, learning, and understanding in higher education (Hardman 2008).

> "I don't speak Korean very well, so it takes me a while to read Korean, but when a student in my class posts a link, I like it because I can look at it first." (14, China)

> "I like it when a student in my class posts pictures about Korean culture. I learned how to eat songpyeon on Chuseok in Korea from the pictures." (12, Malaysia)

Students preferred information that they could see intuitively, such as photos and videos, in the midst of a lot of information, and they appreciated their peers presenting information on their level.

4.3.2. Intercultural Learning

Culture is not a fixed entity that has certain characteristics that can be attributed to people of a particular cultural background (Shin 2020). Universities need to take a new position that goes beyond interactions between cultures and leads to new learning and knowledge that arises from mutual dialogue and respect between academic cultures and knowledge (Ryan 2011). In the class using Padlet, the students expressed satisfaction in contrasting and referring to situations in other countries to understand Korean culture.

"I enjoy watching movies and dramas because I can learn social problems in Korea. It's nice that my classmates upload information on such social issues." (10, East Timor)

"There is a big difference between rich and poor in the film Parasite. I learned more about Korea, and some of my classmates told me about their countries, so I thought it was a global problem, not just in Korea." (3, Vietnam)

When multilingual and multinational students are learning about the culture of a specific country, such as Korea, they can bridge the cultural gap through the free exchange of ideas in Padlet, and by using various countries as reference points, the participants' cultural understanding can be enhanced.

5. Discussion

Padlet classes designed for international students will be extensively discussed to contribute to the educational field based on our research results. Recognition of the limitations of the current study will be presented, along with suggestions for future research.

First, the interactions and communication facilitated through Padlet enhanced the intimacy among the students, thereby helping international students feel a sense of belonging with their classmates. The international students were able to learn the names of other students from different countries through Padlet and foster a sense of belonging and coexistence in the same class by acknowledging each other's activities. The students in this study pointed out that their interest in the classes increased when their posts received "likes" or when they read favorable comments. Padlet also became a platform for international students to organize meetups, such as spontaneously suggesting a meetup during a school festival, to foster intimacy and friendship. When international students form connections and networks within the school community, as they interact and communicate with their peers, they are likely to experience a sense of belonging (Shin 2020).

Second, international students tend to participate more actively in classes using Padlet. The reasons behind this include the option to choose between using their real name and anonymity when posting, decreased linguistic proficiency pressure, no time constraints, and user-friendly features. Unlike LMSs in higher education, Padlet gives participants the option to either use their real name or stay anonymous. Students prefer to use their real names when they want accurate feedback from instructors, but opt for anonymity in regard to delicate posts that could potentially affect the emotions of others during discussions. This coincides with the previous research implication that students engage more actively when they are anonymous in situations that require interactive responses (Yu et al. 2019). Granting students the option of anonymity or the ability to use their real name can enhance class participation. These measures ultimately contribute to improving the quality of discussions on the Padlet platform. In addition, considering the significant challenge of language barriers international students face when studying at university (Park et al. 2018), articulating thoughts through written posts without having to speak out loud can promote class participation. International students found it valuable to exchange class-related inquiries or opinions outside the classroom in online spaces. In particular, they gave positive feedback on being able to address concerns or ideas they might not have actively raised during class and being able to be flexible to fit their individual schedules, free from time constraints. Additionally, as reported in previous research, students—even those with limited digital literacy skills—found Padlet accessible and manageable (Fuchs 2014; Fisher 2017; Mehta et al. 2021).

Third, the visualization of feedback helps expand thinking. It allows users to receive feedback in a conversational style, similar to that of social networks (SNs), and in diverse forms, such as visual images and links from instructors and peers. Moreover, the vertical and horizontal connections between posts enable users to expand their intellectual thinking through interconnected discussions. Padlet allows users to draw lines to connect posts horizontally, which helps users visually understand the flow of feedback. Especially during discussions, vertical feedback on subsequent posts below a student's initial post, along

with horizontal feedback from posts on both sides, is instrumental to expanding organic thinking. Jyothi et al. demonstrated that visualizing how online discussion posts are connected facilitates an intuitive understanding of the breadth and depth of the discourse (Jyothi et al. 2012). In recent research on online discussions, there has been an increasing effort to visualize the content of feedback to make it more intuitive. Padlet can help in visualizing feedback through connecting posts, even when they do not use a separate program.

Fourth, Padlet can be productively utilized in cultural studies classes. International students experience difficulties studying abroad because they have to operate in a foreign cultural environment with limited language skills. The students were satisfied with the Korean culture-related information provided by the professors and other students tailored to meet their education level. International students sometimes face challenges during their experience abroad due to unfamiliar cultural environments and language barriers. These students exhibited gratification concerning the information regarding Korean culture provided by the instructors and the sharing of compatible information by cohorts at their level. The participation of learners and the sharing of ideas and knowledge have already been recognized as vital factors in the learning process in classrooms. Using Padlet in cultural studies not only reinforces academic skills, but also enhances the understanding of diverse cultures and bolsters global competencies.

Although the majority replied that there were no significant flaws in regard to Padlet, some responses included concerns such as "it's difficult to find where new posts are," and "I don't receive notifications, so I don't check it regularly." It can be speculated that although Padlet has the option to set notifications, some users may not have been aware of this function. These types of issues should be included in future research. In order to address any inconveniences, it is essential to create a basic user's guide, including features, such as notification setting, to improve the user experience.

This study has limitations. First, this research is primarily based on the perspectives of international students from eight Asian countries. The limitation stems from the fact that this study did not conduct comparative analyses across multiple groups, but instead focused on a single minority group. Considering the limitations of our small sample size, our recommendation is that future research should expand the sample to enable the use of inferential statistics, such as examining differences in student attitudes by demographics. Second, as the research focuses mainly on the satisfaction of international students in cultural studies courses, it is not representative of research outcomes for international students' education as a whole. Comparative analyses, before and after Padlet usage, across a broader range of courses is needed to provide more comprehensive insights. Third, the impact of the implementation of Padlet on the learning by users may involve diverse factors beyond classic teaching and learning methods. Thus, subsequent studies must consider variables such as learner's predispositions, or language proficiency, or prior knowledge of learning content to provide a more comprehensive understanding of the influence on learners.

6. Conclusions

In international student education research, stable adjustment to university life and active participation in classes have always been priorities in the research agenda. This study introduced Padlet into classes exclusively for international students to promote class participation and interaction and, subsequently, analyzed 22 undergraduate students' experiences using Padlet through surveys and interviews.

Padlet played a positive role in encouraging students with limited language skills or shyness to express their opinions. Moreover, because it was easy to visualize the feedback, the tool increased the students' participation in class by delivering feedback efficiently. Our research contributes to the understanding on the integration of online tools in the education of international students, whose numbers are increasing in the post-COVID-19 era. This perspective has implications for the ongoing development of teaching methodologies.

However, it is essential to acknowledge the limitation of our research due to its small sample size, which impedes broad generalization.

References

Abdelaziz, Marwa A. 2015. Proven Methods to Enhance e-Learning Process Using Social Media (Materials, Inter-action, and Competitive Advantage). *International Journal of e-Education, e-Business, e-Management and e-Learning* 5: 40–46. [CrossRef]

Algraini, Farah Nasser Abdullah. 2014. *The Effect of Using Padlet on Enhancing EFL Writing Performance*. Riyadh: Al-Imam Muhammad Ibn Saud Islamic University.

Arkoudis, Sophie, Kim Watty, Chi Baik, Xin Yu, Helen Borland, Shanton Chang, Ian Lang, Josephine Lang, and Amanda Pearce. 2013. Finding common ground: Enhancing interaction between domestic and international students in higher education. *Teaching in Higher Education* 18: 222–35. [CrossRef]

Bond, Melissa, and Svenja Bedenlier. 2019. Facilitating student engagement through educational technology: Towards a conceptual framework. *Journal of Interactive Media in Education* 2019: 11. [CrossRef]

Boud, David, and Ruth Cohen. 2014. *Peer Learning in Higher Education: Learning from and with Each Other*. London and New York: Routledge.

Carini, Robert M., George D. Kuh, and Stephen P. Klein. 2006. Student engagement and student learning: Testing the linkages. *Research in Higher Education* 47: 1–32. [CrossRef]

Carr-Chellman, Alison, and Philip Duchastel. 2000. The ideal online course. *British Journal of Educational Technology* 31: 229–41. [CrossRef]

Choi, Hyeon Sil. 2018. A study on the adaptation of foreign students to Korean universities. *The Journal of Humanities and Social Sciences* 61: 71–93.

Cleary, Jim, and Ivan Skaines. 2005. Student engagement as a quality indicator at the University of Newcastle. Paper presented at the 2005 Australian Universities Quality Forum, Sydney, Australia, July 6–8.

Conole, Gráinne, and Panagiota Alevizou. 2010. *A Literature Review of the Use of Web 2.0 Tools in Higher Education*. A report commissioned by the Higher Education Academy. York: Higher Education Academy.

Dewitt, Dorothy, Norlidah Alias, and Saedah Siraj. 2015. Collaborative learning: Interactive debates using Padlet in a higher education institution. Paper presented at the International Educational Technology Conference (IETC 2015), Istanbul, Turkey, May 27–29.

Diab, Abeer. 2019. Using some online-collaborative learning tools (Google Docs & Padlet) to develop student teachers' EFL creative writing skills and writing self-efficacy. *Journal of Faculty of Education* 30: 21–70.

Feng, Tingyong, and Hong Li. 2022. Preliminary research on the contemporary college students academic adjustment. *Psychological Exploration* 22: 44–48. (In Chinese).

Fisher, Cynthia D. 2017. Padlet: An online tool for learner engagement and collaboration. *Academy of Management Learning and Education* 16: 163–65. [CrossRef]

Fletcher, Adam. 2007. Defining Student Engagement: A Literature Review. Available online: http://soundout.org/defining-student-engagement-a-literature-review/ (accessed on 1 March 2024).

Fredricks, Jennifer A., Michael Filsecker, and Michael A. Lawson. 2016. Student engagement, context and adjustment: Addressing definitional, measurement, and methodological issues. *Learning and Instruction* 43: 1–4. [CrossRef]

Fuchs, Beth. 2014. The writing is on the wall: Using Padlet for whole-class engagement. *Loex Quarterly* 40: 4.

Groccia, James E., and Mary Stuart Hunter. 2012. *The First-Year Seminar: Designing, Implementing, and Assessing Courses to Support Student Learning and Success: Volume II—Instructor Training and Development*. Columbia: National Resource Center for the First-Year Experience and Students in Transition, University of South Carolina.

Hardman, Frank. 2008. Promoting human capital: The importance of dialogic teaching in higher education. *Asian Journal of University Education* 4: 31–48.

Hew, Khe Foon, and Wing Sum Cheung. 2013. Use of Web 2.0 technologies in K-12 and higher education: The search for evidence-based practice. *Educational Research Review* 9: 47–64. [CrossRef]

Hillman, Daniel C. A., Deborah J. Willis, and Charlotte N. Gunawardena. 1994. Learner interface interaction in distance education: An extension of contemporary models and strategies for practitioners. *American Journal of Distance Education* 8: 30–42. [CrossRef]

Hwang, Dongjin. 2021. An exploratory study on international undergraduate students' satisfaction with life of studying abroad—Focusing on multidimensional approach. *The Journal of the Korea Contents Association* 21: 415–24.

Jing, Xiaoli, Ratna Ghosh, Zhaohui Sun, and Qiang Liu. 2020. Mapping global research related to international students: A scientometric review. *Higher Education* 80: 415–33. [CrossRef]

Jung, Insung, Seonghee Choi, Cheolil Lim, and Junghoon Leem. 2002. Effects of different types of interaction on learning achievement, satisfaction and participation in Web-based instruction. *Innovations in Education and Teaching International* 39: 153–62. [CrossRef]

Jyothi, Sujana, Claire McAvinia, and John Keating. 2012. A visualisation tool to aid exploration of students' interactions in asynchronous online communication. *Computers & Education* 58: 30–42.

Kim, Heejin. 2018. Educational usage of Web 2.0-tool for Cooperative Learning. *The Journal of The Institute of Internet, Broadcasting and Communication* 18: 9–14.

Kim, Hyo Jung, Mi Ri Eom, Su In Kim, Hye Jung Kwon, Su Kang Lee, and Seo Yeon Jin. 2022. Developing a prediction model for academic underachievement of international students. *Journal of Teaching & Learning Research* 15: 81–109.

Kim, Hyun Sang. 2012. An analysis of Korean universities' educational environment in terms of internationalization. *Korean Journal of General Education* 6: 211–40.

King, Alison. 1996. Discourse patterns for mediating peer learning. In *Cognitive Perspectives on Peer Learning*. Edited by Angela M. O'Donnell and Alison King. London: Routledge, pp. 87–115.

Korea Ministry of Justice Immigration and Foreign Policy. 2023. Division's Monthly Statistics for Feb. Available online: https://www.immigration.go.kr/immigration/1569/subview.do;jsessionid=eOaG8OUyqc1dxXAo69jo8-I4XX9RcC0d5lwwOM2e.wizard-13-kxs24?enc=Zm5jdDF8QEB8JTJGYmJzJTJGaW1taWdyYXRpb24lMkYyMjclMkY1Njg4MDElMkZhcnRjbFZpZXcuZG8lM0Y= (accessed on 30 September 2023).

Lambert, Amber D., Patrick T. Terenzini, and Lisa R. Lattuca. 2007. More than meets the eye: Curricular and programmatic effects on student learning. *Research in Higher Education* 48: 141–68. [CrossRef]

Lee, Gum Lan. 2023. Need analysis and program development for foreign students' from the aspect of teaching and learning support. *Journal of Learner-Centered Curriculum and Instruction* 23: 461–82.

Lee, Ji Yeon. 2021. A study on educational methods for understanding Korean language and social culture using media: Focused on foreign students. *Culture and Convergence* 43: 113–34. [CrossRef]

Lee, Sun Young, and Yoon Joo Na. 2018. International students' academic adjustment to college-a preliminary study of course development. *Korean Journal of General Education* 12: 167–93.

Lestari, Pritantina Yuni, and Erwin Hari Kurniawan. 2018. Padlet as media to improve writing mastery of English department students of Uniska 2015–2016. *Advances in Social Science, Education and Humanities Research* 145: 184–88.

Mehta, Kosha J., Isabelle Miletich, and Michael Detyna. 2021. Content-specific differences in Padlet perception for collaborative learning amongst undergraduate students. *Research in Learning Technology* 29: 2551. [CrossRef]

Ministry of Education of the Republic of Korea. 2022. Available online: https://if-blog.tistory.com/13545 (accessed on 10 January 2024).

Moore, Michael G. 1989. Editional: Three types of interaction. *American Journal of Distance Education* 3: 1–7.

Moore, Michael G. 2001. Surviving as a distance teacher. *American Journal of Distance Education* 15: 1–5. [CrossRef]

Nadeem, Nahla Helmy. 2021. Students' perceptions about the impact of using Padlet on class engagement: An exploratory case study. In *Research Anthology on Developing Effective Online Learning Courses*. Hershey: IGI Global, pp. 1919–39.

O'Reilly, Tim. 2005. What Is Web 2.0—Design Patterns and Business Models for the Next Generation of Software. Available online: http://oreilly.com/web2/archive/what-is-web-20.html (accessed on 5 October 2023).

Padlet. 2023. Available online: https://www.his-j.com/oe/search/ (accessed on 31 August 2023).

Panadero, Ernesto, and Anastasiya A. Lipnevich. 2022. Review of feedback models and typologies: Towards an integrative model of feedback elements. *Educational Research Review* 35: 100416. [CrossRef]

Park, Seon Jin, Seol Hyang Baek, Bon Seog Gu, and Tae Sung Lee. 2018. Utilization of feedback based teaching to help foreign students who experience language barrier. *Korean Journal of General Education* 12: 119–42.

Pascarella, Ernest T., Tricia A. Seifert, and Charles Blaich. 2010. How effective are the NSSE benchmarks in predicting important educational outcomes? *Change: The Magazine of Higher Learning* 42: 16–22. [CrossRef]

Rashid, Aida Abdul, Melor Md Yunus, and Wahiza Wahi. 2019. Using Padlet for collaborative writing among ESL learners. *Creative Education* 10: 610–20. [CrossRef]

Ryan, Janette. 2011. Teaching and learning for international students: Towards a transcultural approach. *Teachers and Teaching* 17: 631–48. [CrossRef]

Sætra, Henrik Skaug. 2021. Using Padlet to enable online collaborative mediation and scaffolding in a statistics course. *Education Sciences* 11: 219. [CrossRef]

Shim, Mi Ja, and Jong Min Kim. 2009. The effect of classroom menu with a learning management system on learning motivation and interaction in e-learning environment. *Korea Association for Educational Information and Media* 15: 87–108.

Shin, Yu Jin. 2020. A study on the management of cultural classes through the analysis of factors influencing foreign students' belonging. *International Network for Korean Language and Culture Symposium* 10: 240–52.

Sutton, Leah A. 2001. The principle of vicarious interaction in computer-mediated communications. *International Journal of Educational Telecommunications* 7: 223–42.

Teng, Yilian, and Xia Wang. 2021. The effect of two educational technology tools on student engagement in Chinese EFL courses. *International Journal of Educational Technology in Higher Education* 18: 27. [CrossRef]

Trice, Andrea G. 2004. Mixing it up: International graduate students' social interactions with American students. *Journal of College Student Development* 45: 671–87. [CrossRef]

Wright, Sue, and Denis Lander. 2003. Collaborative group interactions of students from two ethnic backgrounds. *Higher Education Research and Development* 22: 237–51. [CrossRef]

Wu, Fati, and Qi Zhang. 2018. Learning behavioral engagement: Definition, analysis framework and theoretical model. *China Educational Technology* 372: 35–41.

Xiao, Junhong. 2017. Learner-content interaction in distance education: The weakest link in interaction research. *Distance Education* 38: 123–35. [CrossRef]

Xu, Bing, Nian-Shing Chen, and Guang Chen. 2020. Effects of teacher role on student engagement in WeChat-based online discussion learning. *Computers & Education* 157: 103956.

Yoon, Jiwon, and Hyeryeong Shim. 2019. A study of reciprocal peer tutoring program for international students in university: Focused on actual operation cases. *Teaching Korean as a Foreign Language* 53: 101–24. [CrossRef]

Yoon, Jung Yoon, and Sung Won Kam. 2021. The characteristics of good teaching based on student's awareness under COVID-19 learning environments—The comparative case study between liberal arts (human study) major and art major in B college. *The Treatise on The Plastic Media* 24: 19–28. [CrossRef]

Yu, Ting Ting, Sun Dong Kwon, and Hwi Hyung Cho. 2019. An exploratory study on effect of the chatting room use on participation and performance: Focus on anonymity and time. *Journal of Digital Convergence* 5: 1–18.

Zainuddin, Norziha Megat Mohd, Nurulhuda Firdaus Mohd Azmi, Rasimah Che Mohd Yusoff, Sya Azmeela Shariff, and Wan Azlan Wan Hassan. 2020. Enhancing classroom engagement through Padlet as a learning tool: A case study. *International Journal of Innovative Computing* 10: 49–57. [CrossRef]

Zhang, Wei. 2009. Academic Adaptation Experiences of Chinese Graduate Students at JF Oberlin University. Master's thesis, University of Oslo, Oslo, Norway.