

Using Padlets as E-Portfolios to Enhance Undergraduate Students' Writing Skills and Motivation

Eleni Meletiadou
London Metropolitan University, UK

Abstract

Despite the increasing support for the use of e-portfolios, research on its utility is just beginning to emerge. In terms of the current study, 200 students were asked to create digital portfolios with Padlet, share their e-portfolios via their Virtual Learning Platform (VLE), and ask for peer and lecturer feedback every time they completed a written task. Using a diagnostic test and their final assignment, students had to write a reflective report at the beginning and the end of an academic term. They also interacted every week using a forum created by their lecturer to enhance collaboration and peer support. At the end of each interactive feedback session, they had to reflect on their work and the feedback they received and post their self-reflections on the forum. Findings indicated that students managed to improve their writing performance significantly and enhance their motivation towards writing and learning in general due to this innovative alternative assessment method. This was evident from their final reflective reports, their focus group discussions, and the anonymous feedback they provided through Mentimeter. Students reported that they enjoyed this interactive experience which was both engaging and rewarding. However, students expressed their wish for more support when using IT tools and e-portfolios and asked to be guided to develop their writing and reflective skills and engage even more with their e-portfolios.

Keywords: e-portfolios, inclusive assessment, motivation, Padlet, undergraduate students, writing performance

The use of computer-assisted learning is undeniably helpful in making the learning process more effective and meaningful among undergraduate learners in terms of developing their writing and professional skills (Jawaid & Tariq, 2018; Kongsuebchart, & Suppasetseree, 2018). The increasing interest in the use of portfolio assessment emanates from the understanding that it enhances students' learning, facilitates lecturers, improves the assessment process (Yang et al., 2016), promotes self-regulated learning (Tur et al., 2019), improves student motivation (Beckers et al., 2016), and fosters reflection and metacognition (Weber & Myrick, 2018). Barrett (2011) defines an e-portfolio as a collection of evidence of students' learning journey over time which may comprise text, pictures, videos, and students' personal reflections. E-portfolios have been widely adopted as a learning and assessment tool in Europe, the United Kingdom, and the United States (Barrot, 2021). Various studies report that the use of e-portfolios promote reflection and even language learning. In terms of writing pedagogy, researchers claim that e-portfolios facilitate the exchange of peer feedback (Hall & Townsend, 2017). Despite the increasing support and interest for experimentation with e-portfolios, research on its utility is just beginning to emerge (Mapundu & Musara, 2019) especially amidst the COVID-19 crisis.

This article aims to explore whether e-portfolios can be used to improve undergraduate students' writing performance and motivation in Higher Education Institutions (HEI) since research in the use of Padlets as e-portfolios with undergraduate students is scarce in that context. The study intends to address the following research questions:

1. What is the impact of Padlets, when used as e-portfolios, on undergraduate students' writing performance?
2. What are undergraduate students' perceptions of the impact of Padlets, when used as e-portfolios, on their writing performance?
3. What are undergraduate students' perceptions of the impact of Padlets, when used as e-portfolios, on their motivation?

First, the recent literature regarding the use of e-portfolios to enhance undergraduate students' writing proficiency and motivation will be presented to identify potential gaps in the literature. Then, the methodology of the study and its outcomes will be thoroughly explored and discussed. Eventually, conclusions will be presented, the limitations of the study will be examined and suggestions for future research as well as recommendations for the successful implementation of e-portfolios in undergraduate education will be proposed.

Literature Review

The Impact of Padlets on Students' Writing Skills

Padlet is a valuable device-agnostic tool for interaction on virtual wall that allows students to express their views on a specific topic more easily (Jaganathan, 2016). It can be used as an online paper sheet on which learners can post any kind of content (e.g., pictures, videos, and text) anywhere on this page and can be accessed by many users from various devices, such as, laptop, desktop, tablet, or smartphone. Padlets enhance students' motivation and creativity as they allow them to take part in various collaborative activities safely (Fuchs, 2014). However, some researchers report that it can lead to cheating and may seem monotonous for some learners (Wulandari, 2018).

There are several studies that have used e-portfolios in HEI but only one that has used Padlets to enhance undergraduate students' learning. Song (2021) used Padlets as e-portfolios in terms

of a module in a Polytechnic in Singapore to evaluate its effectiveness through 226 students' perceptions using a survey. Findings indicated that Padlets could enhance learners' autonomous learning if students were carefully scaffolded and supported throughout the implementation. This quantitative study highlights the need for qualitative studies which could present the benefits and challenges of using e-portfolios with undergraduate students. The current study intends to examine students' perceived ease of use and usefulness, their inclinations to use this technological tool as well as their perspectives while experimenting with it.

Kongsuebchart and Suppasetseree (2018), who investigated the effects of a Weblog-based e-portfolio on the English writing skills of forty-five Thai EFL undergraduate students reported significant improvement of students' writing skills and participants' positive opinions towards e-portfolios. However, they stressed that a prerequisite for the successful use of e-portfolios is for all students to have a reliable Internet connection and suitable technology for learning. The current study intends to explore the challenges of using e-portfolios with undergraduate students in a European country as a means of improving their writing skills to compare findings.

Furthermore, Ngui et al. (2020) explored the impact of implementing e-portfolios at a public university in Malaysia and concluded that it contributed to the successful enhancement of undergraduate students' writing skills. Students confessed that they improved their writing skills considerably, but the researchers admitted that further research was necessary across other HEI for comparison. They claimed that a comparison of different case studies might additionally reveal more development, strengths and challenges related to e-portfolio use.

Barrot (2019) also examined the effects of Facebook-based e-portfolios on 89 L2 English students' writing performance. The study emphasized the beneficial effects of e-portfolios due to Facebook's interactive features, flexibility, accessibility as well as its ability to expose students to social pressure and increase their audience awareness. However, the researcher highlighted the need for more qualitative data that would explore students' experience in using various online platforms as e-portfolios. These studies could also examine students' psychological dimensions, such as attitudes towards writing or e-portfolios and motivation. Barrot encourages researchers to use interviews or focus group discussions and adds that the use of technology for educational purposes provides a rich area for future investigations. Consequently, it should be treated as one of the core foci of any research agenda on technology-enhanced pedagogy. The current study will further explore some of the areas that Barrot has highlighted in his study.

Finally, Karami et al. (2019) explored Iranian students' perceptions of e-portfolios and their impact on students' writing performance and revealed that e-portfolios had a significant effect on undergraduate students' writing achievement. They highlighted learners' positive attitude towards the use of e-portfolios because of its accessibility, convenience, and the feedback they could receive through it.

The Impact of Padlets on Students' Motivation

The current study also intended to examine whether the use of Padlets as e-portfolios with undergraduate students could enhance their motivation and autonomy as learners. The use of Padlets as e-portfolios have never been explored before, to the knowledge of the present researcher.

E-portfolio is an “alternative” form of assessment which helps learners develop their autonomy and self-confidence as writers through interaction among each other especially when used in combination with an online learning platform (Marín, 2020; Meihami et al., 2018; Nicholson, 2018). As Chaudhuri and Cabau (2017) point out, helping people become aware of each other’s and one’s own learning fosters increased autonomous life-long learning. Undergraduate students’ willingness to engage with e-portfolios and online learning platforms is going to be explored as very little research has been conducted to examine their attitudes to date (Aygün & Aydın, 2016). A key feature of e-portfolios is that learners interact with each other as they create their e-portfolios, provide feedback to each other, and gain considerable benefits (Oh et al., 2020).

In the constructivist theory, learners should be conscious of their own learning process and develop their metacognitive skills so that they can control and evaluate their learning process on their own. The social constructivist perspective on learning puts the learner at the centre of the teaching, learning and assessment process, and the metacognitive functions are deemed as crucial as learners should be able to build accorded new knowledge on their own (Hussain & Al Saadi, 2019). Nicol and Milligan (2006) propose principles for effective formative feedback through alternative assessment methods such as e-portfolios which aim to enhance learning. They claim that formative feedback should focus on self-regulation as learners need to set goals and plan strategies to achieve them, manage their resources, and try to achieve their goals. They also focus on learners’ critical appraisal (Nicol et al., 2014) and problem-solving skills (Hwang et al., 2014). In terms of the present research study, undergraduate students’ perceptions of the ways in which e-portfolios may enhance their learning will be explored to supplement the existing literature.

E-portfolio, one of the most prominent forms of formative assessment, helps learners develop various learning strategies by fostering co-operative learning and self-management which is a hidden benefit of engaging the learner in his/her learning process (Cabau, 2017). Through self- and other-regulation which are fostered as students engage in e-portfolios, certain learning processes which were in a state of development may have had an opportunity to mature and consolidate, and new knowledge may have been generated (Segaran & Hasim, 2021; Lei & Chan, 2017).

Rokhsareh et al. (2015) investigated motivational factors of using e-portfolios from undergraduate learners’ perspective. After interviewing 15 students from the chemical engineering, civil engineering, and computing programs, the researchers identified a eight motivational factors, that is, information quality, system quality, consequences of use, learner competence, social norms, positive feedbacks, ownership, and service quality. Since only 15 learners participated in the study, the researcher highlighted the need for future research studies with larger sample size. Addressing that need for studies with more participants, the current study explored 100 undergraduate students’ perceptions of e-portfolios.

In sum, there are several gaps in the literature regarding undergraduate students’ perceptions of the impact of e-portfolios on students’ writing performance and their motivation as learners (Ifinedo, 2017; Yang et al., 2016). Although the use of e-portfolios is associated with numerous benefits in relation to student writing performance (Aygün & Aydın, 2016) and motivation (Ciesielkiewicz, 2019), more research is needed to provide insights on undergraduate students’ attitudes towards e-portfolios. The current study aimed at addressing various literature gaps using a semi-experimental design, a focus group discussion, and a survey. There is still little

research on how to adapt this approach (e-portfolios) to address the needs of undergraduate students worldwide (Hall & Townsend, 2017).

Consequently, the current study explored the use of e-portfolios as an innovative learning and assessment method with undergraduate students in HEI. The aim was to examine undergraduate students' perceptions of the usefulness of e-portfolios in terms of enhancing students' writing performance and motivation towards learning.

Methodology

Participants

The current study engaged 200 students, aged 19-35, in using Padlets to create e-portfolios and interact with each other with the aim of improving their writing skills and motivation as learners for approximately four months (13 weeks in total) in terms of a general Academic Writing Skills Module at the University of Nicosia, Cyprus. The participants formed six mixed-ability groups of local and international students (Table 1). This was their first year at the university and students found writing a rather challenging task. Students had to develop their academic skills in terms of a module which asked them to produce a variety of written tasks and include them in their e-portfolios. Students attended two 60-minute classes per week, used the same material and were taught by the same lecturer who was also the researcher of this study. These students had to present English language qualifications as a pre-requisite to start their degree which classified them as upper intermediate stage (B2) EFL learners according to the Common European Framework of Reference (CEFR) (Council of Europe, 2001). The lecturer asked students to provide anonymous feedback every two to three weeks using Mentimeter. The lecturer also conducted regular group discussions to identify any challenges that the students may have been facing and provide the necessary support. Participation in the discussions and the provision of feedback was optional. The lecturer asked for the students' permission to use their feedback and marks. The students provided their oral consent since the lecturer ensured confidentiality and anonymity of their responses. The lecturer also informed the University and was granted their approval.

Table 1

Demographic Details and Characteristics of Participating Students

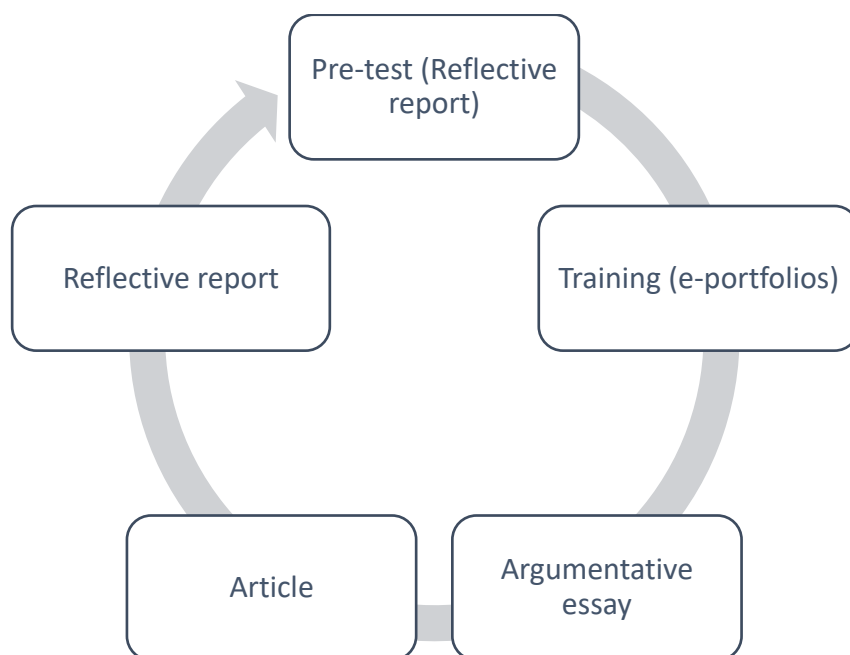
	Students	Frequency
Gender	Male	76
	Female	124
Class rank	High-achievers	14
	Medium-achievers	118
	Low-achievers	68

Instruments and Procedure

Students had to write a pre-test which was a reflective report (Figure 1). In that report, they had to reflect on their experiences in terms of writing and assessment so far and discuss those that

had a significant impact on their lives. Students then received training in how to use Padlets as e-portfolios and were given several samples to understand what they should do. They first created a free account and started building their portfolios choosing the background, headings, texts, videos, or pictures they wanted to include which were relevant to the topics and were asked to upload their texts on their portfolios and share the link with their lecturer and peers asking for feedback. In terms of this module, students had to develop their writing skills. Students received instruction regarding report writing and were asked to prepare a report choosing one topic from the five provided by the lecturer i.e., the importance of diversity and inclusion. Students uploaded their work on their Padlet and used a forum on their VLE to exchange ideas and share the links of their e-portfolios on Padlet. The module tutor played the role of e-portfolio moderator facilitating students' interaction and engagement, providing input when students made mistakes as they discussed various concepts or deviated from the topic of the main discussion. She even had to play the role of a judge resolving conflicts or misunderstandings.

Figure 1
Implementation Cycle



Students received their final mark by the lecturer who provided a mark for all written texts, an argumentative essay, an article and two reflective reports. Students received instruction regarding the different genres (article, essay, report). They also had to write a self-reflective report at the end of the implementation explaining what they have gained from the whole experience and whether they liked it or not and why. Students were also encouraged to offer suggestions for improvement of the e-portfolio implementation. This report served as a post-test and both tests (pre- and post-test) were evaluated taking into consideration the same marking scheme which was prescribed and approved by the University after negotiation of minor elements with the students.

Students invited their peers to provide either written or oral feedback in the form of a short video taking into consideration the marking rubric that was used in terms of this module. The

lecturer negotiated the marking scheme with the students and made some minor changes to allow students to engage even more in the intervention since they felt they owned the assessment criteria as they were able to change them even slightly. They were asked to provide up to five suggestions for improvement and indicate up to five strengths of their peers' texts for two of their peers. To make sure that all students received the same amount of feedback, students could provide feedback on their peers' Padlets on a first comes first served basis. Therefore, once 2 students had provided feedback on one draft, no additional feedback could be provided by other students. They just had to pick another student.

Students explored these topics in the face-to-face setting and online, and based on their conversations, they were asked to provide anonymous feedback addressing three main questions regarding each topic (one topic was covered in two-three weeks) in the form of assignment. The specific questions were: (1) What have you learnt of the topics that we explored? (2) What are your personal perceptions of the issues examined? and, (3) How does the above learning contribute to your development and growth as undergraduate learners? It was determined that the assignments should be between 600 and 700 words. All these data were utilized to answer all research questions. Students had also to post their views (50 words) related to discussions during the lectures and tutorials.

Students were promised to get 10% of the overall marks as a kind of reward if they provided kind, honest, detailed, thoughtful and helpful feedback. The lecturer and the author of the text indicated whether they thought the student had really read the text, reflected on it, and provided valuable feedback. Students were provided the same kind of feedback from their peers and lecturer and were then asked to reflect on the feedback and make revisions. They were encouraged to take into consideration only the suggestions that they thought would really help them improve their work.

In terms of exploring students' attitudes, data were collected from students' final reflection essays, the lecturer's field notes from observations and focus group discussions, and students' anonymous feedback through Mentimeter as students were asked to provide feedback regarding the process of the implementation every two to three weeks. The overall aim was to triangulate the data, identify and determine the themes, and establish reliability of the data collected (Nowell et al., 2017). The researcher analysed all data using thematic analysis. (Terry et al., 2017). Data analysis included specifying the units of analysis coding data, sorting codes, and generating themes (Deterding & Waters, 2021). She also had an assistant who analysed 20% of the data which were chosen randomly to enhance the reliability of the analysis. The researcher and the assistant went through 20% of the data and identified recurring themes. They then used a small phrase to describe the theme. They found themes in four categories which will be presented below.

Findings and Discussion

Impact on Students' Writing Performance

The current study explored the impact of e-portfolio assessment on students' writing performance by comparing students post- versus pre-tests. The students had to write a reflective report before and after the implementation. The researcher scored all reports and a second assessor with a PhD in Applied Linguistics, blindly scored 20% of all pre- and post-test reports using the same marking rubric after receiving training on how to rate other students by the researcher. The interrater agreement was 95% and any disagreements were discussed and

resolved between the coders (Belotto, 2018). The outcomes of students' writing pre- and post-tests can be seen in Table 2.

Table 2
Students' Writing Pre- and Post-Test Scores

		M	SD
Experimental groups	Pre-test	29.88	14.99
	Post-test	54.54	9.95
Control groups	Pre-test	22.88	15.05
	Post-test	25.01	14.79

A paired t-test was conducted to explore experimental groups students' progress and showed that there was a statistically significant difference between students' pre-test ($M = 29.88$, $SD = 14.99$, $n = 100$) and post-test ($M = 54.54$, $SD = 9.95$, $n = 100$) on writing performance ($t(99) = 23.02$, $p < .05$) (Cohen's $d: 1.93$). A similar test was performed for the control groups, and it showed that the difference between students' pre-test ($M=22.88$, $SD=15.05$, $n=100$) and post-test ($M=25.01$, $SD=14.79$, $n=100$) and post-test was not statistically significant ($t(99) = 1.8$, $p < .05$) (Cohen's $d: 0.14$). Cohen's effect size value ($d = 1.93$) suggested a "large" effect size and high practical significance for the experimental groups and a rather "low" effect size ($d = 0.14$) for the control groups.

An independent samples t-test was performed which indicated that students who were involved in the e-portfolio assessment scored higher than student who submitted their work as separate assignments and that this difference in performance was statistically significant $t(198) = 8.064$, $p=0.004 < .05$. Then, a Levene's test was performed in Excel and the p value was $.004 < .05$ which indicates a violation of the assumption that the variance is equal across the control and experimental groups and indicates that the difference between the variances is statistically significant.

Perceived Impact on Students' Writing Skills

Our study indicated that students appreciated the fact that they could easily store their work and add various elements to make it more attractive to potential readers, i.e., add podcasts. They were able to identify their strengths and weaknesses more easily and check whether they were able to improve their work as one student reports:

I love the fact that I can always look back at my work and see the progress I have made. I can also have a look at peers' and my lecturers' comments and keep them into consideration when I am writing something new. I also enjoy adding new elements to my e-portfolio i.e., my own podcasts. The whole experience is so engaging and interactive.

Since peer feedback was used as part of this alternative assessment method that promotes assessment for learning, students were able to engage in a productive dialogue by providing comments and suggestions for improvement to their peers. Students also thought that they were able to develop their linguistic abilities as they were looking for material and ideas, were monitoring their work and engaging with each other's texts. They were also able to develop content knowledge in a variety of fields which would be valuable for the rest of their modules.

Moreover, they seemed more engaged with developing ways in which they could learn more effectively rather than accumulating information and memorizing it as is often the norm at this level. They were able to change their mindsets (Kabilan & Khan, 2012) and become more actively involved in their own learning.

I was so bored when I was asked to write an assignment and submit it. Several module lecturers ask me to write similar assignments. This is demotivating really. With e-portfolios, I can decide what I want to do and how to do it and add images and videos. I love sharing my work with others and having a look at their work as I can get new ideas which help me improve my writing skills.

Students were able to produce better and longer texts and improve various aspects of writing, that is, mechanics and grammar. They felt that they could produce more complex sentences and use new vocabulary since they were able to explore various texts and their peers' work as well. One of the students claimed:

Exams are so boring. We have to memorise a lot of information and just use them during the exam. Nobody remembers anything afterwards. Assignments are also boring as we do not use any creative skills and we do not interact with our peers. In portfolios, students can also include their reflections and allow the lecturer to take them into consideration when he/she marks our assignment. Our lecturer can also detect how he/she can improve his/her teaching practices, what we like and what we hate. As a result, he/she may improve the whole learning procedure.

Students felt that they could easily monitor their work and gradually improve their academic performance. They could also include aspects of their personality in their portfolios as they were able to combine text with, for example, infographics. As a result, they could engage others to read their texts and they could also re-read and reflect on their work with the aim to increase their writing proficiency through peer and self-assessment (Yang et al., 2016).

Finally, in terms of e-portfolios, the lecturer also stressed the significance of process writing and encouraged students to revise their work reflecting on the feedback they received. Each time, they received feedback on their work, they were asked to check older versions of their work, organise their thoughts and make all necessary changes as they focused on improving different aspects in their writing. As they enhanced their writing skills, students also developed various other professional skills such as reflection and critical thinking.

Benefits Related to Students' Motivation

According to students' feedback, e-portfolios seemed to boost students' motivation as they allowed students' complete development. Students had to combine a variety of skills, for example, creativity, autonomous critical thinking, good judgement, sensitivity, and aesthetic appreciation at the same time as they allow students to use a variety of resources and combine them in unique ways according to their own personality and taste.

We are bored to death. We either sleep on our desks or play video games during the lectures. We are demotivated as everything is so repetitive. Same assignments for all modules. No possibility of choosing our topic or of doing something more creative. Portfolios are so much more inclusive. Every student has an opportunity to succeed rather than fail. So, no student is left behind.

Students found e-portfolios extremely interesting and motivating as assessment and learning tools as they seemed to engage more actively and deeply in their own learning, understand what is expected from them and set their own short and long-term goals. Affective assessment provided by peers also enhanced their writing performance and provided additional insights into their own challenges indicating solutions that the lecturer may never have thought of. One of the participants reports:

I don't mind devoting time while I work on my e-portfolio as I am free to do whatever I want. I love this sense of freedom and personal responsibility as well. I am also flattered when my peers are impressed by my work and ask for suggestions to improve their own e-portfolios.

Students appreciated the fact that their lecturers could evaluate both the process and the final product and give them credit for their efforts. Lecturers could also intervene, provide additional support and guidance, and praise learners for their efforts. Students believed that e-portfolios were more comprehensive and meaningful since they allowed students to show their efforts and add their personal touch (Jawaid & Tariq, 2018). Finally, e-portfolios allowed students to familiarise themselves with the assessment criteria helping them reflect on their work after receiving multiple feedback.

Perceived Challenges Relevant to Students' Writing Skills

Students claimed that their lecturer had to check peer feedback to make sure students assess each other's work correctly as students expressed some complaints. They reported that the lecturer might also be influenced when students used other interactive material such as videos and pictures in their e-portfolios. Consequently, lectures might provide more marks than they would have if they had assessed the written text only. A student complained that:

I think my lecturer is unfair. I do not have time to find material to make my e-portfolio more interactive. I think that has an impact on my grade. This is unfair.

The literature also claims that e-portfolios are often invalid and unreliable (Dune et al., 2018). Students in the current study also detected that some of their peers had a tendency to repeat themselves and paraphrase or even plagiarise as they did not have enough time to spend when working on their portfolios (also in Yang et al., 2016).

Perceived Challenges Related to Students' Motivation

Significant challenges are reported in the literature regarding the reliability of e-portfolios. The assessment criteria should be clear, and e-portfolios should be used in combination with some final examination as students feel that is fairer. Some students have negative attitudes towards this approach as it requires higher involvement, more time spent to improve digital skills (Kongsuebchart & Suppasetsee, 2018) and facing various challenges, i.e., problems with internet connection, facilities, and resources to prepare the material to include in the e-portfolios etc. Time constraints that students have is also an issue as well as workload constraints from other modules as a participant indicates:

I really find it hard to understand the rules of the game and the assessment criteria. Thank God, we also have the final exams. I also find it hard to use e-portfolios without proper guidance and support. I am not proud of my digital skills. I need help.

Unreliable internet connection or software issues may hinder students as they try to engage in online discussion in the fora and they might lose unsaved work or be unable to post their contributions to online discussions. This is a very frustrating experience for students, but the recent COVID-19 pandemic has taught people to be more patient and resourceful. Few mature students also described their own challenges:

“I am not good with computers. I do not have the time to develop both my digital and writing skills, not in just 12 weeks. I also find it difficult to understand how Padlets work. They are not that user-friendly.”

Implications

The current study confirms what was reported in the literature but also indicates several useful implications. For instance, when using e-portfolios, lecturers must ensure that the assessment criteria used are crystal clear to enhance the reliability of the e-portfolio approach (Barrot, 2021). This should be used in conjunction with other summative forms of assessment. However, it should count for at least 50% of the overall final grade to be meaningful for students to engage in it as it is demanding in terms of time and overall effort. Lecturers and module leaders should carefully check the timing of submitting the e-portfolio, arrange sessions for students about paraphrasing and plagiarism providing acceptable and unacceptable example with reasons and strategies to avoid them (Barrett, 2011). They should also train students to work independently and reward them for their efforts. Students should understand why it is important to be able to create an e-portfolio. This can be used for e-branding purposes as they will be looking for a job after their graduation. Lecturers should also allow students to work on a variety of topics to avoid repetition, make sure they engage all learners, provide meaningful feedback and clear suggestions for improvement.

There are also implications for researchers who wish to explore alternative assessment methods even further. The current study has several limitations as it explored the use of e-portfolios with a small number of students in a specific context for only one semester. Future research should be more thorough and explore the use of e-portfolios at a large scale in undergraduate education for a longer time frame. It could also examine its impact on other skills, i.e., oral, and professional skills.

Universities should also make sure that all students are provided with access to the internet, laptops, and any other resources necessary to design and complete their e-portfolios and grant extensions if there are unexpected problems, i.e., inability to join a specific network (Lei et al., 2017). They must provide professional development courses to train their staff in using alternative assessment methods, such as e-portfolios, to help students take responsibility for their own learning and develop various skills necessary to thrive in the current highly competitive world.

There are also implications for undergraduate students who should be less timid and willing to make their e-portfolios available to other people such as family, friends, and employers as they can show the range of skills people may possess, how creative and/or reflective they are and ask for feedback as there is always room for improvement. Another suggestion for improvement would be to try to increase the ways in which students engage in collaboration by designing group e-portfolios and fostering ongoing interaction by using additional resources for example, a group on Facebook or twitter. This would enable more people to get involved in discussions around various topics and contribute their ideas and experiences. In the long

term, these exchanges could help students enrich their e-portfolios, improve their writing skills, increase their motivation as learners and expand their network (Cabau, 2017).

Moreover, taking into consideration the findings of the current study, the implementation of e-portfolios should be more structured so that students could easily understand the rules and follow them (Barrot, 2019). To address ethical issues, there should be frequent supervision of the procedure and open communication as well as severe penalties for academic offenders. E-portfolios allow students to have a voice and express their feelings, ideas, and concerns. These can then be taken into consideration to enhance students' overall experience. A brilliant idea would be to decrease students' burden by allowing them to produce one portfolio for all modules they have every semester or one portfolio for the whole duration of their BA studies. This would allow students to improve their work by interacting with one another and decrease the number of exams and assignments they have focusing on the process as well as the final product.

In sum, the aim of this study was to explore undergraduate learners' perceptions of Padlets when used as e-portfolios and their learning benefits especially in terms of enhancing students' writing skills and attitudes towards learning. Understanding their perspectives can lead to improvements in the implementation of e-portfolios, further the HEI's mission, and ultimately benefit all stakeholders.

Conclusion and Recommendations

The current study explored the use of Padlets as e-portfolios with undergraduate students. Students insisted that they should have clear assessment system (well-developed rubrics with identifiable criteria) explaining expected contribution and participation and that the emphasis should be on the quality rather than quantity of contributions and interaction as e-portfolios need to be directly aligned with their intended purpose. Validity should also be reflected in the focus of evaluation for any decision to be fair and accurate. To increase the reliability of the whole procedure, the focus should be on the process rather than the product by observing students' contribution and overall performance.

Writers' rapid growth was discernible in their e-portfolios, their engagement with the forum and the quality of feedback they provided. However, lecturers should help their students develop a deeper understanding of their expectations as writers, enhance their critical thinking and assessment skills and challenge their existing beliefs about learning. Students should be encouraged to check their peers' e-portfolios and contribute in terms of interactive activities by negotiating meaning and form, identifying problems, and providing solutions and suggestions for improvement of their peers' e-portfolios. They should also exchange points of view in a civilised and constructive way and share ideas which will help their peers grow as writers. Using e-portfolios has helped these learners gradually improve their writing skills in so many ways, that is, by increasing understanding of ways in which they can improve their writing efficacy; enhancing linguistic abilities and improving their so called "soft skills"; improving their content knowledge as regards various topics; developing their digital skills, autonomy and interpersonal skills, and managing to move from a fixed to a growth mindset.

Educators encounter various challenges when implementing e-portfolios as they must train students to develop their critical thinking, reflective and digital skills and develop an openness towards other people's ideas and perceptions. Course leaders should be knowledgeable and experienced when using e-portfolios. They should supervise the whole procedure closely and

intervene to make sure all students reap their benefits. Experienced lecturers can engage learners in interaction, encourage peer learning and promote learning how to learn taking into consideration students' unique character. Students should be trained systematically for a long period and supported by peers and their lecturers. Students gradually learn how to fill their own gaps, organise their ideas and never give up.

The present study has also indicated that other types of assessment can also help in triangulating data from the e-portfolios as continuous assessment is necessary. Lecturers should motivate learners to increase both quality and quantity of their e-portfolios and help them realise their own reasons why they should try to improve their writing skills by engaging actively in the e-portfolio experience. Students should engage in continuous learning and show flexibility in various socio-cultural contexts as they will need to continuously add knowledge and skills to become competitive in the employment market and find a career-enhancing position.

The current study stressed that as students often get confused, each e-portfolio should have a specific aim and help students set their own goals, refine their skills, and reflect on how they can improve. Students can then engage in a variety of ways to improve their work, observe others, critically reflect on their work, try out new things, fail, adapt and be flexible but most of all think critically and grow within a community of learners who help each other to reach their own personal learning goals.

Currently, the advantages and disadvantages of developing e-portfolios from the student perspective have been largely ignored (Aygün & Aydın, 2016). Educators need to understand what aspects of e-portfolios promote learning especially in terms of students' writing skills and enhance their motivation (Ciesielkiewicz, 2019). Therefore, more research and educational projects that utilize e-portfolios as a learning tool are needed to help practitioners have a clearer picture of its benefits in the long run as an alternative assessment method that promotes inclusive learning.

References

- Aygün, S., & Aydın, S. (2016). The use of e-portfolios in EFL writing: a review of literature. *ELT Research Journal*, 5(3), 205–217.
- Barrett, H. C. (2011). *Balancing the two faces of e-portfolios, Education for a digital world: Advice, guidelines, and effective practice from around the globe* (2nd Ed.). British Columbia. Retrieved from <https://electronicportfolios.org>
- Barrot, J. S. (2021). Effects of Facebook-based e-portfolio on ESL learners' writing performance. *Language, Culture and Curriculum*, 34(1), 95–111. <https://doi.org/10.1080/07908318.2020.1745822>
- Barrot, J. S. (2019). Facebook as an e-portfolio platform in the EFL/ESL writing classrooms. In S Ballweg & B. Kühn (Eds.), *Portfolioarbeit im kontext von sprachenunterricht*, (pp. 115-130). Universitätsverlag Göttingen.
- Beckers, J., Dolmans, D., & Van Merriënboer, J. (2016). E-portfolios enhancing students' self-directed learning: A systematic review of influencing factors. *Australasian Journal of Educational Technology*, 32(2). <https://doi.org/10.14742/ajet.2528>
- Belotto, M. J. (2018). Data analysis methods for qualitative research: Managing the challenges of coding, interrater reliability, and thematic analysis. *Qualitative Report*, 23(11), 2622–33. <https://doi.org/10.46743/2160-3715/2018.3492>
- Cabau, B. (2017). E-portfolio as a tool to respond higher education ambitions and societal expectations. In T. Chaudhuri & B. Cabau (Eds.), *E-Portfolios in higher education a multidisciplinary approach*, (pp. 141-154): Nature Singapore. https://doi.org/10.1007/978-981-10-3803-7_10
- Chaudhuri, T., & Cabau, B. (Eds.). (2017). *E-portfolios in higher education: A multidisciplinary approach*. Springer. <https://doi.org/10.1007/978-981-10-3803-7>
- Ciesielkiewicz, M. (2019). The use of e-portfolios in higher education: From the students' perspective. *Issues in Educational Research*, 29(3), 649–667.
- Council of Europe. (2001). *Common european framework of reference for languages: Learning, teaching, assessment*. Cambridge: Cambridge University Press.
- Deterding, N. M., & Waters, M. C. (2021). Flexible coding of in-depth interviews: A twenty-first-century approach. *Sociological Methods & Research*, 50(2), 708–739. <https://doi.org/10.1177/0049124118799377>
- Dune, T., Crnek-Georgeson, K., Bidewell, J., Firdaus, R., John, J. R., & Arora, A. (2018). Undergraduate health science students' development of reflective practice on communication skills via e-Portfolios. *Journal of University Teaching & Learning Practice*, 15(3), 5. <https://doi.org/10.53761/1.15.3.5>
- Fuchs, B. (2014). *The writing is on the wall: Using padlet for whole-class engagement*. University of Kentucky.
- Hall, J. M., & Townsend, S. D. C. (2017). Using critical incidents and e-portfolios to understand the emergent practice of Japanese student-teachers of English. *Teaching and Teacher Education*, 62, 1–9. <https://doi.org/10.1016/j.tate.2016.10.017>
- Hussain, R. M. R., & Al Saadi, K. K. (2019). Students as designers of E-book for authentic assessment. *Malaysian Journal of Learning and Instruction*, 16(1), 23–48. <https://doi.org/10.32890/mjli2019.16.1.10.32890/mjli2019.16.1.1>

- Hwang, G. J., Hung, C. M., & Chen, N. S. (2014). Improving learning achievements, motivations and problem-solving skills through a peer assessment-based game development approach. *Educational Technology Research and Development*, 62(2), 129–145. <https://doi.org/10.1007/s11423-013-9320-7>
- Ifinedo, P. (2017). Students' perceived impact of learning and satisfaction with blogs. *The International Journal of Information and Learning Technology*. 72, 189–199. doi:10.1016/j.chb.2016.12.049.
- Jaganathan, S. (2016). Edmodo and Padlet as a collaborate online tool in enriching writing skills in language learning and teaching. Accessed from https://www.researchgate.net/publication/302472966_Edmodo_and_Padlet_as_a_collaborative_online_tool_in_Enriching_Writing_Skills_in_Language_Learning_and_Teaching.
- Jawaid, F. Y. N. A. A., & Tariq, H. J. J. (2018). Challenges to computer assisted language teaching at university level. *International Journal*, 6(2), 188–197.
- Kabilan, M. K., & Khan, M. A. (2012). Assessing pre-service English language teachers' learning using e-portfolios: Benefits, challenges and competencies gained. *Computers & Education*, 58(4), 1007-1020. <https://doi.org/10.1016/j.compedu.2011.11.011>
- Karami, S., Sadighi, F., Bagheri, M. S., & Riasati, M. J. (2019). The impact of application of electronic portfolio on undergraduate English Majors' writing proficiency and their self-regulated learning. *International Journal of Instruction*, 12(1), 1319–1334. <https://doi.org/10.29333/iji.2019.12184a>
- Kongsuebchart, J., & Suppasetsee, S. (2018). The effect of a weblog-based electronic portfolio on Thai EFL undergraduate students' English writing skills. *Computer Assisted Language Learning-Electronic Journal*, 19(2), 28–46.
- Lei, C., & Chan, C. K. (2017). Developing regulation strategies through Computer-supported knowledge building among tertiary students. In C. Lei & Carol K. K. Chan. *Promoting spontaneous use of learning and reasoning strategies*, (pp. 172–192). Routledge. <https://doi.org/10.4324/9781315564029-12>
- Mapundu, M., & Musara, M. (2019). E-Portfolios as a tool to enhance student learning experience and entrepreneurial skills. *South African Journal of Higher Education*, 33(6), 191–214. <https://doi.org/10.20853/33-6-2990>
- Marín, V. I. (2020). Research-based learning in education studies: Design inquiry using group e-portfolios based on blogs. *Australasian Journal of Educational Technology*, 36(1), 1–20. <https://doi.org/10.14742/ajet.4523>
- Meihami, H., Husseini, F., & Sahragard, R. (2018). Portfolio-based writing instruction as a venue to provide corrective feedback on EFL learners' writing performance. *Journal of Modern Research in English Language Studies*, 5(3), 136–119.
- Ngui, W., Pang, V., Hiew, W., & Wah, L. K. (2020). Exploring the impact of e-portfolio on ESL students' writing skills through the lenses of Malaysian undergraduates. *Computer-Assisted Language Learning Electronic Journal*, 21(3), 105–121.
- Nicol, D., & Milligan, C. (2006). Rethinking technology-supported assessment in terms of the seven principles of good feedback practice. In C. Bryan & K. Clegg (Eds.), *Innovative assessment in Higher Education*, (pp. 1–14). London: Routledge.

- Nicol, D., Thomson, A., & Breslin, C. (2014). Rethinking feedback practices in higher education: A peer review perspective. *Assessment & Evaluation in Higher Education*, 39(1), 102–122. <https://doi.org/10.1080/02602938.2013.795518>
- Nicholson, D. T. (2018). Enhancing student engagement through online portfolio assessment. *Practitioner Research in Higher Education*, 11(1), 15–31.
- Nowell, L. S., Norris, J. M., White, D. E., & Moules, N. J. (2017). Thematic analysis: Striving to meet the trustworthiness criteria. *International Journal of Qualitative Methods*, 16(1), 1609406917733847. <https://doi.org/10.1177/1609406917733847>
- Oh, J. E., Chan, Y. K., & Kim, K. V. (2020). Social media and e-portfolios: Impacting design students' motivation through project-based learning. *IAFOR Journal of Education*, 8(3), 41–58. <https://doi.org/10.22492/ije.8.3.03>
- Rokhsareh, M., Azizah, A. R., & Mojib, M. (2015). Electronic portfolio motivational factors from students' perspective: A qualitative study. *Knowledge Management & E-Learning*, 7(2), 265–279. <https://doi.org/10.34105/j.kmel.2015.07.017>
- Segaran, M. K., & Hasim, Z. (2021). Self-regulated learning through e-portfolio: A meta-analysis. *Malaysian Journal of Learning and Instruction*, 18(1), 131–156. <https://doi.org/10.32890/mjli2021.18.1.6>
- Song, B. K. (2021). E-portfolio implementation: Examining learners' perception of usefulness, self-directed learning process and value of learning. *Australasian Journal of Educational Technology*, 37(1), 68–81. <https://doi.org/10.14742/ajet.6126>
- Terry, G., Hayfield, N., Clarke, V., & Braun, V. (2017). Thematic analysis. In C. Willig & W. Stainton Rogers (Eds.), *The sage handbook of qualitative research in Psychology*, 2nd edition (pp. 17–37). London: Sage. <https://doi.org/10.4135/9781526405555.n2>
- Tur, G., Urbina, S., & Forteza, D. (2019). Rubric-based formative assessment in process eportfolio: Towards self-regulated learning. *Digital Education Review*, 35, 18–35.
- Wulandari, R. (2018). *English language education department of a private university students' perception on using Padlet in improving writing skills*. [Unpublished doctoral Dissertation], Universitas Muhammadiyah Yogyakarta.
- Weber, K., & Myrick, K. (2018). Reflecting on reflecting: Summer undergraduate research students' experiences in developing electronic portfolios, a meta-high impact practice. *International Journal of ePortfolio*, 8(1), 13–25.
- Yang, M., Tai, M., & Lim, C. P. (2016). The role of e-portfolios in supporting productive learning. *British Journal of Educational Technology*, 47(6), 1276–1286.

Corresponding author: Eleni Meletiadou

Email: elenim@outlook.com