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Beyond the Technical: Uncovering Student Perceptions of the E-portfolio Experience

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Abstract

E-portfolios are widely used in higher education to promote student reflection and document learning achievements. This study explores how e-portfolios impact digital fluency and self-reflection among 67 students at a large public university in Morocco, comprising 42 undergraduates from a Bachelor of Applied Foreign Language Studies and 25 graduate students enrolled in an Educational Technology course within a Master's program in Teaching English as a Foreign Language (TEFL). The primary data source consisted of written student reflections as a section in their e-portfolios and collected at the end of the semester. Employing a qualitative descriptive design, the study used content and thematic analysis guided by constructivist and self-regulation theories to investigate how e-portfolio engagement supports reflective practice and skill development. The analysis revealed key themes including self-assessment, skill enhancement, and career readiness. While both groups valued reflective activities, graduate students more explicitly linked e-portfolio use to professional identity formation and future career planning, whereas undergraduates focused on immediate learning gains and skill acquisition. These findings highlight the diverse developmental priorities and goals across academic levels. The study emphasizes the importance of customizing e-portfolio practices to meet the specific needs and aspirations of different student populations, enhancing both educational relevance and effectiveness. This research contributes valuable insights into digital literacy and reflective practice within higher education contexts.

Keywords: e-portfolio evaluation, students' reflections, digital literacy, professional readiness

1. Introduction

In recent years, electronic portfolios (e-portfolios) have gained prominence in higher education as effective tools for promoting student engagement and fostering reflective practices. These digital repositories move beyond traditional paper-based portfolios, adopting technology to provide flexible and interactive spaces for students to showcase competencies,

document skill development, and articulate their learning journeys (Stefani et al., 2007; Barrett, 2010). Furthermore, e-portfolios have emerged as a pivotal tool for students to develop essential skills for the digital age (Challis, 2005). To that end, educational aids present an opportunity to bridge the divide between academia and professional practice by providing students with tangible tools to demonstrate their skills to potential employers (Hartnell-Young & Morriss, 2007).

This form of educational technology integration has significantly transformed higher education landscape, fostering innovative learning strategies (Huang et al., 2020; Koehler and Mishra, 2009) and assessment methods (Boud and Falchikov, 2007). Above all, e-portfolios facilitate reflection by enabling students to revisit their work, analyse strengths and weaknesses, and track growth over time (Moon, 2013). The integration of reflective practice within e-portfolios is crucial for fostering deeper learning and promoting self-awareness (Schön, 1983). By engaging in reflective activities, students are encouraged to critically examine experiences, analyse learning processes, and identify areas for improvement (Boudet et al., 1985). This process of self-assessment and critical reflection is essential for developing metacognitive skills, which are crucial for lifelong learning and professional success (Matsumoto-Royo, 2022 et al.; Merkebu et al., 2024).

While the benefits of e-portfolios in promoting reflection and professional development have been widely acknowledged, further research is needed to explore the nuanced perspectives of diverse student populations. Specifically, understanding how undergraduate and graduate students, with their varying levels of academic experience and professional aspirations, perceive and engage with e-portfolios is essential. The present study comes to address this issue and contribute to filling a gap in the literature. Situated within a practitioner research framework, the study allows the researcher, as an educator actively involved in e-portfolio implementation, to directly inform practice and curricula development based on student experiences. The study aims to explore how undergraduate and graduate students perceive the impact of e-portfolios on their reflective practice and how these perceptions relate to their future educational and professional goals. The central research questions guiding this investigation are: how do undergraduate and graduate students perceive the impact of e-portfolios on their reflective practice, and how do these perceptions relate to their future educational and professional goals?

By analysing student reflections on their e-portfolio experiences, this study aims to provide valuable insights for educators seeking to maximize the pedagogical benefits of e-portfolios and tailor implementation strategies to meet the specific needs of diverse student populations. Furthermore, it is anticipated that the findings of this research will contribute to a deeper understanding of the role of e-portfolios in fostering reflective learning and supporting students' transition to future educational and professional pathways.

2. Literature Review

The literature review for this paper explores existing research on e-portfolios in education, focusing on their benefits, challenges, best practices, and student perceptions and attitudes. It also examines the differences in learning experiences and technology adoption between undergraduate and graduate students, with a specific focus on Morocco, where this research took place. The review concludes with a description of the gap in the literature this research aims to address, and seeks to raise awareness about e-portfolio integration in higher education.

E-portfolios have evolved from simple digital collections to dynamic tools for learning, assessment, and professional development (JISC, 2014; Mathew et al., 2019). They provide platforms for students to organise work, reflect on learning processes, and showcase skills (Abrami et al., 2011). Their key benefits include encouraging deeper reflection by documenting progress, analysing strengths and weaknesses, and articulating learning journeys (Moon, 2013). In fact, research has demonstrated significant positive correlations between e-portfolio implementation and enhanced student learning outcomes, particularly in areas of reflective practice and self-regulated learning. This fosters metacognitive skills and promotes self-regulated learning (Zimmerman, 2002; Broadbent and Poon, 2015).

E-portfolios also positively influence learning outcomes by promoting active learning, critical thinking, and problem-solving (Baran et al., 2011; Lorenzo and Ittelson, 2005). As a matter of fact, Slade et al. (2020) emphasise the importance of digital ethics and ethical digital literacy in e-portfolio practice as well as the potential of these platforms to cultivate critical digital literacies. Their research argues that e-portfolios are essential for contemporary professional environments, highlighting their role in developing digital citizenship competencies. E-portfolios also offer rich assessment evidence, allowing for holistic evaluations of student learning (Stefani, Mason and Pegler, 2007), and streamlined feedback through ongoing student-instructor dialogue (Yorke, 2016). Additionally, e-portfolios serve as powerful tools for professional development, showcasing skills to potential employers and documenting professional growth (Hartnell-Young & Morriss, 2007; Ward & Moser, 2019).

However, challenges with e-portfolio implementation do exist. Hence, students and instructors may encounter technical difficulties related to platform usability and digital literacy (Lorenzo and Ittelson, 2005; Van Deursen and Van Dijk, 2014). Adequate support and training are therefore crucial to address these issues. As well, creating and maintaining e-portfolios requires time from both students and faculty, making effective integration into the curriculum essential (Chickering and Gamson, 1987). The fact that establishing clear assessment criteria remains a challenge highlights the need to communicate rubrics and assessment tools transparently. Instructors therefore need to become acquainted with the relevant best practices that emphasise clear learning objectives, meaningful reflective activities, ongoing feedback, and strong curricular integration (Chickering and Gamson, 1987; Darling-Hammond, Hyler and Gardner, 2017).

Given these difficulties, it is worth exploring what research on student perceptions of technology in education, including e-portfolios has revealed. While many appreciate the benefits for showcasing work and skill development, concerns about time commitment, technical challenges, and perceived purpose exist (Buzzetto-Hollywood, 2010; Meyer et al., 2010). As student engagement is influenced by perceived relevance, ease of use, and instructor support; positive perceptions correlate with increased motivation and improved learning (Anim-Wright, 2024). But differences in learning experiences and technology adoption between undergraduate and graduate students are well-documented.

Graduate students, with more higher education experience and professional focus, may approach e-portfolios differently (Buzzetto-More, 2010). They may view them as tools for showcasing expertise and demonstrating career readiness (Sibson et al, 2022), while undergraduates may focus on documenting coursework and developing foundational skills (Lorenzo and Ittelson, 2005). These findings are complemented by research suggesting differences in digital literacy and technology adoption between undergraduate and graduate students (Kennedy et al., 2008). Such differences highlight the need for tailored implementation strategies when adopting e-portfolios for students at different educational levels.

2.1. E-portfolios in Moroccan Higher Education

Given that this study took place in a Moroccan university, zooming in on related research in this country is required to situate the research in its immediate context. While e-portfolio research is growing globally, studies specifically focusing on Morocco in particular, are limited. Existing studies in this context often focus on broader technology integration in education or specific uses of e-portfolios in fields like language learning (Bourkoukou and Elbachari, 2016). Some local research has begun to explore e-portfolios in higher education within specific disciplines (Ait Mama, 2023). However, these studies often focus on implementation challenges or pedagogical strategies, rather than in-depth explorations of student perceptions and the comparative experiences of undergraduate and graduate students. Undoubtedly, there is a lack of research investigating the connection between e-portfolio use, reflective practice, and professional identity and or career readiness within Moroccan higher education.

2.2. The Gap in the Literature and the Current Study

This study addresses a significant gap by providing an in-depth exploration of undergraduate and graduate student perceptions of e-portfolios in the Moroccan higher education context. Through a comprehensive thematic analysis (Braun and Clarke, 2006) of student reflections, this research identifies key themes, challenges, and benefits associated with e-portfolio integration in higher education settings. Specifically, the focus is on how students perceive the impact of e-portfolios on their reflective practice and how these perceptions relate to their future educational and professional goals. By examining the intersections of technology-enhanced learning (Koehler and Mishra, 2009), reflection (Boud and Falchikov, 2007), and academic development (Tynjälä et al., 2012), this study provides valuable insights for educators, instructional designers, and policymakers seeking to optimise e-portfolio implementation and improve student learning outcomes. Additionally, by comparing undergraduate and graduate experiences, the study will provide valuable insights for educators in Morocco on effectively implementing and utilising e-portfolios to maximise learning, promote reflection, and support professional development.

This research is particularly relevant given the increasing emphasis on digital literacy and employability skills in the Moroccan higher education system through bridging the digital divide that still exists. In fact, the technological landscape in Moroccan higher education presents both challenges and opportunities. While infrastructure and resources limitations exist, the recent governmental initiative, Digital Morocco 2030 (2024), signals a commitment to technological educational transformation, and e-portfolios emerge as potential catalysts for this broader digital pedagogical revolution.

3. Research Methodology

3.1. Research Questions

The study seeks to determine and compare the perceptions of undergraduate and graduate students regarding how this tool affects their educational and professional prospects and objectives. To collect the relevant data, the research centres around the following questions: how do undergraduate and graduate students perceive the impact of e-portfolios on their reflective practice, and how do these perceptions relate to their future education and professional goals?

3.2. Research Methods

This study investigates the reflective narratives of undergraduate and graduate students enrolled in Educational Technology and Translation courses, offering a nuanced understanding of their e-portfolio experiences. The research study employed a qualitative, descriptive design to investigate student perceptions and attitudes towards e-portfolios, using student reflections as the main data source which were subjected to content and thematic analysis. Data in the form of students' reflections posted on their e-portfolios was subjected first to content analysis for common themes to be identified. To ensure some degree of validity and reliability, this stage was cross-checked by two more colleagues to verify that these themes are representative of the trends expressed by the collected data.

3.3. Research Design

The research adopted a qualitative, descriptive design within a practitioner research framework as qualitative research is well-suited for exploring complex social phenomena from the perspectives of those experiencing them (Creswell and Poth, 2018). A descriptive approach was chosen to provide a rich and detailed account of student experiences with e-portfolios. Practitioner research, characterised by its focus on addressing practical issues within a specific context and involving the researcher as an active participant, was deemed appropriate as the researcher was directly involved in the implementation and assessment of the students' e-portfolios (Cochran-Smith and Lytle, 2009). This approach allowed for an in-depth exploration of students' perspectives within their authentic learning environment, informing pedagogical practices and curriculum development. Using students' reflections as the primary data source allowed for a direct understanding of their lived experiences and perceptions of the e-portfolio process. Finally, content and inductive thematic analysis were selected as analytical tools to systematically identify patterns and themes within the collected data.

3.4. Research Ethics

The study's research protocol was reviewed and approved by the institutional research ethics committee with which the author is affiliated. Hence, the research adhered to the established ethical principles to ensure the protection, fairness and respect of all participants through the following steps:

- Securing the informed consent of all participants.
- Guaranteeing the confidentiality and anonymity of all participants as well as their data.
- Ensuring that no harm affected the participants.
- Eliminating any form of pressure that could be perceived by the participants given the perceived power dynamics between the researcher and his students.
- Following and adhering to the best practices of digital ethics while accessing and evaluating the content of digital e-portfolios.
- Informing all participants of their right to withdraw at any stage of the study without any repercussions on their academic achievements.

3.5. Participants

Participants and Sampling

The participants comprised two distinct cohorts at the final stage of their education programs, preparing to start or advance their careers. All were Moroccan students at a public university with no study experience abroad, including both undergraduates and graduates. These groups

were selected primarily because e-portfolios are expected to significantly enhance their career transition readiness as they approach graduation.

For undergraduates, e-portfolios connect academic learning with entry-level career preparation by showcasing projects, translation work, and foundational skills such as organization, time management, and reflective practice. For graduates, e-portfolios highlight advanced competencies, including educational technology adaptation, research application, reflective evaluation, skill integration, and goal-setting.

The undergraduate group included final-year students (both genders, aged 21–34) enrolled in a Professional Bachelor's degree in Applied Foreign Language Studies, focusing on Professional Translation. The graduate group consisted of adult students (both genders, aged 28–38) in the final year of a Master's degree in Teaching English as a Foreign Language, some of whom were practicing teachers. E-portfolios were integrated into both courses as ongoing projects requiring students to showcase their work throughout the term. The total sample included 67 participants: 42 undergraduates and 25 graduates. Participation was voluntary, with informed consent obtained and confidentiality assured, and participation did not affect students' academic outcomes.

For the purposes of data analysis, purposive sampling was used, targeting both groups at critical career transition points where e-portfolios could enhance professional readiness. Inclusion criteria required students to have completed e-portfolios with reflections of at least 100 words.

The dataset comprised the following:

Undergraduate reflections: 42 texts, 30–350 words (mean 115), total ~4,830 words

Graduate reflections: 25 texts, 280–800 words (mean 425), total ~10,625 words

Combined corpus: 67 reflections, approximately 15,455 words

3.6. Data Collection

Students' reflective writing was the primary data source for this research. The e-portfolio prompts included a directive requiring students to add a dedicated '*Reflections*' or '*Blog*' section, where they were asked to describe their experiences with the practice of creating and using the e-portfolio. As mentioned in the previous section, the e-portfolio was adopted for both courses as a project that students built, using ready-made websites namely googlesites.com and weebly.com, and kept updating it using work and productions pertaining to various assignments related to the course they were enrolled in. The e-portfolio also served as a form of formative assessment used for these courses. The open-ended instruction about dedicating a section of the e-portfolio to reflections encouraged students to articulate their thoughts, feelings, and insights regarding the entire experience. To mitigate potential bias related to course grades or evaluation, data collection was intentionally delayed until well after the formal evaluation of the entire course had been completed. This step ensured that students felt free to express their honest opinions without fear of affecting their assessment outcomes.

3.7. Theoretical Frameworks

The findings from this bottom-up thematic analysis are informed by several theoretical frameworks. Constructivism posits that knowledge is actively constructed through experience (Piaget, 1950; Vygotsky, 1978), which resonates with students' reflections on how e-portfolios facilitate active learning and self-reflection. Similarly, self-regulated learning

(SRL) emphasises learners' ability to monitor and regulate their own learning processes (Zimmerman, 2002), which is evident in students' intentions to maintain and develop their portfolios over time. Lastly, activity theory highlights the interactions between individuals, tools, and environments in shaping learning experiences (Engeström, 1987). E-portfolios serve as mediating tools within educational contexts that enable students to navigate their learning environments effectively.

4. Data Analysis

Data analysis followed a two-stage process: content analysis followed by thematic analysis of students' reflections on using e-portfolios at both undergraduate and graduate levels. Reflections were collected from the 'Blogs' and 'Reflections' sections of the e-portfolios. The analysis adhered to Braun and Clarke's (2006) six-phase thematic approach, as illustrated in Figure 1.

First, all reflections were read repeatedly to familiarize with the content and record observations. Data was then manually coded line by line. Codes were grouped into preliminary themes through constant comparison. With input from a colleague, these themes were reviewed and refined across the entire dataset. The final themes were labelled as shown, and representative student quotations were selected to illustrate each theme.

Initial immersion in the data enabled identification of significant codes, such as students' initial excitement about the course and challenges with technology. These codes were organized into broader thematic patterns.

Next, the themes were reviewed to confirm they accurately represented the dataset. Two colleagues independently verified the themes against the reflections, allowing refinement and consolidation to ensure distinctiveness and relevance to students' experiences. Emergent themes included 'initial excitement,' 'challenges with technology,' 'value of e-portfolios,' 'instructor support,' and 'future applications.'

Finally, illustrative quotations exemplified each theme, providing rich narrative evidence that supports the findings. This process aligns with qualitative methodologies that prioritize participant voices in understanding their experiences (Braun & Clarke, 2006).

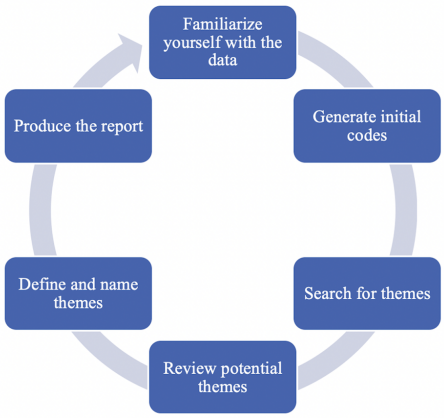

Figure 1. Braun and Clark Thematic Analysis

An initial codebook was developed from 25% of reflections (n=17: 10 undergraduate, 7 graduate), including code definitions, inclusion/exclusion criteria, and exemplars. Two refinement rounds produced 18 sub-codes under five major themes: 1. Expectations vs.

Reality, 2. Technological Adaptation, 3. Value of E-Portfolios, 4. Instructor Support, and 5. Future Applications.

Inter-coder reliability was assessed by two colleagues experienced in qualitative data analysis, who independently coded 30% of the dataset (n=20: 12 undergraduate, 8 graduate) using the codebook. Out of 147 coding instances, 135 codes agreed (91.8% agreement), with Cohen's $\kappa = 0.87$ (95% CI: 0.82–0.92, $p < .001$), indicating "almost perfect agreement" (Landis & Koch, 1977) and exceeding the ≥0.70 threshold for qualitative research (Miles et al., 1994).

The remaining 12 disagreements were resolved through discussion and codebook refinement. Subsequent verification on five additional reflections yielded $\kappa = 0.89$, confirming the thematic analysis framework's reliability.

Saturation was monitored during coding: new codes decreased substantially after 50% of the data, with no new themes after 60%. Thematic stability was reached at 40 reflections, and both subgroups achieved saturation before completion (undergraduates at 67%, graduates at 76%), validating sample sufficiency.

4.1. Themes from Students' Reflections

Data analysis of students' reflections revealed five main themes, illustrated below with representative quotations from e-portfolios:

1. Expectations vs. Reality

Students described initial mismatches between anticipated and actual course experiences. Graduates noted elaborate contrasts: "When I first knew that we were going to have a module on Educational Technology, the first idea that came to my mind was that we were going to practice teaching using technology. Perhaps, it turned out to be even better." They also highlighted transformative shifts: "When the professor required us to design a personal website, I thought, what? I wasn't trained to do this! But then when I learned how to use it, things started to make sense." Undergraduates too echoed this: "Digital portfolio made me very nervous at start but then I get better" and "The experience was like learning to swim - scary at first but exciting once I got used to it!"

2. Technological Adaptation

Reflections addressed infrastructure challenges like connectivity and skill-building paths. While graduates referenced advanced tools (Weebly, Google Sites, Google Classroom, Kahoot, YouTube), undergraduates focused on basics: "I discovered new tools such as Word, Google Drive, and Google Classroom." Both groups acknowledged initial hurdles but found rewards: "It indeed feels good to have a personal virtual space where one can share their work with the public." This suggests that structured implementation fosters digital literacy despite Morocco's resource constraints.

3. Value of E-Portfolios

Both cohorts emphasized e-portfolios' role in reflection, assessment, metacognition, ownership, and professional growth. Graduates showed depth: "Seeing my progress laid out chronologically was eye-opening... Each piece tells a story of growth, challenges, and discoveries." Undergraduates noted practical benefits: "It helped me organize and store tasks... which contributed to tracking my progress." Other quotes highlighted agency—"It feels good to have a personal virtual space where one can share work, learn to be autonomous, and give and receive feedback"—and career links, for graduates "As a future

teacher, this provides insights into how my students would deal with portfolios" or "I created my own teacher e-portfolio that will stay with me forever."

4. Instructor Support

Students valued instructors' guidance, motivation, and integration: "Our professor's enthusiasm is aspirational and motivational." Direct feedback too was essential: "Professor was very supportive, giving us feedback and sharing valuable information," alongside constructivist framing: "It wasn't taught in isolation... our professor would always refer to the theoretical framework from the constructivist approach." Likewise, the iterative aspect of the feedback aided persistence: "The professor implemented an iterative feedback process, transforming each assignment into a learning dialogue," thus mediating tech challenges for novice users.

5. Future Applications

E-portfolio development and maintenances experiences shaped planned teaching practices and career readiness. For graduates, it created intended classroom transfer: "I will use some of those effective ways in my classroom to actively engage and motivate students". They also planned ongoing use: "I am thinking of keeping, developing, refining and enhancing mine. I'll be posting my creative writings." For undergraduates, the experience was linked to careers: "I feel much more prepared for my future career now" and "This experience make me better student and translator." These patterns underscore e-portfolios' role in bridging academic-professional transitions, vital for employability in MENA/African contexts

4.2. Answer to Research Questions

Based on the above findings, the answers to the two main research questions are as follows:

4.2.1. Perceptions of e-portfolios and reflective practice

Students across both undergraduate and graduate levels expressed a strong belief in the value of e-portfolios as tools for enhancing reflective practice. Many students noted that creating an e-portfolio allowed them to engage in deeper self-reflection about their learning experiences. For instance, one graduate student remarked, ‘seeing a personal product which only I can manage pushes me to be more creative, self-reflective, and raises my motivation’. This sentiment was echoed by another student who stated ‘the best part of this course was making this e-portfolio which requires a lot of thinking and problem-solving’. Such reflections indicate that students perceive e-portfolios as not just repositories of work but as dynamic platforms that facilitate ongoing reflection and personal growth. They also highlight the importance of e-portfolios as dynamic educational opportunities that transcend traditional documentation and contribute to the students’ metacognitive skills engagement by taking ownership of their education.

Indeed, students highlighted the role of e-portfolios in helping them articulate their learning processes and outcomes. One participant noted, ‘collecting summaries, reflections, images, videos, and resources is beneficial for both the teachers to keep track of their students’ learning outside the classroom and for the students to be more aware of their process and progress’. This illustrates that students recognise the potential of e-portfolios to document their educational journeys effectively. As one student eloquently noted: ‘it indeed feels good to have a personal virtual space where one can share their work with the public, learn to be autonomous, as well as give and receive feedback from their colleagues and professors’. The statement encapsulates the core value of e-portfolios, which is to shift learning from a

passive, instructor-controlled process to an active, student-driven journey of self-discovery and representation.

4.2.2. Future Educational and Professional Goals

In terms of future implications, students articulated how their experiences with e-portfolios would influence their teaching practices. A graduate student reflected, 'as a future teacher, this provides me with more insights into how my students would be dealing with their portfolios'. This forward-thinking perspective suggests that students are not only focused on immediate benefits but also on how these skills will translate into their professional lives. Additionally, the reflections revealed a desire among students to continue developing their e-portfolios beyond the course. One student expressed enthusiasm about maintaining and enhancing her portfolio: 'I am actually thinking of keeping, developing, refining, and enhancing mine'. This commitment to lifelong learning aligns with the principles of self-regulated learning (SRL), where learners take initiative in managing their educational experiences (Zimmerman, 2002).

4.3. Comparison Between Undergraduate and Graduate Students

When comparing the reflections of undergraduate and graduate students, some differences appeared regarding their experiences with technology and expectations for using e-portfolios. Undergraduate students often approached the task with initial excitement but also expressed anxiety about using technology effectively. For example, one undergraduate stated, 'I had reservations at first... But then when I learned how to use it, things started to make sense'. In contrast, graduate students tended to have more prior experience with technology integration in education and were more focused on how these tools could enhance their professional development. Despite these differences, both groups shared a common appreciation for instructor support throughout the course. One graduate student noted, 'our professor's enthusiasm is aspirational and motivational', highlighting the importance of effective teaching in facilitating student engagement.

Finally, the reflections from both groups illustrate a transformative educational experience centred around the use of portfolios in higher education. While they share common themes such as excitement about technology and challenges faced during adaptation, differences in emphasis reveal deeper insights into their learning processes and future applications as educators. The reflections underscore the importance of fostering an environment where students feel empowered to take ownership of their learning through innovative tools like e-portfolios while also highlighting the essential role that instructor support plays in facilitating this journey. Table 2. below summarises this comparison.

Table 1. Comparison between undergraduate and graduate students.

Aspect	Undergraduate reflections	Graduate reflections
Technology experience	Initial anxiety, learning curve	Prior experience, more confident
Focus	Basic technology skills, personal growth	Professional development, career enhancement
Common themes	Excitement, challenges, instructor support	Excitement, challenges, instructor support
Educational impact	Transformative learning experience	Transformative learning experience with professional focus

5. Interpretation of the Findings

Based on the above, it would be safe to say that the qualitative analysis of student reflections on e-portfolios in an Educational Technology and Translation courses reveals significant insights into their learning experiences, challenges, and growth opportunities. While both groups of students expressed initial excitement about integrating technology into their education, they also faced challenges related to technological adaptation and managing expectations versus reality.

For most respondents, e-portfolios served as a powerful tool to track their progress, reflect on their learning journey, and develop a deeper understanding of their scholarly growth. One graduate student highlights the transformative impact of creating an e-portfolio: 'seeing my progress laid out chronologically was eye-opening. Now, creating an e-portfolio for my Educational Technology class feels like a natural evolution of that experience'. This quote underscores how e-portfolios help students visualise their development over time, providing a tangible record of their achievements and areas for improvement.

From a different perspective, an undergraduate student also touches on the theme of learning and growth: 'I can't deny that just as much as I enjoyed this digital assignment, I had some difficulties, but it ultimately helped me learn and grow as a responsible student'. This reflection on the e-portfolio experience highlights the importance of reflections and evaluating personal growth. The challenges faced during the compilation process are part of the learning process, and overcoming these difficulties contributes to the student's overall development.

Thus, the findings underscore the value of e-portfolios as effective tools for fostering personal ownership and reflection among students, enhancing their engagement with course content. Additionally, the critical role of instructor support was mentioned as a key factor influencing student success, highlighting the need for educators to be actively involved in guiding their students through technological challenges.

Comparatively, these findings resonate with existing literature that highlights the importance of personal ownership in learning (Paris and Ayres, 1994) and the role of e-portfolios in promoting continuous personal development (Rebbeck, 2008). As future educators prepare to enter increasingly digital classrooms, the lessons learned from this study emphasise the importance of equipping them with both technological skills and pedagogical strategies that leverage these tools effectively. By integrating e-portfolios into educational practices, institutions can cultivate a generation of reflective, adaptive, and tech-savvy educators ready to meet the demands of modern teaching environments.

6. Implications

The findings from this qualitative study on students' reflections about e-portfolio use in Moroccan higher education have significant implications for educational practice and curriculum design. Positive feedback indicates that integrating e-portfolios into curricula enhances student engagement and ownership of learning by fostering personalized portfolios that encourage self-reflection and critical thinking. This aligns with recent research demonstrating that e-portfolios foster personal ownership and agency, enhancing students' sense of pride and responsibility for their learning (Chaudhuri & Cabau, 2017; Nguyen & Ikeda, 2015).

Students reported challenges with technology, highlighting the need for structured support such as training sessions or workshops to build digital skills, which can reduce frustration and

improve learning outcomes. This echoes Rebbeck's (2008) findings that e-portfolios reflect ongoing personal development rather than just serving as evidence storage.

As well, instructor support emerged as vital for guiding and motivating students. An enthusiastic and responsive instructor presence, timely feedback, and integration of constructivist pedagogy were essential for sustaining student motivation and adoption of technology, consistent with Hattie's (2009) research on effective teaching.

The insights gained also prepare future teachers to integrate technology effectively in their classrooms, equipping them to face challenges similar to those experienced by their students. This research advances regional scholarship by reinforcing constructivist, student-centered approaches (Vavrus et al., 2011) and aligns with African educators' emphasis on technology as pedagogical innovation (Ng'ambi & Bozalek, 2013). Moreover, it reflects Sub-Saharan Africa's priority on enhancing graduate employability (Oketch et al., 2014).

Limitations include the study's single-institution context, which limits generalizability, potential practitioner-researcher bias despite mitigation efforts, and variability in student language and technology proficiency affecting reflection depth. Future research should adopt multi-site designs across Morocco and the wider MENA/African region, systematically analyze socioeconomic and prior technology experience, and conduct demographic studies for comprehensive insights.

7. Conclusion

In summary, this study offers a thorough and detailed investigation into the views and opinions of both undergraduate and graduate students regarding e-portfolios and how these tools influence the students' ability to engage in reflective practice throughout their learning and experiences. The thematic analysis reveals that both groups view e-portfolios as valuable tools for enhancing their learning experiences, fostering self-reflection, and supporting their future educational and professional goals. Students expressed a strong belief in the importance of e-portfolios as dynamic platforms that facilitate personal growth and ownership of their learning journeys. They highlighted how the process of creating e-portfolios allows them to document not only their achievements but also the challenges they face along the way, ultimately leading to a deeper understanding of their educational progress.

The findings also indicate that while undergraduate students often experienced initial anxiety regarding technology use, graduate students demonstrated greater confidence and familiarity with digital tools. This disparity underscores the necessity for tailored support strategies that address the varying levels of technological competence among students at different academic stages. Furthermore, the critical role of instructor support was identified as a significant factor in enhancing student engagement with e-portfolios, emphasising the need for educators to foster an encouraging learning environment.

While the implications of this research for the Moroccan higher education are profound, the impact of its findings could prove useful beyond the geographical context where it took place. In fact, the findings reported here extend beyond individual student experiences; they suggest that integrating e-portfolios into educational curricula can enhance reflective practices and prepare students for future challenges in their professional lives. By promoting a culture of self-regulated learning and continuous development, e-portfolios can help cultivate reflective practitioners who are well-equipped to navigate the complexities of modern educational environments.

Finally, this research contributes valuable insights into the role of e-portfolios in higher education, emphasising their potential to enhance reflective practice and support students' growth as learners and future educators. E-portfolios represent more than technological interventions; they embody potential mechanisms for pedagogical transformation, addressing critical challenges of educational quality, student engagement, and professional preparation. As educational institutions continue to integrate technology into teaching and learning, understanding the impact of tools like e-portfolios will be essential for fostering effective educational practices.

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