



From Confusion to Confidence: A Narrative Inquiry into ESP Students' Learning through Google Sites E-Portfolios

Salasiah Ammade^{1*}, Nurhasanah², Shakira B. Herman³

¹ Faculty of Language Training and Teacher Education, Universitas Muhammadiyah Parepare, Parepare, Indonesia

² Mathematic Education, Universitas Muhamamdiyah Parepare, Parepare, Indonesia

³ College of Education, Benguet State University Bokod Campus, Philippines

* Correspondence e-mail: evisalasiah@gmail.com

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Abstract

E-Portfolio has been widely used for academic preference for higher education. Yet, limited study on ESP students using E-portfolio still occur as well as study on English learning confidence for ESP. This study aims to explore the narrative confidence story of four students majoring in Nutrition Science at Universitas Muhammadiyah Parepare in using e-portfolios with the assistance of Google Sites in learning English. Using a narrative approach, the study focused on how this learning process affected their confidence in learning English. Data was collected through questionnaire responses from the four participants, who revealed their experiences from the initial confusion when learning English in the English for Specific Purpose (ESP) class to finally feeling proud and satisfied because of their improved English skills and successfully completing an English E-Book project as a final project. Thus, it continued to interview the participants to get in depth data. In analyzing data, the narrative analysis was applied. The results showed that although they initially faced language challenges such as lack of vocabulary, low self-esteem in presenting English, lack of ability to write simple sentences as well as technical difficulties and lack of familiarity with the google sites platform for creating E-portfolio assignments, they gradually developed skills and confidence. E-portfolios helped them organize their assignments, improve their English language skills (especially speaking and writing), and enrich their knowledge in nutrition and culture. These findings highlight the potential of e-portfolios as a pedagogical tool that not only supports the learning of material, but also empowers students to feel more competent and confident in their learning process.

Keywords: E-portfolio; Narrative Inquiry; ESP; Students Confidence; Pedagogical Implications



1. Introduction

The ability to communicate in English has become an essential skill for university students, particularly those engaged in English for Specific Purposes (ESP) courses. For nutrition students, English proficiency not only supports academic achievement but also facilitates access to global knowledge and professional development in health-related fields (Hyland, 2019; Dudley-Evans & St John, 2020). However, many students in non-English majors still face challenges such as limited vocabulary, difficulties in writing, and low confidence in speaking, which hinder their engagement in learning English (Afriani, 2021; Rakhmawati, 2022).

In response to these challenges, technology-assisted learning has been increasingly applied to enhance students' language acquisition and motivation. One promising tool is the use of e-portfolios, which allow learners to document their progress, reflect on their learning, and showcase achievements in a structured digital format (Barrett, 2019; Buyuk & Duru, 2020). Studies have highlighted that e-portfolios can improve students' autonomy, critical thinking, and digital literacy while fostering language skills (Sharma & Mishra, 2021; Sivarajah et al., 2022).

E-portfolios are increasingly being adopted in higher education due to their ability to support active, reflective learning and the development of 21st century competencies required of graduates. They encourage students to reflect on learning experiences, integrate knowledge, and develop self-understanding, which is essential for lifelong learning and professional development (Lu, 2021; Babaee et al., 2021; Sultana et al., 2020). Also, the use of e-portfolios has also been shown to increase student self-efficacy and engagement, which contribute to academic achievement (López-Crespo et al., 2021; Mogas et al., 2023).

Other point is E-portfolios allow students to digitally document skills, achievements, and experiences, which can be used as a tool to enhance employability and meet workplace expectations that demand cross-cutting skills such as communication, critical thinking, and collaboration (Lu, 2021). The experience of using this form correlates with increased digital competence and student

learning autonomy, which is particularly relevant in the digital age and distance learning (Mogas et al., 2023; Mudau & Modise, 2022). Dealing to the assessment, E-portfolios provide a platform for more authentic formative and summative assessment, enable two-way feedback between lecturers and students, and support project-based learning and collaboration (Chang & Kabilan, 2022; Ngui et al., 2022; Ngui et al., 2022; Peña-De-Carrillo & Barragán-Arias, 2021).

In addition, this learning form facilitates active pedagogy, where students are the main subjects in the learning process, increasing intrinsic motivation and engagement in learning (Ciesielkiewicz, 2019; Peña-De-Carrillo & Barragán-Arias, 2021; Harun et al., 2021). Yet, some of the challenges identified include lecturer resistance to new assessment methods, technical training needs, and adequate digital infrastructure (López-Crespo et al., 2021; Sultana et al., 2020; Mudau & Modise, 2022).

Platforms such as Google Sites provide accessible and user-friendly features for building e-portfolios, enabling students to integrate writing, speaking, and multimedia tasks into one coherent learning artifact (Hung, 2021). Google Sites is widely used as an e-portfolio platform due to its ease of access, intuitive use, and collaborative features that support learning at various levels of education. It is a free service that anyone with a Google account can access, at no additional cost. The platform also provides online storage and is easily accessible anytime and anywhere as long as it is connected to the internet (Suryana et al., 2023; Aflahah et al., 2023). Also it is designed to be easy to use, even by novice users. The process of creating and managing the site is very simple, so students and teachers can quickly create e-portfolios without specialized technical skills. Other benefits of the platform are enables collaboration between students and teachers, and supports the integration of various media formats (text, images, videos) that enrich e-portfolio content (Suryana et al., 2023; Aflahah et al., 2023).

The platform can also be used for various learning purposes, from assignment documentation, reflection, to project-based assessment. Google Sites also makes it easy to track students' learning progress in real-time (Tran & Ngoc, 2023; Haave, 2016; Aflahah et al., 2023). The empirical evidence of using Google Sites

for E-Portfolios shows the use of Google Sites as an e-portfolio has been shown to improve learning motivation, student engagement, and learning outcomes, especially in project-based learning and authentic assessment (Tran & Ngoc, 2023; Aflahah et al., 2023). Besides, teachers and students report that Google Sites are helpful in documenting assignments, providing feedback, and facilitating independent and reflective learning (Alfahad, 2024; Rustandi et al., 2023; Aflahah et al., 2023). Google Sites is also considered practical as it does not require high technical expertise and can be integrated with other Google services (Suryana et al., 2023; Aflahah et al., 2023).

Despite these advantages, there is still an absence of research on e-portfolios in ESP contexts, particularly when it comes to how they influence students' learning confidence stories—the narratives of how they progressed from being slow learners to more capable and driven English users. Prior research has mostly looked at e-portfolios from the standpoints of digital literacy, evaluation, or general language development (Tosuncuoglu, 2019; Lin, 2020). Few studies have examined how e-portfolios may improve students' confidence in using English and empower them emotionally and psychologically, especially for higher education students studying nutrition in Indonesia. Because of this, there is a research gap in the understanding of the affective and narrative aspects of integrating e-portfolios into ESP learning.

This study's novelty is in its analysis of students' narrative confidence stories with Google Sites-based e-portfolios within an English for Specific Purposes course for nutrition major students. This study emphasizes the personal growth and confidence-building processes students experience as they progress from initial confusion to successful completion of an English e-book project, in contrast to other efforts that focus on technical or linguistic outcomes. This study aims to explore the experiences of four nutrition students at Universitas Muhammadiyah Parepare employing Google Sites-based e-portfolios, focusing on the impact of this process on their confidence in learning English. By adopting a narrative inquiry approach, this research focuses to contribute both to theoretical insights on digital pedagogy in ESP and to practical implications for integrating e-portfolios in higher education language learning.

2. Materials and Methods

This study employed a narrative inquiry technique to examine students' narrative confidence stories when learning English through an e-portfolio built on Google Sites in an English for Specific Purposes (ESP) course. This method was chosen because it enables researchers to comprehensively and contextually record students' experiences, emotions, and opinions regarding their educational journey (Clandinin & Connelly, 2000). By focusing on the students' own narratives, this allows for a greater understanding of how digital tools, such e-portfolios, affect language development as well as affective aspects like confidence in learning English.

A semi-structured interview guide that functioned as the interview procedure was the main research tool utilized. The purpose of this guide was to assist participants have in-depth, open-ended conversations so they could express their experiences in their own words. A number of open-ended questions centred on important topics were included in the interview guide, including:

- Their experiences creating e-portfolios with Google Sites.
- How they feel about sharing and writing about themselves in English.
- The e-portfolio's apparent effect on their English-speaking confidence.
- Any difficulties or achievements they had throughout the procedure.

The primary research tool for conducting the interviews was the digital meeting platform of Gmeet, which ensured accurate and comprehensive transcription of the participants' responses. The interviews were also recorded to preserve the data. Additionally, as a strategy to build anticipation data, the students were requested to create a short video in which they described their experience constructing an e-portfolio, the difficulties they had using it, and their journey of building self-confidence while presenting an English task. This video was then inserted into their Google site account. This technique of gathering data made it possible to analyze each student's story in great detail and to capture the nuances of each student stories.

The participants were four undergraduate students majoring in Nutrition department at the Faculty of Health Sciences, Universitas Muhammadiyah Parepare, Indonesia. They were enrolled in an ESP course during the academic year 2024/2025. In selecting the participants, a purposive sampling technique was employed. In order to purposefully choose students who might offer rich, detailed information pertinent to the research issue, this non-probability sampling technique was used. The students were chosen based on certain criteria, such as their consistent and active participation in the e-portfolio project and their varied backgrounds in terms of digital literacy and English language. This guaranteed a variety of viewpoints regarding the use of e-portfolios to develop their confidence in learning English.

This particular sample technique was justified by the need to fully comprehend the phenomenon rather than extrapolating results to a larger population. All ethical guidelines were carefully observed during the study. The involvement of each student was fully voluntary, and they were supplied with detailed information regarding the study's objective, procedures, and their opportunity to leave at any moment without consequence. Before the study started, each participant gave their informed consent. Furthermore, by using pseudonyms and maintaining the secrecy of all interview data and personal information, the participants' identities were protected. This was done in order to preserve their privacy and promote candid and open communication about their experiences.

An open-ended questionnaire with 15 questions was used to gather data. With an emphasis on (1) their early difficulties learning English and using Google Sites, (2) the methods they used to get past these difficulties, and (3) their sense of accomplishment and self-assurance following the completion of the English e-book project through the e-portfolio, the questions were created to encourage students to reflect on their educational experiences. Participants were given the opportunity to describe their experiences in detail and to emphasize elements they felt were significant by the use of open-ended questions (Riessman, 2008). Thus, the participants were interviewed to gain deeper data. The interview session was conducted for around 30 minutes for each participant using guided question taken from questionnaire topics.

To find recurrent themes and patterns in the students' stories, the data were subjected to narrative analysis. In accordance with Riessman (2008), the analysis was conducted in multiple phases: 1) Familiarization: To have a general understanding of the narratives, read and reread the questionnaire replies. 2). Coding: Finding important statements and assigning them initial codes. 3). Thematicization: Putting codes into more general categories such early difficulties, coping mechanisms, skill improvement, and self-assurance. 4). Narrative construction: Integrating the topics into a cohesive narrative that illustrates how students' self-esteem changed as a result of the E-Portfolio project. Peer debriefing with other researchers was used to triangulate interpretations in order to ensure reliability, and participant anonymity was maintained throughout the reporting process.

3. Results and Discussions

This study reveals the experiences of four students of the Nutrition Science Department of Muhammadiyah University of Parepare in using Google Sites-based e-portfolios for English learning in English for Specific Purposes (ESP) classes. Through a narrative approach, a picture of the students' learning journey is obtained, starting from confusion to achieving success and pride after completing the final project in the form of an English E-Book.

3. 1. The Early Stage: Confusion and Challenges

In the early stages, students faced various obstacles. Confusion arose because they were not used to using Google Sites or e-portfolios. Language challenges are also very pronounced, such as limited vocabulary, low self-esteem when speaking in front of the class, and difficulty composing simple sentences. In addition, technical obstacles such as difficulty accessing features, choosing a design, and limited internet network also added to the frustration. These early experiences were characterized by a sense of "difficulty", 'hassle' and "confusion" that hampered their motivation (See Table 1).

Table 1. Interview result on the early stage of E-Portfolio implementation

No	Question	Statement			
	The Early Stage: Confusion and Challenge	Student 1	Student 2	Student 3	Student 4
1	Have you ever used Google sites for learning?	No	Yes	No	Yes
2	What was your impression when you first created an E-Portfolio on the Google-site application?	The first impression was difficult because it was my first experience creating an e-portfolio on the Google Site application.	At first I had difficulty using it.	At first, creating an e-portfolio in Google Sites seemed complicated because I didn’t understand the features. But after a while, after trying it out, it turned out to be really easy! Just drag, add text, images, or links, and you’re done.	My first impression when I used this Google site was that it was confusing, difficult and complicated, I had never even heard the word Google site before.

Recognizing these challenges, the teacher played a crucial role in mitigating the students’ frustration. They shifted from a “hands-off” approach to a more supportive, interactive one. The instructor provided step-by-step tutorials, offered one-on-one assistance to address technical issues, and held group sessions to practice language skills in a low-pressure environment. By encouraging peer collaboration, students were able to share tips and solutions, transforming the classroom into a supportive community where everyone felt comfortable asking for help. This shift in instructional strategy was key to helping students overcome their initial fear and confusion, paving the way for more meaningful learning.

With consistent support, students began to move beyond the early stages of frustration. The initial feelings of “difficulty,” “hassle,” and “confusion” were gradually replaced by a sense of accomplishment. They grew more confident in navigating Google Sites, experimenting with different designs, and even

troubleshooting minor technical problems on their own. Their language skills also saw a significant improvement; as they became more comfortable with the platform, their self-esteem in speaking and writing increased. This transition marked a turning point in their learning journey, demonstrating that with the right guidance and perseverance, initial obstacles can be transformed into opportunities for growth and skill development.

3. 2. Adaptation Process: Strategies for Overcoming Barriers

Over time, students began to find ways to overcome difficulties. They learned independently by trying feature by feature, looking for additional references through tutorials on YouTube, and discussing with friends. This process of exploration and practice fostered digital skills while reducing the fear of using English. Despite their initial hesitation, students began to get used to organizing assignments, composing text, adding images, and designing portfolios with more confidence (See Table 2).

Table 2. The Adaptation process of E-Portfolio implementation

No	Question	Statement			
	Adaptation Process	Student 1	Student 2	Student 3	Student 4
1	What challenges do you face when creating a project-based E-portfolio on Google-site, e.g. creating 'daily food consumption, traditional food and drink?'	Maybe my challenge is with the network, sometimes there is an error, it won't upload on my cellphone.	Not knowing the features	The challenges of creating a project-based e-portfolio on Google Sites include the difficulty of finding suitable images, the confusion of choosing the content to include, and the uncertainty of whether it's good enough. Furthermore, designing the poster is quite challenging, as it requires an attractive and professional appearance.	Since this was my first time, I was really, really confused, and I decided to watch a tutorial on YouTube. The part that was perhaps a bit tricky for me was when I wanted to organize daily food, traditional food, and drinks, because I really had to pay attention to the information and the appropriate layout.

Students' interaction with the e-portfolio changed as their abilities advanced. It was now a personal endeavor they could be proud of rather than just a difficult task. They began incorporating their personality into their work, creating visually striking and distinctive portfolios with their newly learned design talents. An important turning point was this change from a necessary duty to an act of creative self-expression. The e-portfolio evolved become a platform for exhibiting their personal development and inventiveness in addition to their academic achievements. Their sense of pride and ownership turned into a strong motivator that inspired them to work even harder.

The adaptation process also had a profound impact on their language skills. The repetitive practice of writing simple sentences for their portfolios, combined with the low-stakes environment of peer discussions, gradually built their confidence. They realized that communication was more important than perfect grammar, which helped them overcome their initial fear of making mistakes. As they gained fluency in the digital space, their willingness to speak and write in English increased. The e-portfolio became a space where they could experiment with language, receive constructive feedback, and track their own progress, transforming a source of anxiety into a pathway to greater fluency and self-assurance.

3. 3. Emotional Change: From Doubt to Confidence

Emotional transformation is one of the important findings. Students who initially felt inferior and reluctant to perform in English, gradually experienced an increase in confidence. Their success in completing one task after another in the e-portfolio built a new sense of confidence. Finally, when the E-Book project was completed, students reported feelings of pride, satisfaction and relief. This narrative reflects a confidence story, where the digital learning experience not only improves academic skills, but also strengthens students' affective aspects.

The students' emotional shift was largely driven by their ability to see their own progress. The e-portfolio became a tangible record of their hard work. Unlike traditional assignments that might be returned with a grade and then forgotten, the e-portfolio served as a live, evolving document. They could look back at their earlier,

simpler work and compare it to their later, more complex projects. This visual evidence of their growth from “confusion” to “mastery” was a powerful motivator, transforming a feeling of inadequacy into one of self-worth. It was this constant, visible progress that cemented their newfound confidence and made their journey feel truly meaningful (See Table 3).

Tabel 3. Interview Result on Emotional Change

No	Question	Statement			
	Emotional Change	Student 1	Student 2	Student 3	Student 4
1	How did you feel when you successfully created an assignment-based e-portfolio on Google Sites for your English learning? I was certainly very happy to have done it. Although it was a bit haphazard at first, I was able to improve it.	Of course, I was very happy because I was able to make it successfully, even though it was messy at first, it turned out I was able to fix it.	Very happy and proud of myself.	The feeling of successfully creating an assignment-based e-portfolio on Google Sites for English learning was incredibly rewarding, especially after it was all completed. It felt incredibly satisfying, as if all the hard work over the past few weeks had finally paid off.	Of course, I was happy and relieved, thoughts like this crossed my mind, “Finally, this can happen after going back and forth on YouTube.”

The emotional benefits extended far beyond the e-portfolio project itself. The confidence students gained from mastering a new digital tool and communicating in a second language began to have a ripple effect on other areas of their lives. They became more willing to participate in class discussions, initiated conversations with peers, and showed increased curiosity in other subjects. The experience taught them that they could overcome significant obstacles through persistence and strategy. This newfound resilience and belief in their own capabilities is perhaps the most significant outcome of all, proving that the e-portfolio was not just an academic tool,

but a catalyst for personal and emotional growth. This transformation from doubt to self-assurance is the true heart of their story.

3. 4. English Skill Development

E-portfolios play an important role in improving English language skills, especially in speaking and writing. Through project-based assignments, students become more accustomed to writing sentences, using nutrition vocabulary in English, and practicing the pronunciation of technical terms such as carbohydrate, protein, and fat. The repetition in the project tasks made them more familiar with the vocabulary, so their speaking and writing skills improved gradually (see Table 4).

Table 4. English Skill Deelopment

No	Question	Statement			
	English Skill Development	Student 1	Student 2	Student 3	Student 4
1	How did you develop your English skills, both speaking and writing, while studying using the E-portfolio on the Google site based on project assignments? Give an example of the development.	Of course, I’ve developed well because I rarely wrote and spoke at first, so I’ve gotten used to it. For example, I can write words well, and I can pronounce words like carbohydrates, protein, and fat, along with many other words.	Thank God, my English has improved and my pronunciation has improved, for example in pronouncing carbohydrate, fat, and vitamin.	While learning to use E-Portfolio on Google Sites, my English skills, both speaking and writing, have improved. For example, vocabulary I rarely used before is now used more frequently. For example, words that frequently come up when writing assignments have become easier to pronounce and more familiar.	There’s been some improvement in speaking, such as in pronouncing words like “fruit,” “carbohydrates,” and “consumption,” which are the most frequently mispronounced words, but because I’ve been constantly taught, I can now pronounce them correctly. There’s also been some improvement in writing, initially only being able to write one word at a time, then looking at a book again. Now I can write several words without looking at a book.

No	Question	Statement			
	English Skill Development	Student 1	Student 2	Student 3	Student 4
2	Have you noticed any changes in your English language skills after using Google Sites? Give an example of the change.	Yes, there are, such as how to speak and pronounce nutrition-based words, how to present correctly using English.	In my pronunciation, I always make mistakes in pronouncing carbohydrates, fats, and vitamins, so we are always trained in pronouncing them until we can do it. Thursday is also always given a food consumption project every Sunday and then a poster is made. Indirectly, we learn a lot of vocabulary from the project.	While learning to use E-Portfolio on Google Sites, my English skills, both speaking and writing, have improved. For example, vocabulary I rarely used before is now used more frequently. For example, words that frequently come up when writing assignments have become easier to pronounce and more familiar.	Of course, there are things I didn't know before, for example, the way years are pronounced, from 2025 (two thousand and twenty-five) to twenty-five. This is truly new knowledge for me.

The e-portfolio provided a unique and effective platform for improving speaking skills by removing the high-pressure environment of a live classroom presentation. Students could record their pronunciation of technical terms and their explanations of nutritional concepts in a private setting. This allowed them to practice as many times as they needed to, building confidence before sharing their work. The ability to listen to their own recordings also enabled them to self-assess and identify areas for improvement, like pronunciation or fluency. This personalized, self-paced practice was a crucial step in transforming their initial hesitation into a willingness to use English vocally.

Beyond rote memorization, the project-based assignments within the e-portfolio gave students a practical context for applying new vocabulary. Instead of simply learning words like “carbohydrate” or “protein” from a list, they had to use them to describe specific dietary plans and meal compositions. This active

application of terminology made the vocabulary more relevant and memorable. The act of organizing content, writing captions, and composing short descriptions for their projects forced them to repeatedly use and internalize the words, solidifying their understanding and making them a natural part of their writing and speaking lexicon. This contextual learning approach went far beyond traditional methods, leading to more lasting and practical language skills.

4. Discussion

4.1. Increased Self-Efficacy through E-Portfolio Experience

Findings show that the experience of completing an e-portfolio project forms mastery experiences that increase students' self-efficacy, in line with Bandura's theory that success in completing tasks is a major source of self-efficacy reinforcement. A quantitative study by Guo & Li (2024) found that the use of e-portfolios in second language writing instruction significantly increased writing self-efficacy. In addition, research by Laksana et al. (2021) on vocational students showed that e-portfolio-based learning methods significantly improved speaking self-efficacy (speaking ability) (aacu.org). These results are consistent with the results of your study, where students reported increased comfort in writing and speaking in English.

The use of e-portfolios in education is growing in popularity as a tool to support reflective learning, self-development and alternative assessment. Many recent studies have shown that the experience of using e-portfolios can increase students' and teachers' self-efficacy, whether in the context of language learning, teaching or career development. Experimental and quasi-experimental studies in various countries show that e-portfolio implementation significantly improves students' self-efficacy in writing, speaking, and other academic tasks compared to traditional methods (Guo & Li, 2024; Putu et al., 2023; Al-Hawamdeh et al., 2023; Laksana et al., 2021; Masoud, 2020).

Besides, the use of e-portfolios based on reflection, collaboration, and feedback has been shown to strengthen students' motivation, confidence, and engagement in the learning process (Guo & Li, 2024; Putu et al., 2023; Laksana et al., 2021; Polka

et al., 2021; Wetcho & Na-Songkhla, 2019). Self-efficacy increases more optimally if the e-portfolio is supported by mentors, technology training, scaffolding, and integration in the curriculum (Mokone & Setlalentoa, 2023; Michos et al., 2022; Thabane, 2024).

Personal factors such as motivation, experience, and perceived ease of use also play an important role in e-portfolio acceptance and effectiveness (Song, 2020; Wetcho & Na-Songkhla, 2019). Also, the literature shows consistently that the experience of using e-portfolios can increase student and teacher self-efficacy, especially if supported by reflective, collaborative and integrated learning designs. Its effectiveness even surpasses traditional assessment methods, making e-portfolios a highly potential tool for the development of self-efficacy and learning independence.

4.2. Enhancing Academic Autonomy and Reflection

The use of e-portfolios encourages students to self-reflect on their learning process. This reflects an increase in learner autonomy and reflective capacity, as found in a study by Ariningsih, Artini, and Marsakawati (2021), which showed that e-portfolios in project-based learning improved students' autonomy and writing ability (Ejournal of Ganesha University of Education). The individual reflection category in e-portfolios has also been shown to support increased self-efficacy and academic achievement, as reported in Education and Information Technologies.

The use of e-portfolios in education is increasingly recognized as an effective tool to encourage students' academic autonomy and self-reflection. E-portfolios provide a digital platform for students to document their learning process, reflect and set learning goals independently, thus strengthening their active role in the learning process. E-portfolios are proven to increase learning autonomy by encouraging students to be actively involved in decision-making, planning, and evaluating their own learning outcomes. Students who use e-portfolios show improved self-regulatory abilities, sense of responsibility, and independence in learning, both at high school and college levels (Aprianti & Winarto, 2021; Ariningsih et al., 2021; Thảm & Trinh, 2022; Al-Hawamdeh et al., 2023). The integration of

e-portfolio in project-based learning also enhances creativity, problem solving, and communication skills (Ariningsih et al., 2021).

Reflection is a key component in an e-portfolio, where students periodically assess and analyze their progress. Studies show that structured use of e-portfolios can improve the quality of students' reflection, higher-order thinking, and metacognitive awareness (Aprianti & Winarto, 2021; Ebil et al., 2020; López-Crespo et al., 2021; Ayaz & Gök, 2022; Pennazio & Fedeli, 2021; Rezaee & Zarifsanaiey, 2019). Teachers play an important role as facilitators and feedback providers to maximize the benefits of reflection through e-portfolios (Sultana et al., 2020; Chae & Lee, 2021).

The success of e-portfolios is influenced by integration in the curriculum, teacher training, technical support, and student motivation. Challenges that often arise include time constraints, student confidence in reflection, and the need for training in the use of technology (Beckers et al., 2016; Wardani et al., 2025; Meletiadou, 2021; Chae & Lee, 2021).

4.3. Reduce Anxiety and Increase Motivation

Students who initially felt “complicated” and inferior, later experienced increased motivation and a sense of satisfaction after successfully completing the e-portfolio task. This finding is similar to a study in Language Testing in Asia (2023), which compared e-portfolios with summative assessments, and found that e-portfolios were more effective in increasing self-efficacy, reducing learning anxiety, and increasing student independence (SpringerLink).

E-Portfolio applications positively impact reflective thinking, learning motivation, and performance tasks of primary school teacher candidates (Ayaz, M., & Gök, B. (2022). E-portfolios are increasingly used in education to support students' psychological well-being, particularly in reducing anxiety and increasing motivation to learn. Studies have shown that e-portfolios can create a more reflective, personalized and supportive learning environment, which has a positive impact on students' emotions and motivation.

Several studies have found that the use of e-portfolios significantly reduces anxiety levels, especially in the context of language learning and writing. E-portfolios based on Problem-Based Learning (PBL) were shown to reduce writing anxiety and improve students' writing performance (Babaei & Borji, 2017). In online learning during the pandemic, e-portfolios were also effective in reducing foreign language anxiety (FLA) in online speaking classes, without significant differences between genders (Putu et al., 2022). The integration of e-portfolios with media such as Canva in English for Specific Purposes (ESP) learning also reduces anxiety and increases self-efficacy (Budi & Anwar, 2024). In addition, portfolios (including e-portfolios) can reduce test anxiety and increase student confidence (Contreras-Soto et al., 2019).

4.4. Strengthening Professional Identity and Disciplinary Relevance

Through projects that integrate nutrition vocabulary and local culture, e-portfolios help students build a stronger academic identity, and link language learning and nutrition content. While there are limited studies on ESP and e-portfolios in the literature, research on employability shows that e-portfolios support professional development and reflection skills, and facilitate metacognition, which is important for career readiness. E-portfolios have developed into an important tool in higher education and professional development, not only as documentation of achievements, but also as a means of establishing professional identity and asserting disciplinary relevance.

E-portfolios allow students and professionals to reflect on the learning journey, identify strengths and weaknesses, and plan for continuous self-development. A study on nurses showed that about 70% of participants felt e-portfolios helped them understand themselves as lifelong learners and strengthen their professional identity (El-Khatib & Helmy, 2023). In teacher education, e-portfolios are used to document teaching philosophy, internship experience, and professional development, thus clarifying identity as a future educator (Babaei et al., 2021; Harun et al., 2021; Воротникова & Захар, 2021).

E-portfolios serve as a bridge between academia and the world of work, displaying evidence of competencies and achievements relevant to the field of

study. Students recognize e-portfolios as a tool for career planning and improving readiness to enter the job market (Mgarbi et al., 2022; Gutiérrez-Santiuste et al., 2022; Ciesielkiewicz, 2019). In the context of Industry 4.0, e-portfolios also support cross-organizational competency development and maintain professional competitiveness (Binbusayis & Vaiyapuri, 2022).

In addition, E-portfolios encourage deep reflection and collaboration within professional learning communities, strengthening generic knowledge and cross-disciplinary skills (Isteni, 2008; Schaaf et al., 2016; Siddiqui et al., 2022). Here, E-portfolios have been shown to be effective in strengthening professional identity and disciplinary relevance, both through reflection, documentation of accomplishments, and work readiness. The integration of e-portfolios in curriculum and professional development is highly recommended to support lifelong learning and employability.

5. Conclusion

This study explores the experiences of four students of the Department of Nutrition Science at Universitas Muhamamdiyah Parepare in using a Google Sites-based e-portfolio in learning English for Specific Purposes (ESP). The results showed a significant transformation from confusion and low self-esteem in the early stages, to improved English language skills, learning independence, and confidence after completing the final project in the form of an English e-book. Thus, this study confirms the potential of e-portfolio as an innovative learning strategy that empowers students to be more competent, reflective, and confident in the language learning process. Further studies are recommended to involve more participants, use more diverse data triangulation, and compare the effectiveness of e-portfolios with other digital media to expand the generalizability of the findings.

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Conflicts of Interest (Optional)

Authors are required to disclose any conditions that may be judged improper and that might impact the interpretation of the reported study results, either by stating a conflict of interest or by writing "Authors may declare no conflict of interest." This section must specify any involvement of the funders in the study design, data collection, analysis, or interpretation, article preparation, or publishing. If there is no role, kindly mention, "The funders have no involvement in any of the related stages."

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