



Enhancing Critical Thinking through Portfolio-Based Learning: A Review of Strategies and Challenges in EFL Education

Omaima Abugaila Elmahdi Maousa

University of Zawia, College of Education, Abuissa, English Department, Zawia, Libya, LY 00218, o.maousa@zu.edu.ly

ABSTRACT :

Developing critical thinking skills is essential for EFL students to enhance their language proficiency and academic success. Portfolio-based learning (PBL) has emerged as a pedagogical approach that promotes active learning, self-reflection, and metacognitive awareness. This review explores the relationship between PBL and the development of critical thinking in EFL students. It examines key studies on the effectiveness of portfolios in fostering higher-order cognitive skills such as analysis, evaluation, and problem-solving. The findings indicate that portfolio-based learning encourages deeper engagement with language tasks, facilitates self-assessment, and supports personalized learning experiences. However, challenges such as time constraints, teacher training, and assessment validity remain obstacles to its widespread adoption. This paper also highlights research gaps, suggesting the need for further studies on the integration of digital portfolios and AI-assisted assessment tools in EFL classrooms. The review concludes that while PBL has strong potential to enhance critical thinking, successful implementation requires a structured approach and ongoing support for both educators and students.

Keywords: Portfolio-Based Learning, Critical Thinking, EFL Education, Self-Reflection, Assessment and Evaluation.

1. Introduction

In English as a Foreign Language (EFL) education, developing critical thinking is vital for enabling students to analyze, evaluate, and apply knowledge in real-world contexts. Yet, traditional methods, centered on memorization and grammar drills, often fall short in fostering higher-order cognitive skills. This has led to growing interest in active, reflective, and student-centered approaches like portfolio-based learning (PBL).

PBL encourages learners to document and reflect on their progress over time through diverse artifacts such as essays, projects, and journals. This continuous assessment supports self-awareness, goal-setting, and metacognitive growth. Rooted in constructivist theory, PBL emphasizes active engagement and ownership of learning, helping students become independent thinkers rather than passive recipients of knowledge. Despite its benefits, implementing PBL poses challenges, including time constraints, subjective assessment, and student resistance to self-directed learning. Teachers may struggle with evaluating reflective work consistently, while students used to traditional testing may find PBL unfamiliar.

Moreover, while research supports PBL's role in enhancing critical thinking, the specific cognitive mechanisms it impacts remain underexplored. Further empirical studies are needed to examine how portfolios shape skills like argumentation, reasoning, and problem-solving.

This study investigates how PBL fosters critical thinking in EFL learners, the challenges it entails, and directions for future research. By analyzing current literature, it seeks to clarify how portfolios can effectively support cognitive development in language learning.

2. Purpose of the Study

This review examines the relationship between portfolio-based learning and the development of critical thinking skills in EFL students. It aims to:

1. Define portfolio-based learning and its role in language education.
2. Explore the connection between PBL and critical thinking development in EFL learners.
3. Identify challenges and limitations in implementing PBL in EFL classrooms.
4. Highlight research gaps and propose directions for future studies.

3. Significance of the Study

Understanding the role of portfolio-based learning in fostering critical thinking can provide valuable insights for EFL educators, curriculum designers, and policymakers. By identifying effective strategies and potential barriers, this study contributes to the ongoing discussion on improving student engagement, cognitive development, and autonomous learning in EFL contexts.

4. Theoretical Framework

A strong theoretical framework is essential for understanding how portfolio-based learning fosters critical thinking development in EFL students. This section examines the key learning theories and models that support the integration of PBL and critical thinking in language education.

4.1 Constructivist Learning Theory

The constructivist learning theory posits that learners actively construct knowledge rather than passively receive information (Piaget, 1972). According to Vygotsky's (1978) socio-constructivist perspective, learning occurs through social interaction and reflective engagement. PBL aligns with this theory in several ways. Portfolio-based learning promotes active engagement by requiring students to analyze, reflect, and revise their work continuously, fostering active cognitive processing rather than passive memorization (Moon, 2020). Through scaffolding and the Zone of Proximal Development (ZPD), teachers provide guidance and structured feedback, allowing students to gradually transition from dependent learning to independent critical thinking (Vygotsky, 1978). This gradual release of responsibility helps learners develop problem-solving skills and gain confidence in their ability to evaluate and improve their work. Additionally, collaborative learning plays a key role in PBL, as peer assessments and constructive feedback create opportunities for social interaction and higher-order thinking. By engaging in discussions, reviewing peers' work, and considering alternative perspectives, students refine their analytical skills and enhance their critical reasoning abilities (Brookfield, 2021). This dynamic learning process fosters intellectual autonomy and deeper cognitive engagement, making PBL an effective tool for developing critical thinking in EFL students.

4.2 Experiential Learning Theory

Kolb's Experiential Learning Theory emphasizes learning through experience, reflection, and application (Kolb, 1984). Portfolio-based learning aligns with experiential learning principles, enabling students to engage in a cycle of learning and reflection that enhances critical thinking skills. Through concrete experience, students participate in authentic learning tasks, such as writing essays, conducting research, and presenting arguments, which allow them to apply language skills in meaningful contexts. This hands-on engagement is followed by reflective observation, where students analyze their progress, evaluate their own thinking process, and identify areas for improvement (Lam, 2020). Reflection fosters metacognitive awareness, helping learners become more aware of their cognitive strengths and weaknesses. As they progress, students engage in abstract conceptualization, where they connect their learning experiences to theoretical knowledge, allowing them to develop deeper insights into language use, academic writing, and critical reasoning (Moon, 2020). Finally, PBL encourages active experimentation, as students revise their work based on feedback, test new strategies, and refine their understanding through continuous improvement (Tillema & Smith, 2021). This iterative process helps students develop autonomy, enhance problem-solving skills, and cultivate higher-order thinking abilities, making PBL a powerful instructional tool in EFL education.

4.3 Self-Regulated Learning (SRL) Theory

Zimmerman's Self-Regulated Learning (SRL) theory explains how learners develop metacognitive, motivational, and behavioral control over their learning process (Zimmerman, 2002). PBL supports SRL by fostering self-reflection, goal-setting, and continuous feedback adaptation. One of the key benefits of PBL is its ability to promote self-reflection, allowing students to assess their own strengths and weaknesses and gain deeper awareness of their learning progress, which is a fundamental aspect of critical thinking development (Paris & Ayres, 2021). Additionally, PBL encourages goal-setting, as students establish personalized learning objectives based on their reflections, which in turn increases intrinsic motivation and fosters a sense of ownership over their educational journey (Benson, 2019). Another essential component of PBL is its emphasis on feedback and adaptation, where students receive teacher and peer feedback, helping them refine their work through evaluation, revision, and improvement (Tsui, 2021). This iterative learning process strengthens analytical skills, as students learn to critically assess their own work, recognize areas for enhancement, and apply constructive feedback effectively. By integrating self-reflection, goal-setting, and feedback-driven learning, PBL provides a comprehensive framework for fostering higher-order cognitive skills in EFL students.

4.4 Critical Thinking Frameworks

Several critical thinking models support the integration of portfolio-based learning in EFL education:

4.4.1 Bloom's Taxonomy of Cognitive Skills

Bloom's Taxonomy (revised by Anderson & Krathwohl, 2001) stated that portfolio-based learning (PBL) effectively aligns with Bloom's Taxonomy, facilitating the development of higher-order cognitive skills essential for critical thinking in EFL students. At the foundational level, PBL supports remembering, as students' recall vocabulary, grammar rules, and language structures, reinforcing their linguistic knowledge through portfolio entries. Moving beyond memorization, PBL fosters understanding by requiring students to explain ideas and summarize texts, helping them engage with course materials in a more meaningful way. As students' progress, they transition to applying their knowledge in new contexts, such as writing argumentative essays or engaging in reflective journal entries, where they demonstrate their ability to use learned concepts in authentic communication.

A key aspect of PBL is its role in analyzing information, as students break down complex ideas, compare different perspectives, and examine relationships between concepts, an essential component of critical reasoning. This analytical approach naturally leads to evaluating, where students make judgments based on established criteria, such as peer reviewing essays, providing constructive feedback, and assessing the credibility of sources. Ultimately, PBL fosters creating, the highest cognitive skill in Bloom's framework, as students generate new ideas, synthesize multiple sources, and

engage in original research or creative writing projects (Halpern, 2020). By guiding students through these cognitive stages, PBL provides a structured and reflective learning process that enhances critical thinking, problem-solving, and independent learning skills in EFL education.

4.4.2 Paul and Elder's Critical Thinking Model

Paul and Elder's (2021) critical thinking framework provides a structured approach to developing analytical and reasoning skills, which aligns well with portfolio-based learning in EFL education. One of the fundamental aspects of this framework is clarity, where students must define and express their ideas accurately, ensuring that their written reflections and analyses are well-structured and comprehensible. Through PBL, learners engage in multiple revisions and feedback cycles, which help them refine their ability to communicate their thoughts effectively.

Additionally, accuracy plays a crucial role in evaluating sources, supporting claims with credible evidence, and fact-checking information presented in portfolio tasks. Students must ensure their arguments are grounded in reliable references, reinforcing their critical evaluation skills. Another key element is precision, which requires learners to provide detailed and specific reasoning in their work. Whether they are analyzing texts, writing essays, or presenting arguments, students are encouraged to elaborate on their ideas with depth and clarity, strengthening their ability to construct well-founded arguments.

Relevance is also a vital component, as students must connect their ideas to the central argument or learning objectives within their portfolios. By engaging in self-reflection and structured feedback, they learn to eliminate unnecessary details and focus on key insights that contribute to their academic growth. Finally, logic ensures that students' conclusions follow from the evidence presented, reinforcing structured thinking and sound reasoning (Davidson & Dunham, 2020). By applying Paul and Elder's critical thinking model, PBL helps students develop a habit of rigorous analysis, structured argumentation, and reflective learning, ultimately enhancing their ability to think critically and communicate effectively in EFL education.

4.5 Sociocultural Theory and Collaborative Learning

Vygotsky's Sociocultural Theory (1978) highlights the role of social interaction and cultural context in learning, emphasizing that knowledge is co-constructed through communication. In portfolio-based learning (PBL), this is seen in the interactive and scaffolded nature of the process. Peer collaboration is central, as students engage in group discussions, feedback, and cooperative tasks that promote critical thinking through dialogue (Tsui, 2021). These exchanges help students develop reasoning skills and consider diverse perspectives in writing.

Authentic communication is another key element; portfolios enable real-world tasks like debates, reflections, and self-assessments, encouraging meaningful language use and clear articulation of ideas (Stapleton, 2019). This shifts learning from memorization to active expression. Teacher scaffolding also plays a vital role. Educators initially provide structured guidance, which gradually decreases as students gain independence in evaluating and refining their work (Shepard, 2022). This transition fosters autonomy, self-regulation, and confidence in academic writing.

PBL aligns with Vygotsky's view of learning as a social process. It also draws on constructivist, experiential, and self-regulated learning theories, as well as critical thinking frameworks. By integrating Bloom's Taxonomy, Paul and Elder's model, and sociocultural principles, PBL promotes both language proficiency and cognitive growth in EFL learners.

5. Portfolio-Based Learning: Concept and Implementation

5.1 Concept of Portfolio-Based Learning

Portfolio-based learning (PBL) is an alternative assessment method that emphasizes continuous learning, self-reflection, and student autonomy, in contrast to traditional assessments focused on standardized testing (Barrett, 2018). A portfolio typically includes a variety of student work, essays, reports, presentations, and reflections, demonstrating progress and achievement (Brown & Hudson, 2021).

Portfolios serve different purposes depending on their use. Process portfolios document drafts, revisions, and reflections, encouraging self-assessment and critical thinking. They help students track growth and build metacognitive and analytical skills by focusing on the learning journey rather than just outcomes. In contrast, product portfolios highlight final work for grading or certification, offering a summative view of student proficiency. Showcase portfolios, meanwhile, present a student's best work for applications or professional purposes, emphasizing strong performance.

With technology, electronic portfolios (e-portfolios) have grown in use. These digital collections allow students to include multimedia, increasing accessibility and flexibility in showcasing their work (Abrami & Barrett, 2020). E-portfolios also support collaboration through easy sharing and real-time feedback. Regardless of format, portfolios promote self-directed learning and critical thinking, making them valuable in EFL education. Through PBL, students regularly evaluate their progress, fostering metacognitive skills and deeper engagement with language learning (Gulbahar & Tinmaz, 2021).

5.2 Implementation of Portfolio-Based Learning in EFL Classrooms

Implementing portfolio-based learning in an EFL classroom requires a structured approach to ensure its effectiveness in fostering language skills and critical thinking. The first step in this process is setting learning objectives, where teachers define clear goals for student portfolios and align them with curriculum standards and language proficiency targets (Benson, 2019). This ensures that portfolios are purpose-driven, focusing on specific language competencies, such as writing, speaking, reading, and self-reflection.

Once objectives are established, the next step is selecting portfolio content, which involves collaboration between teachers and students to determine the types of work to include. Portfolios may contain a variety of artifacts, such as written assignments, recorded speaking tasks, reading reflections, and

self-assessments, providing a comprehensive record of student progress (Tillema & Smith, 2021). This student-centered approach encourages learners to take ownership of their learning by making informed decisions about what best represents their growth.

A crucial element of PBL is the integration of self-reflection and peer feedback, where students regularly assess their own work and engage in peer evaluations to analyze strengths and weaknesses (Zhang, 2020). This practice helps develop metacognitive awareness, allowing students to recognize their areas for improvement and apply critical thinking skills to their learning process (Tassinari, 2018). In addition to self-reflection, providing formative assessment is essential, as teachers give ongoing feedback rather than relying solely on final grades (Shepard, 2022). This continuous assessment process helps students understand their academic progress, motivating them to revise and refine their work over time.

Lastly, using digital tools can significantly enhance portfolio-based learning by incorporating e-portfolios, where students can digitally organize, submit, and reflect on their work (Chau & Cheng, 2019). Digital platforms also facilitate collaborative learning, allowing students to share their portfolios with peers and instructors, receive instant feedback, and access multimedia resources to enrich their learning experience (Lam, 2020). By following this structured framework, EFL educators can effectively implement PBL, creating a dynamic and reflective learning environment that supports language development, self-regulated learning, and critical thinking skills.

5.3 Challenges in Implementing Portfolio-Based Learning

Despite its numerous benefits, the implementation of portfolio-based learning in EFL classrooms presents several challenges that can hinder its effectiveness. One of the main obstacles is its time-consuming nature, as both students and teachers must dedicate significant effort to creating, maintaining, and assessing portfolios. Unlike traditional assessments that rely on standardized tests or single-task evaluations, PBL requires ongoing documentation, reflection, and revision, making it a labor-intensive process for educators and learners alike (Paris & Ayres, 2021).

Another key issue is assessment reliability, as grading portfolios involves subjective evaluation rather than quantifiable scoring. Ensuring fair and consistent grading can be challenging, particularly when assessing critical thinking and self-reflection, which do not always fit into rigid assessment rubrics (Hamp-Lyons & Condon, 2020). Without clear and standardized evaluation criteria, portfolio assessment may lead to inconsistencies in grading, potentially affecting student motivation and academic outcomes.

Additionally, teacher training needs pose a significant barrier to successful PBL implementation. Many EFL instructors lack sufficient training and experience in integrating portfolio-based assessment into their teaching practices, making it difficult to provide structured guidance and meaningful feedback (Tillema & Smith, 2021). Without professional development opportunities focused on portfolio assessment strategies, rubric design, and feedback techniques, teachers may struggle to implement PBL effectively.

Finally, student resistance to PBL is another challenge, as some learners find self-directed learning overwhelming and prefer structured assessment methods like multiple-choice exams or essay-based tests (Zhang, 2020). Many students, particularly those from traditional educational backgrounds, may initially struggle with taking ownership of their learning process, leading to low engagement and motivation (Abrami & Barrett, 2020). To address this, educators must introduce portfolio-based learning gradually, provide clear guidelines, and offer continuous support to help students adapt to this student-centered approach.

6. Critical Thinking in EFL Education

6.1 Defining Critical Thinking in EFL Learning

Critical thinking (CT) is a higher-order cognitive skill that involves analyzing, evaluating, and synthesizing information to form reasoned judgments (Facione, 2019). In the context of English as a Foreign Language (EFL) education, critical thinking is essential for developing reading comprehension, academic writing, problem-solving, and effective communication (Atkinson, 2020). Ennis (2018) defines critical thinking as "reasonable reflective thinking that is focused on deciding what to believe or do" (p. 45). It enables students to question assumptions, interpret texts critically, and engage in meaningful discussions.

Critical thinking is a crucial skill in EFL learning, as it enables students to engage with language analytically and reflectively. Several key components contribute to the development of critical thinking skills in EFL students. One of the fundamental aspects is analysis, which involves breaking down information, identifying key ideas, and understanding relationships between concepts (Paul & Elder, 2021). Through activities such as reading comprehension, argument analysis, and text deconstruction, students develop their ability to critically interpret and evaluate written or spoken discourse.

Another essential component is evaluation, where students assess arguments, evidence, and reasoning to determine their credibility and relevance. In EFL learning, this skill is particularly important in academic writing and debate, as students must critically analyze sources, assess bias, and construct well-supported arguments (Halpern, 2020). Strengthening evaluation skills helps learners distinguish between fact and opinion, enabling them to form independent judgments and engage in logical reasoning.

Inference is also a key element of critical thinking, as it allows students to draw logical conclusions based on available information. EFL learners frequently engage in inferring meaning from context, predicting outcomes, and making educated guesses based on textual clues, all of which contribute to stronger comprehension and reasoning abilities (Lai, 2019). By practicing inferential thinking, students become more adept at understanding implicit meanings in texts, deducing author intentions, and constructing well-reasoned arguments.

Self-regulation plays a crucial role in critical thinking development, as it encourages students to reflect on their cognitive processes and make improvements (Stapleton, 2019). In the EFL classroom, self-regulation involves monitoring one's learning progress, identifying areas for improvement, and applying strategies for better performance (Kuhn, 2018). Through self-reflection, goal-setting, and iterative revision, students become more autonomous learners capable of critically assessing their own work and refining their thought processes.

6.2 The Importance of Critical Thinking in EFL Classrooms

Integrating critical thinking into EFL education significantly enhances students' language proficiency, cognitive development, and academic performance. It improves reading comprehension by enabling learners to analyze texts, uncover implicit meanings, and evaluate arguments, thus fostering deeper engagement with complex ideas (Wallace, 2020).

In writing, critical thinking supports structured argumentation and logical coherence, equipping students to craft well-supported essays and synthesize information effectively, skills vital in academic and professional contexts (Cottrell, 2019). For speaking and listening, engaging in debates and discussions helps students articulate viewpoints, defend arguments, and interpret spoken discourse critically, enhancing their communicative competence (Elder & Paul, 2019). Moreover, critical thinking fosters autonomous learning by encouraging self-reflection and independent problem-solving, leading to increased motivation and adaptability (Brookfield, 2021).

Finally, it prepares students for global communication by developing cross-cultural understanding and the ability to navigate diverse perspectives, essential in today's interconnected world (Nunan, 2020). Overall, embedding critical thinking in EFL instruction cultivates essential cognitive skills, bolsters language abilities, and equips learners to meet academic and real-world challenges.

6.3 Challenges in Developing Critical Thinking in EFL Learners

Despite its value, integrating critical thinking into EFL education faces several challenges. A major obstacle is limited language proficiency, which hinders students' ability to express complex ideas and engage in analytical discussions (Richards, 2020). This linguistic barrier often prevents learners from fully developing their reasoning skills in a second language. Traditional teaching methods also pose a challenge, as many classrooms still focus on memorization and grammar drills rather than promoting analytical thinking or problem-solving (Pennycook, 2019). Such environments offer little space for debate, reflection, or critical inquiry.

Lack of teacher training further complicates matters. Many educators are not equipped with the skills or strategies needed to incorporate critical thinking into language instruction (Tsui, 2021). Without targeted professional development, they may struggle to design tasks that foster reasoning and evaluation. Assessment is another issue; as critical thinking is difficult to measure objectively. Unlike grammar or comprehension tests, evaluating reasoning and argumentation can be subjective and lacks standardized tools (Davidson & Dunham, 2020).

To address these barriers, there is a need to enhance language support, promote student-centered approaches, train teachers, and develop more reliable assessment methods (Kabilan, 2020). Innovative strategies like problem-based learning, debates, argument mapping, and portfolio-based learning can also help deepen student engagement.

6.4 Strategies for Promoting Critical Thinking in EFL Education

Several teaching approaches have been identified as effective in fostering critical thinking skills among EFL learners, as they encourage students to analyze, evaluate, and synthesize information while enhancing their language proficiency. One of the most influential methods is Socratic questioning, which encourages students to ask deeper questions, challenge assumptions, and engage in critical discussions (Paul & Elder, 2021). By prompting learners to justify their reasoning, consider alternative perspectives, and clarify their thoughts, Socratic questioning helps them develop logical thinking and argumentation skills, which are essential in both academic and real-world contexts.

Another powerful strategy is Problem-Based Learning, which involves students in real-world problem-solving tasks that require critical evaluation, reasoning, and collaboration (Hmelo-Silver, 2020). In this approach, learners are presented with complex, authentic problems that they must analyze and solve, promoting independent inquiry, research skills, and practical language application. PBL is particularly useful in EFL settings because it encourages students to think critically while using language in meaningful, communicative contexts.

Debates and discussions also play a crucial role in developing both language skills and critical thinking. Engaging in structured debates allows students to defend their viewpoints with evidence, assess counterarguments, and construct logical responses, improving their persuasive language abilities and analytical reasoning (Stapleton, 2019). Classroom discussions further provide opportunities for active listening, argument evaluation, and articulation of complex ideas, all of which are essential for higher-order cognitive development in EFL learners.

In addition to spoken discourse, reflective writing and journaling help students analyze their thoughts, track their learning progress, and develop self-regulation skills (Moon, 2020). Writing reflections enables learners to articulate their experiences, critically evaluate their understanding, and identify areas for improvement, fostering metacognitive awareness and deeper engagement with learning materials (Kuhn, 2018). This process not only enhances their writing fluency but also encourages independent thinking and self-directed learning.

Lastly, Portfolio-Based Learning supports critical thinking development by allowing students to collect, review, and reflect on their work over time, providing insight into their intellectual growth and language development (Tillema & Smith, 2021). Portfolios encourage learners to self-assess their progress, recognize patterns in their learning, and revise their work based on feedback, reinforcing cognitive flexibility and problem-solving skills.

7. The Interplay Between Portfolio-Based Learning and Critical Thinking

7.1 Enhances Critical Thinking through Portfolio-Based Learning

Portfolio-based learning (PBL) is a student-centered assessment approach that fosters critical thinking by encouraging self-reflection, analysis, and evaluation of one's learning process (Tillema & Smith, 2021). Unlike traditional testing methods, portfolios require students to actively engage in their learning, leading to deeper cognitive processing and the development of higher-order thinking skills.

Moon (2020) stated that portfolio-based learning promotes critical thinking in EFL education by:

1. Encouraging Self-Reflection and Metacognition:

Portfolios play a significant role in fostering self-reflection and metacognitive awareness in EFL learners, enabling them to take an active role in their learning process. By regularly evaluating their progress, identifying strengths and weaknesses, and setting future learning goals, students develop a deeper understanding of their own academic growth and language proficiency (Brookfield, 2021). This reflective practice encourages learners to analyze their past performance, recognize areas for improvement, and implement strategies for self-improvement, promoting a continuous learning mindset.

Furthermore, this self-assessment process enhances metacognitive awareness, which is a fundamental component of critical thinking (Facione, 2019). Metacognition allows students to monitor their thought processes, assess the effectiveness of their learning strategies, and make informed adjustments to their study habits. As a result, learners become more independent, self-regulated, and strategic thinkers, which not only improves their language acquisition but also strengthens their ability to analyze and solve complex problems. By integrating portfolio-based learning, educators can create a structured and reflective learning environment that empowers students to think critically, take ownership of their progress, and develop lifelong learning skills.

2. Developing Analytical and Evaluative Skills:

Portfolio assessment plays a crucial role in developing critical thinking skills by encouraging students to engage in continuous revision and self-improvement. One of the key aspects of this process is revising and improving work based on feedback, which enhances students' ability to analyze their writing, identify weaknesses, and make informed revisions (Lam, 2020). Unlike traditional assessments that provide a single grade, portfolios emphasize iterative learning, allowing students to refine their work through teacher and peer feedback. This process not only improves language proficiency but also fosters higher-order thinking skills, as students learn to critically assess their writing structure, argumentation, and clarity.

Additionally, portfolio-based learning requires students to evaluate the quality and credibility of their own work and sources, promoting critical evaluation skills essential for academic success (Halpern, 2020). By assessing their research, arguments, and supporting evidence, learners develop the ability to distinguish between reliable and unreliable information, recognize biases, and strengthen their reasoning skills. This practice cultivates independent judgment and analytical thinking, equipping EFL students with the necessary skills to engage in scholarly discourse, construct well-supported arguments, and apply critical thinking in both academic and real-world contexts. Through portfolio assessment, students become more self-aware, reflective, and capable of making informed academic decisions, contributing to their overall intellectual and linguistic development.

3. Fostering Autonomy and Decision-Making:

Portfolio-based learning fosters student autonomy by shifting responsibility to the learner, requiring them to make independent decisions about what to include in their portfolio and how to improve their work (Benson, 2019). Unlike traditional assessments, where teachers dictate the content and evaluation criteria, PBL empowers students to take ownership of their learning process, encouraging them to self-assess their progress, reflect on their strengths and weaknesses, and make intentional choices about their academic development. This autonomy helps learners develop self-regulation skills, reinforcing their ability to set personal learning goals and take proactive steps toward improvement.

Furthermore, this decision-making process closely aligns with real-world problem-solving, which is a core component of critical thinking (Paul & Elder, 2021). In both academic and professional settings, individuals must evaluate options, analyze potential outcomes, and make informed choices based on evidence and reasoning. Through portfolio-based learning, students engage in these cognitive processes, enhancing their ability to think critically, assess multiple perspectives, and apply logical decision-making strategies. By fostering independence and problem-solving skills, PBL prepares students for lifelong learning and adaptability, equipping them with the cognitive flexibility needed to navigate complex academic and professional challenges.

4. Encouraging Constructive Feedback and Peer Interaction:

Portfolio-based learning (PBL) fosters peer assessments and collaborative learning, where students actively evaluate each other's work, provide constructive feedback, and engage in meaningful discussions (Tsui, 2021). This process requires logical reasoning, as students must carefully assess the strengths and weaknesses of their peers' work, justify their critiques, and offer specific, evidence-based suggestions for improvement. By engaging in peer evaluation, learners develop a deeper understanding of quality writing, coherence, and argumentation, which enhances their critical thinking and self-reflection skills.

Moreover, this collaborative process not only strengthens language skills but also enhances students' ability to analyze and assess arguments critically (Davidson & Dunham, 2020). When reviewing peer work, students must apply analytical thinking to identify inconsistencies, assess the validity of arguments, and recognize logical fallacies. This active engagement with language and reasoning helps learners develop a more structured approach to forming and defending their own ideas, improving their ability to construct clear, well-supported arguments in both spoken and written communication.

8. Empirical Studies on Portfolio-Based Learning and Critical Thinking

Several studies have highlighted the positive impact of portfolio-based learning (PBL) on critical thinking development in EFL students, demonstrating its effectiveness in fostering higher-order cognitive skills, analytical reasoning, and self-regulated learning. For instance, Lam (2020) conducted a study on EFL writing portfolios and found that students who used portfolios developed stronger argumentation skills, improved their analytical thinking, and demonstrated greater awareness of text structure compared to those in traditional classrooms. This suggests that portfolio-based learning not only enhances writing proficiency but also encourages students to think critically about their writing choices, organization, and logical coherence.

Similarly, Gulbahar and Tinmaz (2021) examined the use of digital portfolios in EFL classrooms and reported that students who engaged with digital portfolios demonstrated higher motivation, engaged more critically with their work, and showed improved problem-solving abilities. The incorporation of technology in PBL allowed students to collaborate, receive instant feedback, and reflect on their progress, reinforcing critical evaluation and independent learning skills.

Additionally, Tassinari (2018) analyzed self-regulated learning in EFL students and found that portfolios played a crucial role in enhancing self-directed learning, reflection, and cognitive engagement, all of which are essential components of critical thinking. By requiring students to monitor their progress, assess their strengths and weaknesses, and make informed decisions about their learning strategies, portfolio-based learning fosters intellectual autonomy and deeper cognitive processing.

8.1 Challenges in Using Portfolio-Based Learning for Critical Thinking Development

While portfolio-based learning supports critical thinking, its implementation in EFL classrooms faces notable challenges. A major concern is the time demand; PBL involves continuous feedback and revision, making it difficult to manage in large classes (Paris & Ayres, 2021). Teachers must evaluate multiple submissions and provide individualized feedback, which is far more demanding than standardized testing.

Another issue is the subjectivity of assessment. Portfolios require qualitative judgments on reflections and analysis, which can result in inconsistent grading without clear rubrics (Hamp-Lyons & Condon, 2020). Additionally, many EFL students are unaccustomed to self-directed learning and may resist the autonomy PBL requires (Zhang, 2020). To address these issues, educators should develop clear, standardized rubrics to guide both grading and self-assessment (Shepard, 2022). Digital portfolios can also streamline management, facilitate feedback, and boost engagement (Chau & Cheng, 2019). These platforms allow efficient tracking of student progress and encourage collaboration.

Finally, explicit instruction in critical thinking is essential. Many students lack training in argumentation, reflection, and evaluation, which limits their ability to engage fully in PBL (Paul & Elder, 2021). Teaching these skills can enhance both language proficiency and intellectual growth.

By using rubrics, integrating digital tools, and teaching critical thinking explicitly, educators can overcome PBL challenges and create a supportive, engaging environment for EFL learners.

8.2 Future Directions in Portfolio-Based Learning and Critical Thinking

Given the growing emphasis on critical thinking in EFL education, researchers suggest several future directions to enhance the effectiveness of portfolio-based learning. One promising area is the integration of AI-powered assessment tools, which can provide instant, data-driven feedback on student reflections, helping learners develop more structured and analytical reasoning (Abrami & Barrett, 2020). AI technology can assist in identifying patterns in student writing, offering automated suggestions for improvement, and detecting logical inconsistencies in arguments. By incorporating AI-based feedback, educators can streamline the assessment process, allowing for more efficient and objective evaluation of students' critical thinking progress.

Another recommended approach is the adoption of hybrid models that combine portfolios with traditional assessment methods. A balanced evaluation system that integrates both portfolios and standardized tests may offer a more comprehensive assessment of students' cognitive development (Benson, 2019). While portfolios capture in-depth learning progress, reflective thinking, and creativity, standardized tests provide a structured, quantifiable measure of academic proficiency. By merging these two approaches, educators can leverage the strengths of both assessment models, ensuring that students' analytical and problem-solving abilities are effectively measured.

Furthermore, researchers advocate for longitudinal studies on portfolio-based learning, as more research is needed to track the long-term impact of PBL on critical thinking in EFL learners (Nunan, 2020). Current studies primarily focus on short-term improvements, but it remains unclear whether the cognitive benefits of PBL persist over time. Longitudinal research could provide insights into how sustained engagement with portfolios affects students' ability to transfer critical thinking skills to other academic subjects, professional environments, and real-world scenarios. Such studies would also help educators refine portfolio-based instruction by identifying best practices for long-term skill retention and application.

9. Challenges and Limitations of Portfolio-Based Learning in Developing Critical Thinking in EFL Students

While portfolio-based learning has demonstrated significant benefits in fostering critical thinking skills among EFL students, its implementation is not without challenges. The effectiveness of PBL depends on multiple factors, including teacher preparedness, student engagement, assessment reliability, and institutional support (Hamp-Lyons & Condon, 2020). This section explores the primary challenges and limitations in using portfolios to develop critical thinking in EFL education.

9.1 Time-Intensive Nature of Portfolio Assessment

One of the most frequently cited challenges of portfolio-based learning is its time-consuming nature, which can place a significant burden on both teachers and students (Paris & Ayres, 2021). Unlike traditional assessment methods, which provide immediate scores based on standardized tests, portfolios require continuous engagement, including feedback, self-reflection, and iterative revisions (Lam, 2020). This ongoing cycle of assessment enhances learning but also demands considerable time and effort.

For teachers, PBL requires individualized feedback, continuous monitoring of student progress, and assessment of multiple drafts, making it difficult to manage in large classrooms (Benson, 2019). Unlike standardized tests, where evaluation is quick and objective, portfolio assessment involves qualitative judgment, requiring teachers to provide personalized guidance and constructive feedback on each student's work. The need for frequent revisions and detailed evaluations can lead to increased workload and grading challenges.

Similarly, for students, actively engaging in self-reflection, documenting their learning journey, and making revisions can be overwhelming, particularly when combined with other coursework and academic responsibilities (Tassinari, 2018). PBL requires learners to regularly assess their

progress, critically evaluate their work, and apply feedback, which demands strong time-management and self-regulation skills. Some students may struggle with the sustained effort required to maintain a portfolio, particularly if they are accustomed to traditional, teacher-led assessments. Despite these challenges, structured implementation strategies, such as using digital portfolios to streamline organization, providing clear rubrics to guide evaluation, and scaffolding feedback in stages, can help alleviate the time demands associated with PBL (Tsui, 2021). By addressing these concerns, educators can make portfolio-based learning more feasible and effective, ensuring that students benefit from its reflective and critical thinking advantages without feeling overwhelmed by the workload.

9.2 Subjectivity and Reliability in Portfolio Assessment

Assessing critical thinking through portfolio-based learning presents challenges in reliability and fairness due to its subjective nature (Hamp-Lyons & Condon, 2020). Unlike standardized tests with objective scoring, portfolios require qualitative judgments of student reflections and analyses, which can vary among educators.

A key issue is inconsistent grading, as teachers may differ in how they assess aspects like depth, clarity, or responsiveness to feedback (Davidson & Dunham, 2020). This variability can affect student motivation and academic outcomes. Moreover, unclear assessment criteria may confuse students, making it hard for them to meet expectations or improve their work (Shepard, 2022).

To address these concerns, researchers recommend using standardized rubrics that define critical thinking criteria clearly (Halpern, 2020). Such rubrics help both students and teachers understand expectations and reduce grading subjectivity. Incorporating multiple assessors, including peers or co-evaluators, can also enhance fairness and consistency (Paul & Elder, 2021). Additionally, training educators in portfolio assessment is essential. Many lack experience in evaluating reflective and analytical work, which can lead to inconsistency. Professional development can improve grading practices and feedback quality, making PBL a more effective tool for developing and assessing critical thinking (Brookfield, 2021).

9.3 Student Resistance to Self-Directed Learning

Portfolio-based learning requires students to take responsibility for their learning, which can be challenging for those used to teacher-led instruction (Zhang, 2020). Many EFL learners lack confidence and skills for self-directed learning, often feeling unsure about analyzing their own work (Stapleton, 2019). This uncertainty can lead to dependence on teacher guidance and limited engagement with reflection.

EFL students often prefer structured, test-based learning focused on memorization and grammar drills (Richards, 2020). As a result, they may find PBL's open-ended, reflective tasks unfamiliar. Moreover, limited training in self-assessment makes it difficult for students to evaluate their progress, set goals, or identify areas for improvement (Moon, 2020). To ease the transition, educators should introduce PBL gradually through structured activities and reflective tasks embedded in regular coursework (Nunan, 2020). Teaching self-reflection strategies, like using guided prompts and modeling can help students build confidence. Peer feedback sessions also promote collaborative thinking and help learners develop evaluative skills through discussion and review.

9.4 Institutional and Technological Constraints

Effective implementation of portfolio-based learning in EFL education requires institutional support, yet many educational systems face significant barriers that hinder its adoption (Tillema & Smith, 2021). One major challenge is the lack of teacher training programs that equip educators with the skills to integrate PBL into language curricula effectively (Pennycook, 2019). Without proper training, teachers may struggle to design meaningful portfolio tasks, assess critical thinking skills, and provide constructive feedback, making it difficult to maximize the benefits of PBL in language learning.

Another institutional barrier is limited access to digital tools, particularly in regions with underdeveloped technology infrastructure (Chau & Cheng, 2019). Many schools lack the necessary resources, such as digital platforms for e-portfolios, online feedback tools, and cloud-based storage systems, which are essential for efficient portfolio management and assessment. This technological gap limits students' ability to engage in digital learning environments and restricts educators' capacity to provide timely and interactive feedback. Additionally, administrative resistance to alternative assessment methods presents a significant challenge, as standardized testing remains the dominant form of evaluation in many institutions (Brookfield, 2021). Since standardized exams provide easily quantifiable results, institutions may be reluctant to adopt portfolio-based assessments, which require qualitative judgment and individualized evaluation. This resistance can make it difficult for teachers to convince administrators of the value of PBL, even when evidence supports its effectiveness in fostering critical thinking and autonomous learning.

To overcome these barriers, policymakers and educational institutions should take several steps to facilitate the successful integration of PBL into EFL education. First, providing professional development programs is essential to train teachers in using portfolio-based assessment effectively. Educators should receive specialized training on designing portfolios, assessing student work fairly, and incorporating reflective learning strategies into the curriculum.

Second, institutions should invest in digital tools to support portfolio-based learning, including e-portfolios, AI-driven feedback systems, and online collaboration platforms (Abrami & Barrett, 2020). These tools can streamline the assessment process, enhance accessibility, and encourage students to engage in reflective learning more effectively.

Finally, institutions should develop policies that formally recognize portfolio assessment as a valid method for evaluating student learning (Shepard, 2022). By incorporating PBL into institutional assessment frameworks, schools can ensure that portfolio-based evaluation is valued alongside standardized testing, giving students and teachers the flexibility to engage in more meaningful, skill-based learning experiences.

9.5 Language Proficiency and Cognitive Load

For many EFL students, engaging in portfolio-based critical thinking tasks can be cognitively demanding, particularly for those still developing their English proficiency (Richards, 2020). Critical thinking requires students to analyze, evaluate, and synthesize information, which can be challenging when combined with the demands of language learning. One significant barrier is that students with low language proficiency may struggle to express complex ideas, making it difficult for them to demonstrate their critical thinking abilities effectively (Kabilan, 2020). Limited vocabulary, grammatical constraints, and difficulties in structuring arguments clearly can hinder students' ability to engage in deep analysis and reflection.

Additionally, the dual cognitive load of thinking critically while processing a second language can be overwhelming for some learners (Tsui, 2021). When students are required to interpret complex texts, articulate sophisticated arguments, and engage in reflective writing, they must simultaneously comprehend and produce language while applying higher-order thinking skills. This cognitive overload can lead to frustration, disengagement, or superficial reasoning, preventing students from fully benefiting from portfolio-based learning.

To support EFL students in overcoming these challenges, educators can implement strategic instructional techniques. One effective approach is using scaffolding techniques, such as guided reflection questions and structured writing prompts, which provide students with clear frameworks to organize their thoughts (Moon, 2020). By breaking down tasks into manageable steps, teachers can help learners gradually develop their ability to express critical thinking in English.

Another helpful strategy is to provide bilingual resources or allow preliminary discussions in the students' first language, which can ease cognitive demands and help students process ideas more effectively (Paul & Elder, 2021). By enabling students to brainstorm and clarify their thoughts in their native language before translating them into English, educators can reduce language barriers while maintaining critical thinking depth.

Finally, teachers should encourage gradual progression, starting with simpler reflection tasks and gradually introducing more complex analytical activities (Facione, 2019). Instead of requiring students to immediately engage in in-depth analysis, educators can begin with structured, low-stakes critical thinking exercises, such as identifying key arguments in a text or comparing different perspectives, before moving on to more sophisticated reasoning tasks.

By implementing scaffolding, bilingual support, and progressive skill development, educators can make portfolio-based learning more accessible to EFL students, allowing them to strengthen both their language proficiency and critical thinking skills without becoming overwhelmed by cognitive demands.

10. Future Directions and Research Gaps in Portfolio-Based Learning and Critical Thinking in EFL Education

While portfolio-based learning has been widely recognized for its potential to develop critical thinking skills in EFL education, several research gaps and future directions remain unexplored. Further studies are needed to address pedagogical, technological, and contextual challenges in implementing PBL effectively. This section outlines the key areas where future research is needed.

10.1 Investigating Longitudinal Effects of Portfolio-Based Learning on Critical Thinking

Most studies on portfolio-based learning and critical thinking focus primarily on short-term outcomes, such as immediate improvements in analytical reasoning, self-reflection, and academic writing (Lam, 2020; Zhang, 2020). While these findings highlight the effectiveness of PBL in fostering critical thinking skills, the long-term impact of portfolio-based learning on EFL students' cognitive development and language proficiency remains underexplored. There is a need for further research to determine whether the benefits of PBL extend beyond the classroom and how they influence students' academic and professional growth over time.

One key area for future research is the need to conduct longitudinal studies that examine whether critical thinking improvements persist after students complete their formal education (Tassinari, 2018). Since critical thinking is a lifelong skill, researchers should investigate whether students who engage in PBL continue to apply critical thinking strategies in future academic settings, careers, and personal decision-making.

Additionally, studies should explore how students' ability to analyze, evaluate, and synthesize information evolves over multiple academic years (Facione, 2019). By tracking students over an extended period, researchers can assess whether portfolio-based learning contributes to sustained intellectual development, enhanced problem-solving skills, and deeper engagement with complex texts and arguments. Understanding this progression would help educators refine PBL strategies to ensure long-term benefits for EFL learners.

Another important research direction is to examine the transferability of critical thinking skills developed through PBL to other academic disciplines and real-world contexts (Halpern, 2020). Critical thinking is not only valuable in language learning but also essential in fields such as science, business, and technology. Future studies should investigate whether students who develop critical thinking skills through PBL can successfully apply these abilities in other subject areas, professional environments, and intercultural communication settings.

10.2 The Role of Digital and AI-Driven Portfolios in Enhancing Critical Thinking

The digital transformation of education has introduced electronic portfolios (e-portfolios) as a powerful tool for enhancing critical thinking skills in EFL learners (Abrami & Barrett, 2020). E-portfolios provide students with a structured, interactive space to collect, organize, and reflect on their work, integrating multimedia elements, real-time feedback, and online collaboration. However, while research has explored the general benefits of digital portfolios, studies on AI-driven assessment tools for portfolio-based learning in EFL education remain limited. As artificial intelligence (AI) continues to reshape educational assessment, future research should focus on its potential applications in PBL to enhance critical thinking evaluation and personalized learning experiences.

One key area of future research is the need to investigate the effectiveness of AI-powered feedback tools in assessing students' analytical writing and critical thinking reflections (Chau & Cheng, 2019). AI-based systems can provide instant, detailed feedback, helping students refine their argumentation, logical reasoning, and self-reflection. Unlike traditional teacher-driven feedback, AI tools can assess large volumes of portfolio submissions efficiently, offering personalized suggestions for improvement and enabling students to track their progress over time.

Another promising avenue for research is the exploration of machine learning algorithms to identify patterns of cognitive growth in portfolio submissions (Brookfield, 2021). AI-driven models can analyze students' development of critical thinking skills by tracking how their argumentation, source evaluation, and analytical depth evolve over multiple portfolio entries. Such research could help educators design adaptive learning systems that respond to students' individual cognitive needs, providing targeted support for critical thinking development.

Additionally, researchers should examine how digital portfolios impact students' engagement, motivation, and self-regulation in critical thinking tasks (Gulbahar & Tinmaz, 2021). E-portfolios offer interactive features, peer collaboration opportunities, and gamified progress tracking, which may influence students' motivation to engage in reflective and analytical learning. Understanding these effects can help educators refine digital portfolio design to maximize their effectiveness in fostering autonomous learning and deep critical analysis.

10.3 Cultural and Contextual Influences on Portfolio-Based Learning in EFL Settings

Much of the existing portfolio-based learning research is rooted in Western educational models, which emphasize student autonomy, self-directed learning, and reflective practices (Benson, 2019). These models align with constructivist theories, where learners take active control of their education through independent inquiry, critical thinking, and self-assessment. However, in many EFL contexts, particularly in Asia, the Middle East, and Africa, teacher-centered approaches remain dominant, where instructors play a central role in knowledge transmission and assessment (Pennycook, 2019). This contrast raises important questions about the effectiveness and adaptability of PBL in non-Western educational settings.

One critical area for future research is the need to investigate how cultural attitudes toward assessment and learning autonomy influence students' engagement with portfolios (Nunan, 2020). In many teacher-driven educational systems, students are accustomed to structured, exam-based evaluation methods, making self-directed portfolio work unfamiliar and potentially challenging. Research should explore whether students in these contexts perceive PBL as a beneficial assessment tool or if cultural norms around learning and authority affect their willingness to engage in self-reflection and independent evaluation.

Additionally, there is a need to examine teacher perceptions of portfolio-based learning in non-Western EFL settings and identify strategies for successful integration (Tsui, 2021). Since teachers play a crucial role in implementing PBL, understanding their views on its feasibility, challenges, and potential benefits can help shape training programs and institutional policies. Research should focus on whether educators in these contexts feel adequately prepared to guide students in reflective and analytical learning and what kind of support they require to integrate portfolios effectively into their teaching.

Another important research direction is to analyze whether portfolio-based learning approaches need modification based on regional pedagogical traditions (Richards, 2020). Since educational philosophies vary across cultures, PBL models may need to be adjusted to align with local teaching practices, assessment expectations, and student learning behaviors. Future studies should explore hybrid approaches, where elements of traditional assessment (e.g., structured grading rubrics, teacher-guided reflections, or scaffolded self-assessment exercises) are integrated into PBL models to create a more culturally responsive learning experience.

10.4 Developing Standardized Assessment Criteria for Portfolio-Based Critical Thinking Evaluation

One of the major limitations of portfolio-based learning is the subjectivity in assessment, as portfolios rely on qualitative evaluation rather than quantitative scoring (Davidson & Dunham, 2020). Unlike standardized tests, which provide objective, measurable results, portfolios require interpretation and judgment, leading to variability in grading and potential bias in evaluation. Since critical thinking skills are complex and multifaceted, assessing them through student reflections, analyses, and self-assessments can be challenging without clear guidelines and structured assessment frameworks.

To address this limitation, future research should focus on developing standardized rubrics to assess critical thinking skills in portfolio work (Shepard, 2022). A well-designed rubric should outline specific criteria for evaluating argumentation quality, logical reasoning, depth of reflection, and evidence-based analysis. Standardized rubrics can help ensure greater consistency and transparency in assessment, allowing both teachers and students to understand expectations and performance benchmarks clearly.

Another promising area of research is the exploration of automated scoring tools, such as AI-based text analysis, to determine whether they can reliably assess the quality of critical thinking in student reflections (Paul & Elder, 2021). AI-driven tools have the potential to provide instant feedback, detect patterns in reasoning and argumentation, and offer objective evaluations based on predefined cognitive benchmarks. If developed effectively, such tools could reduce grading inconsistencies while also allowing students to revise and improve their work based on AI-generated insights.

Additionally, research should investigate how teachers can be trained to evaluate critical thinking fairly and consistently using portfolios (Tillema & Smith, 2021). Since critical thinking assessment requires educators to analyze student reasoning, argument structure, and depth of reflection, professional development programs should focus on training teachers in effective evaluation strategies, bias reduction, and constructive feedback methods. By equipping educators with assessment literacy and calibration techniques, institutions can enhance grading reliability and improve student outcomes.

10.5 Exploring the Integration of Portfolio-Based Learning with Other Pedagogical Approaches

Portfolio-based learning should not be viewed in isolation but rather as part of a broader instructional framework that enhances critical thinking development by integrating multiple pedagogical approaches (Moon, 2020). While portfolios provide a structured method for self-reflection, analysis, and skill development, their effectiveness can be amplified when combined with other instructional strategies that encourage deep cognitive engagement and active learning.

One area for future research is to investigate the effectiveness of combining PBL with problem-based learning and Socratic questioning techniques to enhance critical thinking skills (Paul & Elder, 2021). Problem-based learning immerses students in real-world problem-solving scenarios, requiring them to analyze complex situations, evaluate evidence, and apply logical reasoning, all skills that align with portfolio-based reflection. Similarly, Socratic questioning fosters deeper inquiry and metacognitive awareness, helping students refine their arguments and reasoning skills by challenging assumptions and engaging in structured critical dialogues. Research should explore how these methods can work together to create a more dynamic and reflective learning experience in EFL education.

Another promising research avenue is to examine whether blended learning approaches, integrating portfolios, classroom discussions, and technology-driven instruction, lead to greater cognitive gains (Kabilan, 2020). By incorporating digital tools, interactive learning platforms, and AI-based feedback mechanisms, educators can provide students with real-time guidance, collaborative opportunities, and multimodal resources to enhance their portfolio-based learning process. Research should determine how blended learning environments impact student motivation, engagement, and long-term retention of critical thinking skills.

Additionally, studies should explore how portfolios can be used alongside debate-based learning, where students present, defend, and revise their arguments over time (Stapleton, 2019). Debates encourage logical reasoning, structured argumentation, and the ability to respond to counterarguments, all of which are essential components of critical thinking. By integrating debate-based activities into portfolio work, students can document the evolution of their reasoning, reflect on how their perspectives have changed, and refine their persuasive communication skills.

10.6 The Impact of Portfolio-Based Learning on Specific Language Skills

While research has extensively explored portfolio-based learning in writing and reflection, its impact on other essential EFL skills, such as speaking, listening, and reading comprehension remains underexplored (Richards, 2020). Since critical thinking applies across all language domains, future research should investigate how portfolios can enhance oral communication, listening comprehension, and reading analysis, ensuring that PBL fosters well-rounded language proficiency.

One potential area of study is to investigate how oral reflection and spoken portfolios can enhance critical thinking and speaking skills (Brookfield, 2021). Traditionally, portfolios have been used for written reflections, but incorporating spoken portfolios, where students record and analyze their verbal responses to prompts, discussions, or debates, could provide a new way to develop both critical thinking and oral fluency. Research should explore how structured oral reflections encourage learners to articulate ideas clearly, evaluate their speaking strategies, and refine their argumentation skills over time.

Another important direction is to examine the role of portfolios in improving listening comprehension, particularly by requiring students to analyze and reflect on authentic listening materials (Halpern, 2020). Many EFL learners struggle with critical listening, as they often focus on surface-level comprehension rather than deep analysis of spoken content. If portfolios include reflection tasks on lectures, podcasts, or interviews, students may develop stronger inferencing skills, ability to assess speaker intent, and capacity to distinguish factual information from opinion. Future research should determine whether self-assessment of listening comprehension through portfolios leads to better retention and analytical engagement with spoken texts. Similarly, researchers should study whether portfolio tasks improve reading comprehension by encouraging students to engage in deeper textual analysis and synthesis (Wallace, 2020). Traditional reading assessments often focus on basic comprehension questions, but portfolios could require students to annotate texts, compare multiple sources, evaluate arguments, and synthesize information from various readings. This approach could enhance students' ability to critically engage with written materials, recognize implicit meanings, and develop more sophisticated reading strategies.

11. Conclusion

Portfolio-based learning is an effective and forward-thinking strategy for enhancing critical thinking in EFL education. Unlike traditional approaches that emphasize memorization and passive learning, PBL fosters active engagement through self-reflection, metacognitive development, and continuous cognitive involvement. By encouraging students to document, revise, and reflect on their learning, it cultivates key higher-order thinking skills such as analysis, evaluation, synthesis, and problem-solving, skills that are essential for academic success and real-world communication.

This review highlighted several core benefits of PBL. It promotes learner autonomy, responsibility, and self-assessment, creating a learning environment that values process as much as product. It also encourages iterative improvement, enabling students to learn from feedback and refine their work over time. Nevertheless, several challenges remain. Time constraints, subjective evaluation, student resistance, and institutional limitations can hinder effective implementation. These can be mitigated through clear rubrics, ongoing teacher development, and supportive learning environments that prioritize student growth.

The integration of digital portfolios and AI-based tools adds further potential to PBL by streamlining formative assessment, offering personalized feedback, and tracking cognitive growth with greater accuracy. However, cultural and pedagogical traditions, particularly in teacher-centered EFL contexts, can shape how PBL is perceived and applied. To ensure successful implementation, PBL must be thoughtfully adapted to align with local norms while gradually shifting learners and educators toward more student-centered practices.

Furthermore, while short-term studies suggest positive outcomes, long-term research is essential to determine whether critical thinking gains achieved through PBL are retained and transferred beyond the classroom setting. Exploring how these skills evolve in university, professional, or intercultural contexts can provide valuable insights for future curriculum design.

In conclusion, PBL offers a promising framework for cultivating critical thinking among EFL learners. However, its success depends on careful integration, cultural sensitivity, technological support, and sustained investment in teacher training. When thoughtfully implemented, PBL can transform language classrooms into dynamic spaces of inquiry, reflection, and intellectual growth.

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