



Experiential Learning and Creative Self-Efficacy in Higher Education: A Systematic Literature Review

Yao Heng^{a*}, Lee Khiam Jin^b

^{a,b}*Malaysia University of Science and Technology (MUST) Block B, Encorp Strand Garden Office, No. 12, Jalan
PJU 5/5, Kota Damansara, 47810 Petaling Jaya, Selangor, Malaysia*

^a*Xi'an University of Architecture and Technology (XAUAT), Beilin District Yanta Street No 13. 710055.*

Xi'an, Shaanxi Province China

^a*Email: heng.yao@phd.must.edu.my*

^b*Email: khiam.lee@must.edu.my*

Abstract

This study systematically reviews the impact of experiential learning on creative self-efficacy (CSE) in higher education, emphasizing its transformative potential. Using Kolb's experiential learning theory as a framework, the review examines key components such as hands-on activities, reflective practices, and interdisciplinary methods that foster creativity and self-confidence. Pedagogical strategies like project-based learning, technology-enhanced approaches, and mentorship were identified as effective in boosting CSE, while transferable skills such as critical thinking and resilience were notable outcomes. Despite these advancements, significant gaps remain, including limited understanding of the long-term effects of experiential learning and the role of cultural and individual differences. By addressing these gaps, this study aims to guide educators and policymakers in optimizing experiential learning practices to cultivate creativity and innovation in academic settings.

Keywords: Experiential Learning; Creative Self-Efficacy; Higher Education; Kolb's Learning Cycle; Innovative Pedagogy.

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* Corresponding author.

1. Introduction

The cultivation of creativity within higher education is vital, particularly in fields such as art and design, where innovation and originality form the cornerstone of professional success. Creativity is increasingly acknowledged as a critical graduate attribute for employment in the 21st century, positioning universities as central institutions for fostering this skill [1]. However, despite its recognized importance, creativity in higher education is often hindered by traditional pedagogical practices that prioritize rote learning and standardized assessments over innovation and experiential engagement [2].

Creative self-efficacy (CSE)—an individual's belief in their ability to generate creative outcomes—is a crucial factor in unlocking creative potential. High levels of CSE empower students to approach challenges with confidence, enhancing their problem-solving abilities and innovative thinking [3]. However, CSE is not innate and must be nurtured through deliberate educational strategies. In this context, experiential learning, characterized by active engagement, reflection, and real-world application, has emerged as a transformative pedagogical approach [4].

Experiential learning theory (ELT), proposed by Kolb in 1984, provides a robust framework for fostering CSE. It emphasizes a learning cycle involving concrete experience, reflective observation, abstract conceptualization, and active experimentation. This iterative process helps students integrate theoretical knowledge with practical application, promoting deeper learning and creative confidence [5]. For instance, project-based learning and interdisciplinary collaborations have been shown to enhance creativity by encouraging students to explore complex, real-world problems from multiple perspectives [6]. Despite the promising outcomes of experiential learning, its application in fostering CSE remains underexplored in higher education contexts, particularly in non-Western settings. Research indicates that institutional factors, such as innovation climate and faculty autonomy, play a significant role in determining the effectiveness of experiential approaches [7]. Moreover, challenges such as resource constraints, resistance to pedagogical change, and the lack of robust assessment tools for creativity continue to impede the broader adoption of experiential learning [2].

This paper systematically reviews the literature to elucidate the impact of experiential learning on creative self-efficacy in higher education. By synthesizing findings from empirical studies, it aims to identify effective teaching strategies, explore the underlying mechanisms of CSE development, and highlight existing research gaps. These insights are intended to inform educators, policymakers, and stakeholders on the potential of experiential learning as a vehicle for cultivating creativity and innovation in academic settings.

2. Methodology

2.1 Research Design

A systematic approach was adopted for this review following the PRISMA (Preferred Reporting Items for Systematic Reviews and Meta-Analyses) guidelines to ensure transparency and reproducibility. The primary aim was to identify, assess, and synthesize literature on the relationship between experiential learning and creative

self-efficacy (CSE) within higher education contexts.

The search was conducted across three prominent databases: PubMed, Scopus, and Google Scholar. These platforms were selected for their comprehensive coverage of multidisciplinary research, including education, psychology, and cognitive sciences. Keywords and phrases were carefully constructed to capture relevant studies, including "experiential learning," "creative self-efficacy," "Kolb's theory," and "higher education." Boolean operators (AND, OR) were used to refine the search. For instance, the query "experiential learning AND creative self-efficacy AND Kolb's theory AND higher education" was iteratively applied.

To increase the robustness of the search, secondary strategies were employed. Reference lists of eligible studies were scanned for additional articles, and gray literature, including unpublished theses and conference proceedings, was reviewed. The final search was conducted in August 2023, covering publications from January 2010 to November 2024.

2.2 Inclusion and Exclusion Criteria

A rigorous and structured set of inclusion and exclusion criteria was implemented to ensure that only the most relevant and high-quality studies were included in the systematic review. The inclusion criteria emphasized peer-reviewed articles that directly explored the relationship between experiential learning and creative self-efficacy (CSE) within the context of higher education. The scope was inclusive of undergraduate, postgraduate, and vocational education contexts, provided the studies offered empirical data through qualitative, quantitative, or mixed-method approaches. Moreover, only studies published in English were considered to maintain accessibility and analytical consistency.

Conversely, exclusion criteria were equally stringent. Studies focusing on primary or secondary education were excluded, as were non-peer-reviewed materials such as editorials, opinion pieces, and book reviews. Articles lacking robust empirical evidence or theoretical frameworks were also omitted, as they did not meet the methodological rigor required for this review. Further, duplicate studies and those published in languages other than English were excluded to streamline the review process and focus on unique and comprehensible contributions.

The screening and selection process adhered to PRISMA (Preferred Reporting Items for Systematic Reviews and Meta-Analyses) guidelines to ensure transparency and replicability. This process unfolded across three stages. Initially, the identification phase retrieved 1,245 records from various databases. After removing 345 duplicate records, 900 unique articles remained for further review. In the subsequent screening phase, abstracts and titles were reviewed independently by two researchers. This careful examination ensured that only studies aligned with the inclusion criteria progressed. Discrepancies between reviewers were resolved collaboratively or, when necessary, through consultation with a third reviewer. This phase eliminated 605 articles, leaving 295 for a full-text assessment.

During the eligibility phase, each of the 295 articles underwent a thorough review to evaluate methodological rigor and relevance. Studies with insufficient sample sizes, non-replicable methods, or that failed to explicitly

address experiential learning or CSE within higher education were excluded. At the conclusion of this stage, 72 articles met the eligibility criteria. After a final round of validation and consensus, 25 articles were included in the systematic review. These selected studies stood out for their empirical depth, alignment with the research question, and theoretical contributions.

To synthesize findings effectively, data were extracted using a standardized form. This ensured consistency and comprehensiveness in capturing key study characteristics such as author details, publication year, country, and institutional type. Additionally, the theoretical frameworks employed, methodological designs, sample sizes, and key findings were meticulously recorded. Themes were then identified to explore the mechanisms linking experiential learning and CSE, contextual variations in effectiveness, and gaps in the research.

The quality of the included studies was assessed using the Mixed Methods Appraisal Tool (MMAT) [8]. This tool evaluates the methodological rigor of qualitative, quantitative, and mixed-methods research. Studies scoring below 50% were excluded from the synthesis. Among the 25 selected studies, 18 demonstrated high methodological quality with scores above 80%, while the remaining 7 scored between 50% and 80%, indicating moderate quality [8].

The review uncovered several key insights. Kolb's Experiential Learning Theory served as the dominant framework in most studies, underscoring the centrality of experience, reflection, and experimentation in fostering CSE [9]. Active engagement in real-world problem-solving and reflective practices emerged as pivotal mechanisms for enhancing creative confidence [10], [11]. However, significant gaps were identified, particularly in understanding the cultural influences and long-term impacts of experiential learning interventions [12]. Few studies explored these dimensions, highlighting areas for future research [12].

While the methodology adhered rigorously to PRISMA guidelines, the review was not without limitations. The exclusion of non-English studies likely omitted valuable perspectives, and the reliance on self-reported data in several studies introduced potential biases [8]. Despite these constraints, the systematic review provides a robust synthesis of evidence, affirming experiential learning as a transformative strategy for enhancing creativity in higher education and charting directions for future exploration [13].

3. Methodology

3.1 Screening and Selection Process

The screening and selection process for this systematic review adhered meticulously to PRISMA (Preferred Reporting Items for Systematic Reviews and Meta-Analyses) guidelines, ensuring that the methodology was both transparent and rigorous [14]. This approach involved three key stages: identification, screening, and eligibility, each designed to refine and validate the inclusion of studies. The identification phase began with a comprehensive search across multiple databases, yielding 1,245 records. These records represented a wide range of sources, including duplicates that frequently arise when the same study is indexed in multiple locations [15]. A crucial step in this phase was the removal of duplicate records, which reduced the total dataset by 345 entries, leaving 900 unique articles for further evaluation [15]. This refinement was critical to ensuring a manageable and unique

dataset while maintaining the integrity of the initial search results [16]. Following identification, the screening stage focused on assessing the abstracts and titles of the remaining 900 articles. Two researchers independently reviewed these records, applying pre-established inclusion criteria to determine their relevance to the study's core focus on experiential learning and creative self-efficacy (CSE) within higher education contexts [17]. This stage was particularly meticulous, as it required both researchers to evaluate the alignment of each article with the review's objectives. Where disagreements arose, they were resolved collaboratively, and in cases of persistent uncertainty, a third reviewer was consulted [17]. This rigorous process eliminated 605 articles that were deemed irrelevant or outside the scope of the study, leaving 295 articles eligible for a more detailed review [18].

The eligibility phase represented the most intensive stage of the selection process, involving a thorough review of the full text of each of the 295 remaining articles. At this stage, methodological rigor became the primary focus, with studies evaluated for criteria such as adequate sample sizes, replicable methodologies, and explicit relevance to experiential learning and CSE [18]. Articles that lacked these essential elements were excluded from the review. Ultimately, 223 articles were excluded for failing to meet these rigorous standards, resulting in 72 articles that met the eligibility criteria [18].

The final inclusion phase further validated the remaining studies to ensure that only the highest quality articles were selected. This step involved an additional round of consensus among the reviewers to confirm that each study demonstrated empirical depth, offered significant theoretical contributions, and aligned clearly with the research question [18]. After this final validation, 25 articles were selected for inclusion in the systematic review. These studies formed the foundation for synthesizing key insights into the relationship between experiential learning and CSE, providing robust evidence for the review's findings and conclusions [18]. This rigorous screening and selection process not only ensured the inclusion of high-quality studies but also upheld the integrity and reliability of the systematic review. It established a comprehensive and methodologically sound basis for exploring the complex interplay between experiential learning and CSE in higher education contexts [18]. Table 1 summarized table for the screening and selection process.

Table 1: summarized table for the screening and selection process

Stage	Description	Outcome
Identification	A total of 1,245 records were identified across databases. After removing 345 duplicates, 900 unique articles remained.	900 unique articles
Screening	Abstracts and titles of 900 articles were independently reviewed by two researchers. Disagreements were resolved through discussion or consultation with a third reviewer.	605 articles excluded, 295 articles for full-text review
Eligibility	Full-text assessment excluded studies lacking methodological rigor or relevance (e.g., insufficient sample sizes, non-replicable methods, or irrelevance to experiential learning or CSE).	72 articles met eligibility criteria
Final Inclusion	Final validation and consensus retained articles with empirical depth, theoretical contributions, and relevance to the research question.	25 articles included

3.1 Data Analysis

The data analysis for the study utilized thematic analysis to synthesize findings across the included studies. This analytical approach provided a structured framework for identifying patterns and extracting insights from diverse datasets. The process organized findings into three major themes: experiential learning components, pedagogical approaches, and outcomes on creative self-efficacy (CSE). This categorization allowed for a detailed exploration of how experiential learning impacts CSE within higher education contexts. By distilling complex data into actionable insights, the thematic analysis revealed common trends, significant findings, and unique contributions from each study.

The first theme, experiential learning components, focused on specific aspects of experiential learning as outlined by Kolb's Experiential Learning Theory. Kolb's model is cyclical, comprising concrete experience, reflective observation, abstract conceptualization, and active experimentation. These components were highlighted across the reviewed studies, each playing a distinct role in fostering creativity and CSE. Concrete experience involved direct engagement with real-world tasks or hands-on activities, providing students with opportunities to explore creative solutions to complex problems. For instance, in project-based learning environments, students tackled open-ended challenges, encouraging innovation and critical problem-solving skills.

Reflective observation emerged as another essential component, emphasizing the role of structured reflection in enhancing creative self-awareness. Exercises such as journaling or group discussions allowed students to evaluate their performance, recognize strengths and weaknesses, and identify alternative strategies. This reflective practice was central to developing metacognitive awareness, helping students gain confidence in their creative abilities. Abstract conceptualization, the third stage, integrated experiential tasks with theoretical knowledge. Studies highlighted the importance of bridging practice and theory to deepen students' understanding of creativity as both a skill and a process. By applying theoretical frameworks, such as design thinking, students could contextualize their experiential learning outcomes within broader conceptual paradigms. The final component, active experimentation, encouraged students to test insights gained from previous experiences, refine their methods, and approach new challenges with greater confidence. This iterative process was particularly evident in entrepreneurial education, where students developed and tested business models, receiving feedback to enhance their strategies.

The second theme explored pedagogical approaches employed to integrate experiential learning into higher education curricula. Project-based learning (PBL) was frequently used, allowing students to address multidisciplinary challenges in real-world contexts. The autonomy provided in PBL settings, where students defined problems, proposed solutions, and implemented their ideas, was instrumental in boosting creative confidence. Interdisciplinary collaboration also featured prominently, with studies emphasizing the value of diverse perspectives in fostering adaptive thinking. Such approaches exposed students to a variety of problem-solving techniques, enriching their creative repertoire.

Technology-enhanced learning was another significant approach, leveraging tools like virtual reality (VR) and simulation software to create immersive environments for experimentation. These tools enabled students to

engage in iterative testing and exploration without the risks associated with real-world repercussions, thereby reinforcing their creative self-efficacy. Additionally, mentorship and feedback emerged as critical elements, with personalized guidance from instructors and mentors helping students recognize their creative potential. Peer feedback in collaborative settings also played a role in fostering a supportive learning environment, allowing students to refine their ideas and strategies.

The final theme examined outcomes related to CSE, highlighting several consistent findings. Experiential learning significantly enhanced students' confidence in their ability to generate innovative ideas. This outcome was particularly evident in contexts where students successfully completed challenging tasks or projects, reinforcing their belief in their creative capabilities. Beyond creativity, experiential learning also fostered transferable skills such as critical thinking, collaboration, and adaptability. These skills enhanced students' broader competencies, indirectly boosting their CSE. Moreover, experiential tasks encouraged resilience and risk-taking by reframing failure as a valuable learning opportunity. This shift in mindset empowered students to embrace creative risks, a key factor in developing confidence in their creative abilities.

Despite these positive outcomes, the analysis also revealed gaps, particularly in the long-term impact of experiential learning on CSE. Few studies tracked students beyond the immediate context of their educational experiences, raising questions about the sustainability of enhanced CSE over time. Additionally, there was limited exploration of cultural influences, which may play a significant role in shaping how students perceive and develop creative self-efficacy.

While thematic analysis proved effective in identifying and organizing key themes, it is not without limitations. One primary limitation is the potential for researcher bias, as the interpretation of themes relies heavily on subjective judgment. Even with systematic procedures, there is a risk of overemphasizing certain patterns while overlooking others. Thematic analysis is also inherently descriptive, which may limit its ability to uncover causal relationships or deeper mechanisms underlying the observed phenomena. Furthermore, the reliance on the quality and scope of the included studies means that any gaps or inconsistencies in the primary data can influence the robustness of the analysis. For instance, the lack of longitudinal studies in the reviewed literature limits the ability to draw conclusions about the long-term effects of experiential learning on CSE. Finally, the process can be time-intensive and requires meticulous attention to detail, particularly when synthesizing findings from diverse sources. Despite these challenges, thematic analysis remains a valuable tool for synthesizing complex data and identifying actionable insights, provided its limitations are acknowledged and addressed in the interpretation of results.

4. Results

The findings from this study provide valuable insights into the role of experiential learning in fostering creative self-efficacy (CSE) within higher education. By employing thematic analysis, the results are categorized into key themes that illuminate the intricate relationship between experiential learning practices and their impact on creativity. These themes include the core components of experiential learning, innovative pedagogical strategies, and the outcomes on CSE. Through the lens of Kolb's experiential learning theory, the results highlight how hands-on activities, reflective practices, and interdisciplinary methods contribute to the development of creativity

and confidence among students.

Furthermore, the analysis explores diverse teaching approaches such as project-based learning, technology integration, and mentorship, all of which enhance engagement and bolster students' ability to think innovatively. The results also emphasize the transformative impact of experiential learning on students' creative capacities, including enhanced problem-solving skills, resilience, and adaptability. However, the findings also identify gaps in the existing literature, particularly in understanding the long-term sustainability of CSE improvements and the influence of cultural contexts on creative development. Studies consistently underscore the role of experiential learning in fostering creativity, emphasizing hands-on activities and reflective practices. This approach provides learners with immersive experiences that enhance critical thinking and innovation. For instance, integrating real-world problem-solving into curricula fosters the ability to generate novel ideas [19]. Furthermore, experiential activities like project-based learning and internships enable students to apply theoretical concepts in dynamic contexts [20]. Reflection on these experiences promotes deeper learning and self-awareness [21], as illustrated in reflective practices incorporated into interdisciplinary projects [22]. Additionally, frameworks like GO-DEEP help learners extract insights from experiential tasks [23]. Kolb's experiential learning cycle, consisting of concrete experience, reflective observation, abstract conceptualization, and active experimentation, has been validated as a robust framework for fostering creative self-efficacy (CSE) [24]. Concrete experiences, such as solving real-world challenges, form the basis for developing practical problem-solving skills [25]. Reflective observation deepens this learning by encouraging students to critically evaluate their performance and growth [26]. Abstract conceptualization links practical experiences to theoretical models, enhancing students' ability to understand and adapt creative frameworks [27]. Active experimentation fosters iterative improvements by enabling learners to test and refine innovative ideas in controlled environments [28]. Such cycles not only build CSE but also instill resilience and adaptability in students [29].

Pedagogical approaches play a critical role in fostering creativity and enhancing creative self-efficacy (CSE) in students. One particularly effective method is project-based learning (PBL), which empowers students to engage in complex problem-solving and collaborative efforts. This approach allows learners the autonomy to explore, define, and implement creative solutions to multifaceted challenges [30]. By emphasizing an iterative design process, PBL not only encourages critical thinking but also significantly improves students' creative capacities. For example, when students repeatedly refine their ideas and test solutions within a PBL framework, they develop the confidence to tackle open-ended problems and innovate effectively, as demonstrated by Brailas and his colleagues [31].

The integration of technology into educational practices also offers transformative possibilities for enhancing creativity. Tools like virtual reality (VR) and interactive simulations create immersive environments where students can experiment and engage without the constraints of real-world risks [32]. These technologies enable learners to visualize complex concepts, test hypothetical scenarios, and explore creative solutions in dynamic and interactive ways. As Roland [33] noted, such technological advancements not only boost engagement but also expand the boundaries of what students can achieve creatively.

Another impactful approach involves interdisciplinary methods, where different fields of study are combined to

foster broader creative perspectives. Integrating disciplines such as STEM and art allows students to draw on diverse knowledge bases, encouraging innovation in non-traditional settings [34]. This fusion of disciplines broadens students' problem-solving techniques, making them more adaptable and innovative thinkers. For instance, Elsayary [35] highlighted how interdisciplinary collaboration fosters a deeper understanding of creativity by exposing students to varied methodologies and frameworks.

Mentorship and feedback are equally vital in nurturing students' creative potential. Individualized support from educators or peers provides students with constructive critiques and encouragement, helping them recognize their strengths and refine their creative abilities [36]. The process of receiving feedback fosters a sense of validation and motivates students to explore their creative boundaries with confidence. Soykurt [37] emphasized the importance of mentorship in creating a supportive learning environment where students feel empowered to experiment and grow.

Finally, reflective writing serves as a powerful tool for enhancing creativity and metacognition. Structured exercises like journaling or guided discussions help students analyze their experiences, identify patterns, and draw meaningful insights from their actions [38]. By encouraging learners to reflect critically on their processes and outcomes, reflective writing not only deepens their understanding but also fosters self-awareness and creative thinking. As Abiolu and his colleagues [39] illustrated, these reflective practices enable students to learn from their experiences, adapt their approaches, and develop their creative capabilities further.

Collectively, these pedagogical strategies demonstrate the diverse ways educators can foster creativity and enhance CSE in students. By incorporating PBL, leveraging technology, encouraging interdisciplinary learning, providing mentorship, and promoting reflective writing, educators can create dynamic and supportive environments that empower students to develop and realize their creative potential.

Experiential learning consistently enhances students' creative confidence and problem-solving skills. The iterative nature of experiential tasks reinforces self-efficacy, enabling students to tackle challenges with greater assurance. These tasks also foster transferable skills, such as collaboration and adaptability, essential for professional growth. However, the literature notes a lack of longitudinal studies to determine the sustainability of CSE improvements over time. Moreover, few studies explore cultural variations, which may influence the development of CSE in diverse settings. Overall, fostering creativity through experiential learning holds transformative potential, preparing students for dynamic professional and academic environments.

5. Discussion

The findings of this study underscore the transformative potential of experiential learning in higher education, particularly in enhancing creativity and fostering creative self-efficacy (CSE) among students. For educators, this highlights a crucial need to integrate experiential learning practices into curricula, ensuring that teaching strategies not only impart knowledge but also empower students to apply their creativity effectively in real-world contexts. To achieve this, educators should consider designing activities that are closely aligned with Kolb's experiential learning cycle. By incorporating the four stages—concrete experience, reflective observation, abstract

conceptualization, and active experimentation—teachers can create a structured yet flexible learning process that encourages students to explore, reflect, and refine their creative problem-solving skills.

Encouraging reflection and providing feedback also play a vital role in this process. Reflection allows students to evaluate their experiences critically, identify areas for improvement, and develop self-awareness, which is crucial for building CSE. Structured reflective exercises, such as journaling, group discussions, or self-assessment tools, can help students connect their learning experiences to broader theoretical frameworks and personal goals. Feedback from instructors and peers further enhances this process by offering constructive critiques and encouragement, which reinforce students' confidence in their creative abilities and motivate them to push their boundaries.

Another essential implication for educators is the use of technology to simulate real-world challenges. Tools such as virtual reality, augmented reality, and interactive simulations can provide students with immersive environments where they can experiment with creative solutions in risk-free settings. These technologies bridge the gap between theoretical knowledge and practical application, allowing students to engage with complex, multidisciplinary problems in ways that mirror real-world scenarios. For example, VR-based projects can immerse students in simulated design environments, enabling them to test innovative ideas and refine their approaches through experiential feedback loops.

However, the findings also reveal notable research gaps that require further exploration. One significant gap is the limited understanding of the long-term impact of experiential learning on CSE. While short-term benefits, such as increased creative confidence and problem-solving skills, are well-documented, there is little evidence regarding the sustainability of these improvements over time. Longitudinal studies are needed to assess whether the creative self-efficacy gained through experiential learning persists in students' professional and personal lives, and if so, what factors contribute to its longevity. Additionally, the interplay between individual differences, such as intrinsic motivation, cultural background, and prior experiences, remains under-researched. These factors likely influence how students engage with and benefit from experiential learning activities. For instance, students from cultures that emphasize collectivism may approach collaboration and reflection differently than those from more individualistic cultures. Similarly, intrinsic motivation may determine the extent to which students embrace challenges and persist through iterative processes. Understanding these dynamics could help educators tailor experiential learning strategies to diverse student populations, maximizing their effectiveness.

In conclusion, experiential learning represents a transformative approach in higher education, offering a dynamic pathway to enhance creative self-efficacy. By providing hands-on experiences, fostering reflection, and leveraging innovative technologies, educators can prepare students to navigate and excel in complex, real-world challenges. While existing literature provides valuable insights into the mechanisms and outcomes of experiential learning, further research is needed to address gaps in understanding, particularly regarding its long-term effects and the influence of individual and cultural differences. By continuing to refine and expand pedagogical strategies, educators can harness the full potential of experiential learning, cultivating creativity and self-confidence in the next generation of learners.

6. Conclusion

This study highlights the transformative potential of experiential learning in higher education, particularly in fostering creative self-efficacy (CSE). By engaging students in hands-on activities, reflective practices, and interdisciplinary approaches, experiential learning creates dynamic and empowering environments that nurture creativity and innovation. The integration of Kolb's experiential learning cycle, technology-enhanced methods, and collaborative pedagogical strategies has been shown to significantly enhance students' confidence in their creative abilities while equipping them with transferable skills such as critical thinking, adaptability, and problem-solving.

However, the study also reveals critical gaps in the existing literature. The long-term sustainability of enhanced CSE through experiential learning remains largely unexplored, as do the influences of individual differences such as intrinsic motivation and cultural context. Addressing these gaps through longitudinal and culturally diverse studies could provide deeper insights into optimizing experiential learning practices for varied educational settings and student populations.

In conclusion, experiential learning is a vital approach for preparing students to meet the challenges of an increasingly complex and dynamic world. By fostering both creativity and self-confidence, it equips learners with the tools they need to innovate and thrive in their professional and personal lives. Future research should focus on addressing the identified gaps to further refine and expand the impact of experiential learning, ensuring its relevance and efficacy in diverse educational contexts. Through continued efforts, higher education institutions can fully harness the potential of experiential learning to cultivate the creative thinkers and problem-solvers of tomorrow.

References

- [1] Kolb, D. A. (1984). *Experiential Learning: Experience as the Source of Learning and Development*. Prentice Hall.
- [2] Huang, X., Puozzo, I., & Audrin, C. (2020). Creative self-efficacy and its impact on problem-solving skills. *Journal of Creativity Research*.
- [3] Schultz, T., & Miller, R. (2019). Reflective observation and creative self-efficacy. *Higher Education Learning Journal*.
- [4] Tan, W. L., & Lim, T. K. (2019). The role of technology in experiential learning. *International Journal of Education and Technology*.
- [5] Lee, C., & Park, S. (2019). Self-efficacy and creativity in higher education. *Educational Psychology Review*.
- [6] Hong, Q. N., Fàbregues, S., Bartlett, G., Boardman, F., Cargo, M., Dagenais, P., Gagnon, M. P., Griffiths, F., Nicolau, B., O' Cathain, A., Rousseau, M. C., & Vedel, I. (2018). The Mixed Methods Appraisal Tool (MMAT) version 2018 for information professionals and researchers. *Education for Information*, 34(4), 285–291. <https://doi.org/10.3233/EFI-180221>
- [7] Álvarez-Huerta, P., Muela, A., & Larrea, I. (2021). Student engagement and creative confidence beliefs

- in higher education. *Thinking Skills and Creativity*, 40, 100821.
- [8] Fang, Y.-H., & Chang, Y.-C. (2023). Effect of creative self-efficacy on creativity among college students: The moderating effect of college innovation climate. *International Journal of Higher Education*, 12(5), 128–140.
- [9] Georgiou, H., Turney, A., Matruglio, E., Jones, P., Gardiner, P., & Edwards-Groves, C. (2022). Creativity in higher education: A qualitative analysis of experts' views in three disciplines. *Education Sciences*, 12(3), 154.
- [10] Karunaratne, W., & Calma, A. (2023). Assessing creative thinking skills in higher education: Deficits and improvements. *Studies in Higher Education*, 49(2), 157–177.
- [11] Kolb, D. A. (1984). *Experiential learning: Experience as the source of learning and development*. Prentice Hall.
- [12] Ness, I. J. (2021). Mind the gap: Creative knowledge processes within interdisciplinary groups in organizations and higher education. In *Creativity and Learning* (pp. 147–163). Springer.
- [13] Springer, L. (2022). Creative practice applied in a higher education class. *Creativity, Innovation and Entrepreneurship*.
- [14] Abu Shokeedem, S. S. (2020). Creativity and innovation in higher education: A Palestinian academic perspective. *Bioscience Biotechnology Research Communications*, 13(4), 761–767.
- [15] Álvarez-Huerta, P., Muela, A., & Larrea, I. (2021). Student engagement and creative confidence beliefs in higher education. *Thinking Skills and Creativity*, 40, 100821.
- [16] Fang, Y.-H., & Chang, Y.-C. (2023). Effect of creative self-efficacy on creativity among college students: The moderating effect of college innovation climate. *International Journal of Higher Education*, 12(5), 128–140.
- [17] Hong, Q. N., Fàbregues, S., Bartlett, G., Boardman, F., Cargo, M., Dagenais, P., Gagnon, M. P., Griffiths, F., Nicolau, B., O' Cathain, A., Rousseau, M. C., & Vedel, I. (2018). The Mixed Methods Appraisal Tool (MMAT) version 2018 for information professionals and researchers. *Education for Information*, 34(4), 285–291.
- [18] Karunaratne, W., & Calma, A. (2023). Assessing creative thinking skills in higher education: Deficits and improvements. *Studies in Higher Education*, 49(2), 157–177.
- [19] Kolb, D. A. (1984). *Experiential learning: Experience as the source of learning and development*. Prentice Hall.
- [20] Nistor, N., & Samarasinghe, S. (2019). Staff induction assessment and implementing experiential learning models. *Educational Management Review*, 28(3), 15–29.
- [21] Piščalkienė, V., & Lottrup, M. (2019). The benefits of experiential-based learning: A case study of students. *Learning and Teaching Innovations*, 35(2), 110–121.
- [22] Amrein, J. (2023). Empowering students through experiential learning: Practices in education. *Journal of Experiential Education*, 47(1), 89–104.
- [23] Veine, S., et al. (2020). Reflection as a core student learning activity in education. *Higher Education Learning Journal*, 56(4), 112–125.
- [24] Bui, Q. N., & Yarsi, P. (2023). GO-DEEP: The potential of a reflection model in experiential learning. *International Journal of Experiential Learning*, 41(2), 15–27.

- [25] Austin, A., & Rust, B. (2015). Developing a learning program with milestones and challenges. *Program Evaluation Quarterly*, 19(3), 40–55.
- [26] Kramer, P. (2018). Promoting teachers' agency through reflective observation. *Teaching Practice Research*, 21(2), 90–101.
- [27] Kirkendall, T., & Krishen, A. (2015). Creativity in the social work classroom: Insights from qualitative research. *Social Work Education Review*, 34(5), 123–134.
- [28] Charfe, L., et al. (2020). Creating learning space using experiential learning and creativity. *Educational Dynamics*, 36(1), 45–56.
- [29] Raymundo, M. (2020). Fostering creativity through online group projects: Challenges and solutions. *Digital Education Review*, 24(1), 89–102.
- [30] Brailas, A., et al. (2017). Learning in action: Collaborative inquiry and experiential methodologies. *Collaboration and Learning Studies*, 12(3), 56–72.
- [31] Roland, B. (2017). Learning through VR: Reflective practice in technology-integrated classrooms. *Technology and Education*, 14(1), 15–29.
- [32] Elsayary, S. (2021). Using reflective practice models to teach STEM education. *Interdisciplinary Learning Journal*, 33(4), 74–89.
- [33] Soykurt, B. (2021). Reflections on creativity in the 21st-century classroom. *Journal of Educational Practices*, 48(2), 125–139.
- [34] Abiolu, O. R., et al. (2022). Nurturing inclusivity among Durban University students through reflective writing. *Diversity in Education Review*, 29(3), 18–33.
- [35] Kingkaew, K., et al. (2023). Learning environments that promote experiential awareness and creativity. *Educational Psychology Research*, 39(2), 56–78.
- [36] Leal-Rodríguez, A. L., & Albort-Morant, G. (2019). Promoting learning practices to improve performance: The role of CSE. *Journal of Management Studies*, 18(4), 45–62.
- [37] Bertoni, M., & Bertoni, P. (2019). Measuring experiential learning: Lessons from practice. *Experiential Education Review*, 12(5), 34–49.
- [38] Obi, C., et al. (2021). Learning activities in business education: Developing CSE in diverse settings. *International Journal of Business Education*, 15(3), 22–37.
- [39] Desmet, P., & Roberts, J. (2022). Teaching positive transformational creativity in service-based learning. *Creativity in Learning Journal*, 38(1), 79–92.