

ISSN: 2617-6548

URL: www.ijirss.com



Critical thinking in identity and citizenship education at Omani elementary schools: A new pedagogical framework

Souad Merah¹, Samih M. Al Karasneh^{2*}, Ramdane Tahraoui³, Ali M. Jubran⁴, Afkar Said⁵

^{1,3}Faculty of Education and Arts, Sohar University, Sohar, Oman.
²University of Sharjah, UAE, and Yarmouk University, Jordan.
⁴Faculty of Education and Arts, Sohar University, Sohar, Oman, and Yarmouk University, Jordan.
⁵Faculty of Education and Arts, Sohar University, Oman.
⁵Faculty of Education, Alexandria University, Egypt.

Corresponding author: Samih M. Al Karasneh (Email: skarasneh@sharjah.ac.ae)

Abstract

The aims of this conceptual paper are to explore the incorporation of critical thinking skills in teaching Identity and Citizenship (IC) in Omani schools and to gauge the levels of readiness among teachers to use innovative teaching pedagogies for fostering critical thinking. It also aims to highlight the utility of the current conventional IC teaching methods vis-à-vis the perceived effect of using student-centered learning approaches, especially the Philosophy for Children (P4C) pedagogy, and their efficiency in fostering critical thinking. A reflective analysis of the literature was utilized to examine and highlight the effects of the pedagogy in use. It was concluded that IC's teaching style remains very much conventional, as this subject is treated like any other school subject in an exam-oriented system, whereby information is directly disseminated to students with the objective of preparing them to take a written examination in which they might pass or fail. How students understand, perceive, or even apply the taught morals and values has become a secondary concern in the current trend of education. Therefore, a new pedagogy for a better realization of the objectives of the educational philosophy and the educational goals stated in Oman Vision 2040 is sought for this subject. A new learning framework could be proposed that will be based on eliminating the causes of alienation that students usually face while dealing with morals and values disseminated in morality lessons, and also to help teachers use innovative teaching methods to make the subject more relevant in catering to the 21st-century required skills, especially critical thinking.

Keywords: Critical thinking, Identity and citizenship, Innovative pedagogy, Methods of teaching, Moral education, Philosophy for children.

DOI: 10.53894/ijirss.v8i1.4580

Funding: This study received no specific financial support.

History: Received: 20 December 2024/Revised: 30 January 2025/Accepted: 4 February 2025/Published: 7 February 2025

Copyright: © 2025 by the authors. This article is an open access article distributed under the terms and conditions of the Creative Commons Attribution (CC BY) license (https://creativecommons.org/licenses/by/4.0/).

Competing Interests: The authors declare that they have no competing interests.

Authors' Contributions: All authors contributed equally to the conception and design of the study. All authors have read and agreed to the published version of the manuscript.

Transparency: The authors confirm that the manuscript is an honest, accurate, and transparent account of the study; that no vital features of the study have been omitted; and that any discrepancies from the study as planned have been explained. This study followed all ethical practices during writing.

Publisher: Innovative Research Publishing

1. Introduction

Education serves as a transformative force, profoundly shaping both individual character and societal cohesion [1, 2]. Among its many components, morality and identity-building subjects hold a particularly significant position, aiming to instill ethical values, nurture civic responsibility, and foster a sense of belonging [3, 4]. However, their inclusion in school curricula has ignited intense debates. Some consider moral education an essential part of comprehensive development [5], while others condemn it as a means of facilitating ideological control, strengthening the mainframes of dominant power structures [6, 7]. In all these dualities, therefore, comes the imperative for urgently examining the teaching of morality and identity against the perceived challenges of implementation and how alternative forms of teaching can take place to bridge such identified gaps [2, 8].

Globally, moral and identity education often fails to reconcile the preservation of cultural heritage with the demands of globalization. Modern education systems are challenged to balance traditional values with critical thinking, adaptability, and problem-solving skills needed for 21st-century global citizenship [9]. Despite the global emphasis on moral education, a significant research gap remains regarding the effective integration of critical thinking into identity and citizenship education, especially within culturally specific contexts such as Oman. The inclusion of morality and identity-building in education has long been contentious. While many scholars advocate for their integration as essential to holistic development, others view them as mechanisms for ideological indoctrination. Hargreaves [6] argues that moral and identity education often serves as a means for dominant groups to impose their values, perpetuating systemic power imbalances. Critics have specifically targeted the unreflective and dogmatic dissemination of moral values [7, 10]. Nonetheless, moral education remains indispensable, as it fosters societal cohesion and stability [3].

Historically, morality and religion have been deeply intertwined, shaping both educational practices and societal value systems. The Renaissance (14th–17th century) heralded a transformative shift, separating state and religion and paving the way for rational inquiry, secular education, and religious freedom. This transition diminished the monopoly of religious institutions over morality, replacing it with values derived from diverse cultural and social frameworks.

As Durkheim [1] posits, morality is inherently social, comprised of collective rules and practices that maintain societal stability [4]. Aristotle further emphasized that all institutions are rooted in moral purposes, cultivated through daily practices and hierarchical values [11]. Moral education, as old as organized education itself, reflects humanity's ongoing quest to define and uphold ethical norms governing relationships.

While traditional approaches relied on indoctrination and rigid moral principles, modern societies demand educational systems that equip learners with the capacity for rational moral reasoning. Dewey and Tufts [10] and Wilson [12] advocate for pedagogical methods that teach students to analyze, interpret, and respond thoughtfully to moral dilemmas. This paradigm shift underscores the vital role of critical thinking as a cornerstone of contemporary moral education, aligning it with the demands of 21st-century global citizenship.

In Oman, cultural and educational frameworks grounded in Islamic and Arabic traditions present both unique challenges and opportunities for the teaching of morality and identity [13]. Central to the national educational philosophy is moral and identity education, which emphasizes the consolidation and development of values for society. Manifestations of such objectives materialize in areas such as subject topics like Islamic Studies, Social Studies, and IC, along with moral messages embedded in the curricula of languages. For instance, the IC textbook for Cycle One includes units such as "My Glorious Self," "My Productive Family," and "Our Interactive Neighborhood," which focus on community participation and individual development [14].

In the same way, Islamic Studies textbooks for Cycle One are intended to foster moral behavior and ethics in the daily practices of students [15]. Social Studies textbooks for Cycle Two incorporate knowledge, skills, and values tailored to the developmental stages of students, promoting engagement with real-life contexts [16].

Despite all these concerted efforts, critical thinking has yet to be substantially embedded in Omani moral education. The current pedagogical approaches are based on rote memorization and exam preparation methods that may contradict the broader objectives of moral and character education. This reliance on traditional methods has limited opportunities for students to critically consider ethical dilemmas and meaningfully apply the values learned [17, 18].

The following issues demand a deep understanding of the interplay between cultural identity, educational practices, and global expectations. These challenges mean that any consideration of moral and identity education must urgently adopt a transformative approach to preserve the richness of Oman's cultural heritage while helping students secure the critical skills needed in an increasingly entangled world. The need for these changes is further reiterated by Oman's Vision 2040 in terms of generating a knowledge society by investing in innovative and adaptive human capital.

1.1. Bridging Challenges to the Problem Statement

The educational landscape of Oman stands at a critical juncture where the traditional approach to IC education faces the demands of modern pedagogical practices. While the national curriculum places great emphasis on moral and civic values, systemic reliance on rote memorization and examination-driven teaching undermines the development of higher-order cognitive skills, such as critical thinking. These shortcomings are particularly evident in international assessments like TIMSS, where Omani students have consistently underperformed, highlighting significant deficiencies in analytical and problem-solving abilities [19, 20].

Current practices in IC education create a self-perpetuating cycle of passivity in learning, whereby students learn moral lessons but are not equipped to critically analyze or apply them in life. This is clearly in contrast to the goals envisioned by Oman Vision 2040, which sees education as a cornerstone for creating a knowledge society that can address global challenges. The gap between the two requires a paradigm shift in teaching strategies for effective integration of critical thinking into

moral education. While the study is about Oman's context, its findings contribute to the wider global discussion of moral education in multicultural and examination-oriented educational systems. This introduction has provided a framework within which such dynamics will be explored and argued for an in-depth analysis of the evolving role of moral education in contemporary educational systems. This research, therefore, sets out to proffer a transformative framework for integrating critical thinking into moral and identity education, which constitutes a critical lacuna in the literature at both the local and international levels.

1.2. Purpose and Research Questions

This study aims to propose a new instructional framework for teaching IC in Omani elementary schools, with a focus on integrating critical thinking skills. The research is guided by the following questions:

- 1. What are the effects of traditional IC teaching methods on students' ability to critically engage with moral dilemmas?
- 2. How do conventional pedagogical approaches hinder the development of moral reasoning and decision-making skills?
- 3. What innovative strategies can enhance the teaching of IC to foster critical thinking?
- 4. What is the proposed framework for integrating critical thinking into IC education?

2. Methodology

2.1. Approach and Design

This study adopts a qualitative approach, employing a systematic review of relevant literature to explore the integration of critical thinking into Identity and Citizenship (IC) education within the Omani context. This approach aligns with Creswell and Poth [21]emphasis on qualitative inquiry as a robust method for examining complex social phenomena. A systematic review was chosen to synthesize insights from diverse sources, informed by Booth, Sutton, and Papaioannou's 2016 guidelines, which highlight its efficacy in identifying gaps and generating actionable insights in educational research.

2.2. Data Collection

A rigorous content analysis was performed regarding peer-reviewed articles, official reports, and policy documents on critical thinking and IC education. This was done following the framework for content analysis proposed by Krippendorff [22], ensuring that procedures were systematic and replicable. Inclusion criteria were developed to include only those aspects related to 1) the use of traditional and innovative teaching methodologies in moral and character education, 2) the role of critical thinking in enhancing ethical reasoning, decision-making, and problem-solving, and 3) the utilization of student-centered pedagogical practices within both international and Omani contexts.

The data was organized in a structured manner using Microsoft Excel to enable theme identification, as suggested by Thomas [23] in approaches toward qualitative data management. Specific themes that were identified include pedagogical innovations, systemic barriers, and alignment with 21st-century educational imperatives.

2.3. Data Analysis

Thematic analysis, as conceptualized by Braun and Clarke [24], was used to develop the recurring patterns, insights, and gaps in the data gathered. This involved an iterative process of coding, refining, and categorizing the themes to attain a comprehensive level of understanding regarding critical thinking in IC education. Furthermore, to achieve validity and reliability, peer reviews and collaborative discussions within groups were performed, following the methods of triangulation proposed by Denzin [25]. Moreover, the research adhered to the criteria for trustworthiness in thematic analysis as outlined by Nowell, et al. [26]. The findings highlighted systemic barriers to the development of critical thinking and provided pedagogical innovations that reflect student-centered learning principles, as supported by Lipman [27]. The iterative process of the analysis allowed for the refinement of themes and the identification of critical gaps in existing practice that inform the transformative aims presented in Schleicher [28] framing of modern education.

2.4. Limitations

However, the fact that this study relied on secondary data may reduce its generalizability. Future studies using empirical research would thus confirm and develop this proposed framework and enhance its applicability for different educational settings.

3. Findings and Discussion

The purpose of the present study was to provide a transformative framework for teaching IC in Omani elementary schools, with an emphasis on integrating critical thinking skills. Guided by the research questions, the findings point out the implications of conventional IC teaching approaches on students' critical engagement with moral dilemmas, systemic and cultural barriers to developing critical thinking among students, how innovative pedagogies may facilitate this, and a proposed framework to address such challenges. Such findings are expected to be compatible with Oman Vision 2040, emphasizing that while equipping students with 21st-century skills, their cultural and moral values should also be preserved.

4. Effects of Traditional IC Teaching Methods

Addressing Research Question 1: What are the effects of traditional IC teaching methods on students' ability to critically engage with moral dilemmas?

Identity and Citizenship education in Oman predominantly relies on traditional, exam-centric teaching methods. These methods prioritize rote memorization and factual recall over reflective engagement, which significantly limits students' ability to connect moral and civic values taught in the classroom to real-life scenarios. This disconnection undermines the relevance of the subject and its potential for long-term impact [19, 29].

Outdated instructional practices hinder the development of higher-order thinking skills. Students are rarely encouraged to question, analyze, or deeply engage with moral dilemmas, resulting in a superficial understanding of values. These methods contradict the goals of Oman Vision 2040, which advocate for fostering critical thinking, problem-solving, and ethical reasoning to prepare students for modern challenges [8, 29].

5. Barriers to Integrating Critical Thinking

Addressing Research Question 2: How do conventional pedagogical approaches impede the development of moral reasoning and decision-making skills?

The integration of critical thinking into IC education faces several systemic and cultural barriers.

5.1. Exam-Centric Curriculum

The education system's focus on standardized testing fosters a culture of rote learning, prioritizing grades and factual recall over inquiry-based and reflective teaching methods. This exam-driven approach limits meaningful engagement with moral and civic content [30, 31].

5.2. Teacher Preparedness

Educators often lack the necessary training and resources to implement innovative teaching strategies. Professional development programs are sporadic and insufficient, leaving teachers ill-equipped to promote critical thinking and student-centered learning [29, 32].

5.3. Cultural Expectations

Traditional classroom hierarchies position teachers as the sole authority, while students are expected to passively absorb knowledge. This cultural resistance to participatory approaches hampers efforts to develop ethical reasoning and decision-making skills [33, 34].

These barriers collectively inhibit IC education's ability to prepare students for the complexities of contemporary life.

6. Potential of Innovative Pedagogies

Addressing Research Question 3: What innovative strategies can enhance the teaching of IC to foster critical thinking? Innovative, student-centered pedagogical approaches offer transformative solutions to these challenges. Research points out several effective methods that include:

6.1. Critical Thinking Skills

Improvement: Innovative pedagogies, such as P4C, provide students with open discussion time to critically reflect on moral dilemmas and ethical principles. Such approaches prepare learners with the means to solve real-world problems according to Lipman [8] and Bhattacharjee and Ghosh [35].

6.2. Collaboration and Communication

The innovative pedagogies help build teamwork, dialogue, and respect for different viewpoints, creating an environment conducive to discussing ethical and civic issues collectively, as noted by Moreno-Guerrero, et al. [36].

6.3. Building Ethical Reasoning and Self-Awareness

Reflective practices, such as learning diaries, prompt students to critically evaluate their beliefs and behaviors, deepening their moral understanding and improving decision-making skills. This view is supported by Ayuningtyas and Supriatna [37] and Tammeleht and Löfström [38].

For example, P4C has successfully fostered cooperative learning environments where learners critically explore moral concepts through guided inquiry [39, 40]. Additionally, reflective diaries have provided the systematic grounds for introspection, allowing students to relate knowledge theoretically to actual situations [41].

7. Proposed Framework for IC Education

Answering Research Question 4: What is the proposed framework for integrating critical thinking into IC education? To address these issues, this research proposes a holistic framework for the transformation of IC education in Oman, aligned with Oman Vision 2040.

7.1. Teacher Training Programs

Establish robust professional development programs that will equip teachers with new approaches, such as P4C, inquiry-based learning, and reflective practices. The training should focus on enhancing the confidence and competencies of teachers in conducting critical thinking and ethical reasoning [38, 42].

7.2. Curriculum Redesign

Refresh the IC curriculum to create a combination of interdisciplinary projects, critical thinking exercises, and real-world applications. Critical updates must favor student activities that help individuals connect moral concepts with common experiences [8, 43].

7.3. Monitoring Reform

Move away from traditional examinations and adopt performance-based assessment methods that include group projects, reflective journals, and ethical problem-solving tasks. Such methods will better assess the critical thinking and decision-making skills of students [23, 44].

This framework will pave a strategic route for modernizing IC education without breaching Oman's cultural and moral values. If these strategies are implemented, Omani education can prepare students to navigate effectively the challenges arising from an interconnected world, in line with the aspirations of Oman Vision 2040.

8. Conclusion

The demands of the 21st century call for a transformative approach to teaching and learning in moral and character-building education. Traditional, didactic methods no longer suffice in equipping students to navigate the complexities of modern societal challenges. Instead, innovative pedagogies that emphasize critical thinking, creativity, and real-world application must take precedence. Teachers play a pivotal role in fostering higher-order cognitive processes, including application, analysis, synthesis, argumentation, interpretation, and problem-solving as foundational skills for the future [45-48].

Traditional moral education approaches often fail to engage students meaningfully, as they lack connections to real-life ethical dilemmas. Innovative strategies, such as Philosophy for Children (P4C), provide a compelling alternative by fostering reasoning, ethical analysis, and reflective thinking. These methodologies empower students to navigate ethical challenges effectively while fulfilling the broader goal of moral education: developing responsible, ethical individuals who contribute actively to their communities and society.

A paradigm shift in the perception and implementation of moral, character-building, and citizenship education is both necessary and urgent in Oman. The educational practices that need to align with the aspirations of Oman Vision 2040 involve developing a knowledge society prepared with relevant 21st-century skills through the adoption of a new learning framework. It provides an implementable and innovative route for transformation based on critical thinking and student-centered methodologies.

This paper contributes to the international debate on the integration of critical thinking into education, with a focus on Omani primary schools. The research supports inquiry-based and student-centered approaches in developing students' skills in critical thinking, problem-solving, and ethical decision-making. Future research should be directed toward empirical studies that will help refine and extend the integration of critical thinking into Omani classrooms and ensure effective and scalable practices for wider dissemination.

By these means, education in Oman can endeavor to meet challenges from a complicated world. Developing a cadre of reflective, skilled, and principled citizens, it would thus be set on a sound footing in the coming interdependent world—one that also corresponds to the country's and world's aspirations toward a vibrant, modern society poised for the future.

8.1. Recommendations

The following recommendations are suggested based on the findings of the research as ways to increase critical thinking within Identity and Citizenship in Oman. Systemic, pedagogical, and cultural suggestions align with Oman Vision 2040 and the Philosophy of Education in Oman.

- 1. National Framework: Provide a comprehensive framework that embeds critical thinking in IC education, considering clear objectives, standards, and guidelines, thereby ensuring standard implementation across all schools.
- 2. Teacher Training: Implement professional development programs with an emphasis on recent pedagogies such as P4C, inquiry-based learning, and reflective practices that allow teachers to be agents of transformative education.
- 3. Curriculum Revision: Realign the IC curriculum to incorporate critical thinking activities, practical scenarios, and interdisciplinary approaches to make lessons interesting and relevant to the students' lives.
- 4. Assessment reform should move away from traditional testing to performance-based assessments, such as reflective journals, problem-solving tasks, and collaborative projects, to effectively assess students' critical thinking and ethical reasoning.
- 5. Resource Development: Develop digital and physical teaching resources and upgrade classroom infrastructure to facilitate interactive, student-centered learning environments.

These recommendations are put forward with a view to preserving Oman's cultural heritage while equipping students with the critical skills needed to successfully navigate the complexities of a globalized world. Tackling systemic barriers and adopting innovative pedagogies will position Oman to build a future-ready education system aligned with national and international priorities.

8.2. Strategies for Implementation

Translating the recommendations into actionable outcomes requires scalability, inclusivity, and continuous improvement; such emphases can be realized by the following strategies that ensure critical thinking is well-placed in IC Education in Oman to meet the country's aspirations for 21st-century education through Oman Vision 2040:

- 1. Pioneer Programs: Implement pilot programs in selected schools to test and refine the proposed strategies. Pilot programs are part of large-scale implementation, ensuring applicability in all types of school setups.
- 2. Capacity Building: Design an extensive training program for teachers through online modules, workshops, and mentorship programs. This is to ensure that equal opportunities are available for professional development in urban and rural areas.
- 3. Community Involvement: Engage parents, local organizations, and educational stakeholders in advocacy and awareness campaigns. This will help create a supportive ecosystem that strengthens the integration of critical thinking into IC education and ensures community ownership.
- 4. Monitoring and Evaluation: Establish effective monitoring mechanisms characterized by specific performance indicators and feedback mechanisms. Regular evaluations will highlight successes and areas for improvement to ensure accountability and guide iterative refinement.
- 5. Recognition and Incentives: Provide motivators such as rewards, grants for innovative practices, and public recognition to encourage individuals to adopt the changes and sustain enthusiasm.

Accordingly, with these strategies in place, critical thinking will be comfortably embedded in Oman's IC education framework, developing a vibrant, forward-looking educational system. Such measures ensure that not only is better student performance guaranteed, but they also contribute to achieving the greater goals of Oman—developing innovative, adaptive, and globally competent citizens.

References

- [1] E. Durkheim, *Moral education*. Courier Corporation. https://doi.org/10.36261/ijdeel.v10i1.6165https://doi.org/10.36261/ijdeel.v10i1.6165, 2012.
- [2] D. Koch, Principles of instrumental logic: John Dewey's lectures in ethics and political ethics, 1895–1896. SIU Press, 1998.
- N. Strawn, "Finite frame varieties: Nonsingular points, tangent spaces, and explicit local parameterizations," *Journal of Fourier Analysis and Applications*, vol. 17, no. 5, pp. 821-853, 2011. https://doi.org/10.1007/s00041-011-9161-7
- [4] B. I. Chazan, Contemporary approaches to moral education: Analyzing alternative theories. New York: Praeger, 1985.
- [5] Boston University, "Character education manifesto," Retrieved: https://www.bu.edu/ccsr/about-us/partnerships/character-education-manifesto/. [Accessed 1996].
- [6] A. Hargreaves, "Restructuring restructuring: Postmodernity and the prospects for educational change," *Journal of Education Policy*, vol. 9, no. 1, pp. 47-65, 1994. https://doi.org/10.1080/0268093940090104
- [7] D. Bar-Tal, "How morality signals, benefits, binds, and teaches," *Journal of Experimental Social Psychology*, vol. 101, p. 104313, 2021. https://doi.org/10.1016/j.jesp.2021.104313
- [8] M. Lipman, *Philosophy goes to school*. Philadelphia: Temple University Press, 2010.
- [9] A. Schleicher, "The case for 21st-century learning. Organisation for Economic Co-operation and Development," Retrieved: https://www.bollettinoadapt.it/old/files/document/11702schleicher_oecd_.pdf. [Accessed 2011.
- [10] J. Dewey and J. H. Tufts, "Ethics," *Laissez faire*, vol. 161, p. 475, 2022.
- [11] M. Broadie, "Computing efficient frontiers using estimated parameters," *Annals of Operations Research*, vol. 45, pp. 21-58, 1993. https://doi.org/10.1007/BF02284584
- [12] D. S. Wilson, "Adaptive individual differences within single populations," *Philosophical Transactions of the Royal Society of London. Series B: Biological Sciences*, vol. 353, no. 1366, pp. 199-205, 1998. https://doi.org/10.1098/rstb.1998.0202
- [13] Philosophy of Education in Oman, *Ministry of education*. Oman: Philosophy of Education, 2017.
- [14] Ministry of Education, *Identity and citizenship textbook for cycle*. Oman: Ministry of Education, 2023.
- [15] Ministry of Education, *Islamic studies textbook for cycle 1*. Oman: Ministry of Education, 2020.
- [16] Ministry of Education Oman, Social studies textbook for cycle two. Oman: Ministry of Education, 2021.
- [17] Ministry of Education, National curriculum framework for basic education. Oman: Ministry of Education, 2016.
- T. A. Al Barwani, W. Thabit Al-Ani, and I. Hussein Amzat, "An effective teaching model for public school teachers in the Sultanate of Oman: Students' stance," *Education, Business and Society: Contemporary Middle Eastern Issues*, vol. 5, no. 1, pp. 23-46, 2012. https://doi.org/10.1108/17537981211224842
- [19] A. S. Al Shabibi and H. Silvennoinen, "Challenges in education system affecting teacher professional development in Oman," *Athens Journal of Education*, vol. 5, no. 3, pp. 261-282, 2018. https://doi.org/10.30958/aje.5-3-5
- [20] TIMSS & PIRLS International Study Center, *International results in mathematics: Trends in international mathematics and science study.* Chestnut Hill, MA: Boston College, 2011.
- [21] J. W. Creswell and C. N. Poth, *Qualitative inquiry and research design: Choosing among five approaches*. Los Angeles, CA: Sage Publications, 2018.
- [22] K. Krippendorff, Content analysis: An introduction to its methodology. Los Angeles: Sage Publications, 2018.
- [23] D. R. Thomas, "A general inductive approach for analyzing qualitative evaluation data," *American Journal of Evaluation*, vol. 27, no. 2, pp. 237-246, 2006. https://doi.org/10.1177/1098214005283748
- [24] V. Braun and V. Clarke, "Using thematic analysis in psychology," *Qualitative Research in Psychology*, vol. 3, no. 2, pp. 77-101, 2006. https://doi.org/10.1191/1478088706qp063oa
- [25] N. K. Denzin, "Triangulation 2.0," Journal of Mixed Methods Research, vol. 6, no. 2, pp. 80-88, 2012. https://doi.org/10.1177/1558689812437186
- [26] L. S. Nowell, J. M. Norris, D. E. White, and N. J. Moules, "Thematic analysis: Striving to meet the trustworthiness criteria," International Journal of Qualitative Methods, vol. 16, no. 1, p. 1609406917733847, 2017. https://doi.org/10.1177/1609406917733847
- [27] M. Lipman, Thinking in education, 2nd ed. Cambridge University Press. https://doi.org/10.1017/CBO9780511840272, 2003.
- [28] A. Schleicher, "Teaching excellence through professional learning and policy reform," *Lessons from Around the World, International Summit on the Teaching Profession*, vol. 2, no. 2, pp. 406-415, 2016. https://doi.org/10.1787/9789264252059-en
- [29] R. Hashim, S. Hussien, and A. M. Imran, "Hikmah (wisdom) pedagogy and students' thinking and reasoning abilities," *Intellectual Discourse*, vol. 22, no. 2, pp. 1–23, 2014.

- [30] G. K. Brown, "Making ethnic citizens: The politics and practice of education in Malaysia," *International Journal of Educational Development*, vol. 27, no. 3, pp. 318-330, 2007. https://doi.org/10.1016/j.ijedudev.2006.08.002
- [31] P. Graham, "Educating for ethics and sustainability: An international perspective," *Teaching Ethics*, vol. 8, no. 1, pp. 47–61, 2007.
- [32] S. C. Choy and P. K. Cheah, "Teacher perceptions of critical thinking among students and its influence on higher education," *International Journal of Teaching and Learning in Higher Education*, vol. 20, no. 2, pp. 198-206, 2009. https://doi.org/10.30845/ijtlhe.v20i2.369
- [33] V. Balakrishnan, "Teaching moral education in secondary schools using real-life dilemmas," Doctoral Dissertation, Open Access Te Herenga Waka-Victoria University of Wellington, 2009.
- [34] N. M. Yusof, "Multicultural education: Managing diversity in Malaysian schools," *Malaysian Education Deans Council Journal*, vol. 2, no. 7, pp. 1-8, 2008.
- [35] S. Bhattacharjee and S. Ghosh, "Usefulness of role-playing teaching in construction education: A systematic review," presented at the 49th ASC Annual International Conference, San Luis Obispo, CA, 2013.
- [36] A.-J. Moreno-Guerrero, C. Rodríguez-Jiménez, G. Gómez-García, and M. Ramos Navas-Parejo, "Educational innovation in higher education: Use of role playing and educational video in future teachers' training," *Sustainability*, vol. 12, no. 6, p. 2558, 2020. https://doi.org/10.3390/su12062558
- [37] R. Ayuningtyas and N. Supriatna, "Scaffolding writing model based on diary to improve moral intelligence for elementary school students," *In International Conference on Elementary Education*, vol. 4, no. 1, pp. 705–711, 2022. https://doi.org/10.11591/ijee.v4i1.33418
- [38] A. Tammeleht and E. Löfström, "Learners' self-assessment as a measure to evaluate the effectiveness of research ethics and integrity training: Can we rely on self-reports?," *Ethics & Behavior*, vol. 34, no. 8, pp. 575-596, 2024. https://doi.org/10.1080/10508422.2023.2243368
- [39] B. Kilby, "Why teachers' beliefs and values are important in P4C research: An Australian perspective," *Childhood & Philosophy*, vol. 15, pp. 1-19, 2019.
- [40] K. M. Sucliffe, L. Paine, and P. J. Pronovost, "Re-examining high reliability: Actively organising for safety," *BMJ Quality & Safety*, vol. 26, no. 3, pp. 248-251, 2017. https://doi.org/10.1136/bmjqs-2016-006043
- [41] V. M. Cojocariu and G. Mareş, "Pedagogical diary-a way of identifying some of the values of future primary and preschool teachers," presented at the In The Fifth International Conference on Adult Education (p. 431), 2018.
- [42] R. Khanmohammadi *et al.*, "The influence of biomedical research on future business funding: Analyzing scientific impact and content in industrial investments," *arXiv preprint arXiv:2401.00942*, 2024. https://doi.org/10.48550/arXiv.2401.00942
- [43] P. Legrenzi and C. Umiltà, "Knowledge as a profession: Trust in results and science," 2024.
- [44] S. Tian and P.-F. Liao, "Philosophy for children with learners of English as a foreign language," *Journal of Philosophy in Schools*, vol. 3, no. 1, pp. 40–58, 2016. https://doi.org/10.21913/jps.v3i1.1299
- [45] B. S. Bloom, Taxonomy of educational objectives: Handbook I, the cognitive domain. New York: David McKay, 1956.
- [46] P. Facione, "Critical thinking: A statement of expert consensus for purposes of educational assessment and instruction," The Delphi Report The California Academic Press., 1990.
- [47] M. Putman *et al.*, "How do galaxies accrete gas and form stars?," *arXiv preprint arXiv:0902.4717*, 2009. https://doi.org/10.48550/arXiv.0902.4717
- [48] W. Artika and C. Nurmaliah, "Improving critical thinking skills through higher order thinking skills (hots)-based science," International Journal of Instruction, vol. 16, no. 4, pp. 283-296, 2023. https://doi.org/10.29333/iji.2023.16417a