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**| RESEARCH ARTICLE**

## **Innovative Learning Spaces and the Creative Use of Professional Conversations in Leadership Capability Advancement**

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**| ABSTRACT**

This focus of this paper is on understanding historical and critical viewpoints that facilitate learning for effective outcomes in adult education plans. It is shown that inclusive and participatory methods are useful for promoting lifelong learning. It highlights professional ideas that support learning methods that empower learners' knowledge development and eliminate structural barriers to learning. The iterative process of discovery reflects the movement between interactive sessions with next generation leaders and evidence in the literature that emerged as a comprehensive literature review and analysis. The analysis indicates that leaders, educators, and other professionals should be facilitating and promoting professional conversations from a learner-centered perspective since they enable learners to embrace self-direction in growth and learning. Through the approach, educators emphasize learners' strengths and experiences, while implementing team discussions, peer coaching, and mentorship programs. This paper illustrates that learning space metaphors such as campfire, watering hole, cave, life, and holodeck, are essential for establishing flexible learning environments that enhance knowledge development through vivid imagery among learners. It indicates that, while each metaphor signifies a specific educational process, combining the concepts improves learning by making it more collaborative as learners can participate in imaginative activities and problem-solving tasks in a collaborative approach that promotes research. Furthermore, it illustrates that Thornburg's learning spaces can also be incorporated into collaborative education frameworks to improve learner-centered engagement. The experiential utilization shows that the purpose of Thornburg's learning spaces is to create intentional teaching and learning practices that require facilitators and mentors to go beyond what is familiar and apply risk-taking techniques such as dynamic interaction in teaching and learning processes. A review of cooperative and experiential learning in this paper also shows that they form the foundation for co-learning, co-thinking, co-mentoring, and co-creating in education processes. It is demonstrated that cooperative and experiential learning concepts align with the core principles of adult education, emphasizing practical application and purposeful reciprocal engagement. As learners contribute to creating study materials and designing learning activities, they facilitate co-creation to improve their interactions with educators. A review of co-transforming and co-innovating concepts in education also indicates that they are effective methods of enhancing leadership capabilities. This paper illustrates that co-transforming methods foster transformative learning related to real-life situations, encouraging participants in professional conversations to become change agents within a transformation ecosystem. It also illustrates that components of co-innovating can be established by acquiring new ideas, conscientiously managing shared knowledge, and effectively implementing creative concepts. This review demonstrates that co-learning approaches reflect the constructivist philosophy even though they are novel methods. It indicates that the constructivist theory can be applied in learning processes since it inspires learners to engage actively in educational tasks. This paper also highlights research findings demonstrating the effectiveness of professional discussions in leadership and educational contexts due to their dynamic applicability. It encourages professionals to gain extensive awareness of the intentional decision-making for effective teaching and leadership. It also emphasizes the need for future professionals to adopt and maintain practices that reflect learner-centeredness. The report concludes by stressing the importance of combining professional conversations with deliberate and intentional activities and discussion as an effective strategy for educating adult learners. Such an education approach encompasses discussions that foster teamwork, critical thinking, and reflective thought among learners that culminate in a transforming mindset.

## **| KEYWORDS**

Learner-centeredness, professional conversations, learning space metaphors, cooperative and experiential learning, transforming mindset

## **| ARTICLE INFORMATION**

**ACCEPTED:** 11 April 2025

**PUBLISHED:** 12 May 2025

**DOI:** 10.32996/jlds.2025.5.2.2

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### **Introductory Overview**

Knowing historical and critical viewpoints is necessary for redesigning adult education. According to Benavot et al. (2022), inclusiveness and participatory techniques should help to rethink lifelong learning. Professional conversations support this goal by fostering discussions that empower learners and advance the elimination of structural obstacles to learning. The advantages of such tactics are made clear by Owen et al. (2021), who elaborate on how intentional actions, such as planned talks, improve older individuals' well-being and quality of life. This review expounds on the essence of developing innovative learning spaces that encourage professional conversations within an educational collaboratory. Additionally, it discusses the strategies for methodologies in leadership capability advancement such as co-learning, co-mentoring, co-thinking, co-creating, co-transforming, and co-innovating, and calls for additional focus on aspects that enhance professional conversations going forward. Creating an environment that promotes adult learning requires an innovative approach that integrates multiple strategies, encompassing enabling learner-centered approaches and incorporating digital technology.

### **Innovative Learning Spaces, the Educational Collaboratory and the Context of Professional Conversations**

It is favorable for leaders, educators, and other professionals to embrace professional conversations from a learner-centered perspective because it permits them to take charge of their growth and learning in a self-directed manner. The strategy prioritizes individual strengths, experiences, and needs and entails deploying team discussions, mentorship, or peer coaching (Rathmell et al., 2019). The learner-centered approach follows constructivist theories, which champion autonomous problem-solving and active learner participation. In this method, professional conversations are useful for learners to discuss presumptions, exchange encounters, and jointly develop solutions (Shah, 2019). Merriam (2017) emphasizes that these autonomously-led and experiential approaches are especially beneficial for adult learners. Professional discussions foster an atmosphere that encourages critical thinking and problem-solving by emphasizing respect for one another and shared exploration (Ali et al., 2018). By promoting self-determination, task orientation, and experience learning, instructors who use this approach match their methods with adult learning concepts.

The learning space metaphors - campfire, watering hole, cave, life, and holodeck - provide a thorough foundation for creating flexible learning environments. Each metaphor stands for a different facet of the educational process. The holodeck combines all of these components through technologically improved immersive encounters. The campfire embodies conventional formal knowledge-sharing. The watering hole fosters peer-to-peer interactions, and the cave promotes introspection. The life component supports practical application (Thornburg, 2013). Learning will further improve by combining these concepts with the notion of the educational collaboratory. Learners can participate in imaginative tasks and problem-solving in a collaborative setting that fosters research (Nazeef et al., 2024; Nja et al., 2023). In contrast to a regular classroom, collaboration involves knowledge sharing and co-creation. It uses both real and virtual venues to encourage engagement and creative inspiration. Technologies that facilitate these procedures and guarantee inclusion and adaptation include open-source systems and virtual educational settings (Rebmann & Clark, 2017). The model that becomes applicable through putting Thornburg's metaphors into collaborative contexts is an excellent example of learner-centered education for individual and group requirements. The focus on technology to promote inclusivity and creativity is another advantageous feature of such an integration. Artificial intelligence, virtual reality, and other technological advances will transform classrooms into interactive centers where learners can interact with the material and work together to solve difficult problems (Onopriienko et al., 2023; Storey & Wagner, 2024; Zammit, 2024). The virtual holodeck, for example, can replicate several real-world situations involving handling a medical emergency or creating a long-term business plan, enabling learners to transform their learning into effective actions. One of the most important settings for adult professional talks is the fast-evolving digital environment. Digital literacy is fundamental because it encourages participation and achievement in disadvantaged adult demographics (Jimoyiannis, 2015). These encounters will be crucial in helping learners meet some of the major obstacles presented by a world that is evolving quickly.

Developing a versatile ecosystem focusing on learner-centered participation is possible by incorporating Thornburg's learning spaces into the collaboratory framework. For instance, interdisciplinary exchanges in the collaboratory are consistent with the cooperative trade at the watering hole. Learners get the urge to exchange ideas, challenge presumptions, and develop critical

thinking skills in such an environment (Owen & Brown, 2021). Similarly, the collaboratory's focus on encouraging personal discoveries within a group context becomes evident through the introspective cave. Quiet areas of reflection enable learners to go through the material and formulate concepts that subsequently undergo discussion and improvement in the collaboratory. The post-digital academic setting of nowadays, where place and space mix physical and virtual environments made possible by technological advances, is a perfect fit for educational collaborations (Lamb et al., 2022). These environments foster the worldwide critical thinking, dialogue, and creativity skills necessary for success in the 21st century. Creating engaging, diverse environments that better prepare learners for upcoming problems, while encouraging agency and imagination for independent learning, can be a new perspective on learning spaces (Sa dos Reis, 2022). For instance, virtual collaboratories promote global collaboration by enabling foreign cohorts to exchange and gain knowledge from diverse viewpoints. It enhances education and prepares learners to handle intricate, multidimensional problems in their disciplines.

In theory, many recent debates have centered on combining professional actions with deliberate instruction. The focus of intentional teaching practices is on purposeful behaviors and goal-achieving techniques. Intentional teaching calls for teachers to step outside of what is familiar and use risk-taking techniques, such as dynamic interactions (Higginbottom et al., 2022). Professional discussions and intentional teaching depend on learners actively participating in discussions that challenge their preconceptions and promote personal advancement. Similarly, Leggett (2023) emphasizes collaborative and reflective processes. For learner engagement to be a significant component of this process, he urges instructors to be intentional. Professional conversations also touch on the intentional decision-making procedures of effective leadership and instruction. Chen et al. (2023) examine how deliberate decision-making improves play-based learning and establishes a pleasant connection between professional conversations' structured yet adaptable elements. Hence, to make considerable steps in employing intentional teaching and learning, educators and learners should embrace models such as the intentional teaching framework, which emphasizes adopting suitable steps to addressing a task, employing observation, taking practical actions, reflecting, and improving (Leggett, 2023). Through teacher and learner intentionality, achieving new heights that would not be possible to attain using traditional approaches is feasible.

### **Co-Learning Methodologies for Leadership Capability Advancement**

Cooperative and experiential learning views are the foundation for co-learning, co-mentoring, co-thinking, and co-creating. It aligns with the core tenets of adult education, which include practical application and reciprocal involvement with purpose. Through learner involvement and dialogue, the co-learning system builds communal knowledge, giving it its dynamic nature. In such circumstances, learners collaboratively create an environment that adds a variety of viewpoints to enhance comprehension and intellectual advancement. Co-learning, Navarro-García et al. (2015) explain, encourages learners to criticize one another's ideas actively, increases awareness, and improves communication skills. Co-mentoring offers a special chance for people with varying expertise to learn from one another. Co-mentoring promotes mutual advancement and knowledge sharing, unlike conventional mentoring, which frequently occurs in a one-way fashion. According to Ali et al. (2018), co-mentoring fosters a positive atmosphere where peers and seasoned educators work together to solve obstacles and exchange best practices. The focus on shared solving, in which people pool their cognitive resources to tackle challenging problems, emphasizes co-thinking. This method's prediction happens in two-way conversations in which sharing, discussion, and improvement of concepts happen enthusiastically. According to Navarro-Garcia et al. (2015), co-thinking improves the creation of creative ideas by integrating participants' diverse experiences and areas of competence. Based on their contributions to one another when creating study materials and learning activities, co-creation enhances the interaction between educators and learners. Co-creation, according to Konings et al. (2020), centers on developing educational programs while taking the requirements and objectives of those involved into account. As a result, the participants' significance and fascination will advance. With complete learner participation throughout the learning process, this method permits ownership and responsibility.

Co-transforming and co-innovating are equally effective approaches for enhancing leadership capabilities. Co-transforming creates transformative learning that relates to real-life situations and enables all participants in professional conversations to become change agents. According to Christie et al. (2015), co-transformation challenges conventional wisdom and opens the door for creative thinking, which results in systemic improvements rather than just personal advancement. Conscientiously managing shared knowledge, acquiring fresh perspectives, and effectively implementing creative ideas are all components of co-innovating. This method enables participants to transform abstract ideas into tangible innovation and closes the gap between principles and real-world applications. According to Navarro-Garcia et al. (2015), risk-taking, exploration, and originality create an atmosphere supporting the success of co-innovative projects. Through the identified strategies, it is possible to achieve, sustain, and benefit from collaborative and experiential learning.

As the co-learning strategies are relatively new, further assessment reveals a common aspect – they reflect the constructivist philosophy. This essay already points out the constructivist philosophy as enabling learner participation. Specifically, the notion holds that people formulate knowledge through their own experience (Dagar & Yadav, 2016). The theory inspires learners to be

active parties in their education. Each of the identified co-learning strategies exhibits the quality of the constructivist view in that they urge people to utilize their existing knowledge as a basis for new learning and encourage social engagement with others to develop their knowledge. Moreover, these alternatives encourage learning through experience rather than just listening to lectures. For example, co-learning fosters a community of practice that emphasizes continual improvement while enhancing the learning experience through reciprocal collaboration (Navarro-García et al., 2015). Co-thinking depicts social interaction because learners develop critical thinking abilities and a sense of collaborative responsibility for the outcomes, making solutions more robust and feasible. The same applies to co-mentoring, which helps participants grow personally and professionally by improving their endurance and adaptability by learning from one another's experiences and thoughts (Ali et al., 2018). From these examples, the co-learning strategies appear vital in fostering a learner-centered learning approach, warranting additional understanding of their influence.

### **Anticipating Futuristic Horizons and the Transformative Power of Professional Conversations**

Professional discussions have emerged as a crucial strategy with transformative power in leadership and education to grow and enhance the involvement of mature learners. One of the reasons for this is that professional conversations use dialogue dynamics as a deliberate teaching technique to foster an atmosphere that encourages reflective practice, critical thinking, and group learning (Earl & Timperly, 2019; Glover et al., 2024). Research findings demonstrate the effectiveness of professional discussions in various leadership and educational situations, highlighting their dynamic and diverse applicability (Okeke & Van der Westhuizen, 2020). Additional findings highlight how deliberate learning frameworks can further enhance the effectiveness of these discussions, particularly when it comes to setting objectives, collaborative benefits, and evidence-based approaches (Benavot et al., 2022). Furthermore, because professional interactions align with pedagogical concepts, they are excellent at engaging mature learners. According to Anderson and Boutelier (2021), andragogy and working adult professionalism merge, and the dialogical approach helps adult learners think about their prior experiences and professional skills. They gain a sense of control and importance, which are two crucial aspects of adult education. Hence, professionals should acquire extensive awareness of the intentional decision-making of good teaching and leadership in the future. Committing additional input to understand how the area works and how to implement its requirements would improve the learning process through practical activities, including role plays, forming a suitable connection between professional conversations that are planned but flexible. The commitment is essential, bearing in mind that professional conversations could become one of the fundamental tools that make it easier to attain different learners' wants and aspirations and augment retention (Morgan-Bowyer, 2023). Making necessary adjustments would offer a chance to improve the learning experience for adult learners who are likely to perform well through practical and appropriate adjustments.

Furthermore, future professionals should embrace and maintain practices that encourage learner-centeredness. Investing in improving the practice is essential, bearing in mind that it augments engagement by enabling learners to gain additional motivation when they take charge of their learning (Wang, 2023). Additionally, the strategy is beneficial because it encourages retention and application of information and because it allows learners to form critical thinking skills when they get the drive to ask and respond to questions and solve problems (Wang, 2023). Hence, future researchers should generate concepts that expound understanding of Thornburg's learning spaces to improve learner-centered engagement through their incorporation into the collaboratory framework. For instance, they may expound on the aspects that may deter collaborative engagement at the watering hole and how each identified element influences interdisciplinary interactions in the collaboratory. On the same note, Shah (2019) contends that exploring the idea of professional conversations further can offer a chance to improve the application of the learner-centered approach in teaching and learning. Leaders and instructors can build an engaging environment that meets the different needs of adult learners by purposefully creating new concepts and enhancing current ones. Through relentless efforts to promote a learner-centered approach, educators would gain much insight into the strengths and weaknesses of their learners, thereby giving them a chance to make needed adjustments to bolster their full potential.

### **Conclusion**

By combining deliberate instruction with discussion, professional conversations offer a successful strategy for involving mature learners. It includes discussions that encourage critical thinking, teamwork, and reflective thought. Furthermore, it supports andragogy and comprehensively promotes adults' conceptualization, contemplation, and advancement. Intentional learning framework methods and collaborative work show positive outcomes, indicating structured and purposeful methods to discourse in management and learning. As technological advancements advance, so will the methods for incorporating professional conversations into virtual contexts and laying the groundwork for developing fair and efficient educational opportunities.

### **Disclaimer**

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## References

- [1] Ali, Z. B. M., Wahi, W., & Yamat, H. (2018). A review of teacher coaching and mentoring approach. *International Journal of Academic Research in Business and Social Sciences*, 8(8), 504-524. [https://www.academia.edu/download/93122432/1\\_PUBLISHED\\_A\\_Review\\_of\\_Teacher\\_Coaching\\_and\\_Mentoring\\_Approach.pdf](https://www.academia.edu/download/93122432/1_PUBLISHED_A_Review_of_Teacher_Coaching_and_Mentoring_Approach.pdf)
- [2] Anderson, M., & Boutelier, S. (2021). Converging andragogy with working adult professionalism in initial teacher preparation. *Journal of Educational Research and Practice*, 11(1). <https://scholarworks.waldenu.edu/jerap/vol11/iss1/14/>
- [3] Benavot, A., Hoppers, C., Lockhart, A., & Hinzen, H. (2022). Reimagining adult education and lifelong learning for all: Historical and critical perspectives. *International Review of Education*, 68(2), 165-194. <https://link.springer.com/content/pdf/10.1007/s11159-022-09955-9.pdf>
- [4] Chen, M. Y., Rouse, E., & Morrissey, A. (2023). Intentionality and the active decision-making process in play-based learning. *The Australian Educational Researcher*, 51. <https://link.springer.com/content/pdf/10.1007/s13384-023-00644-6.pdf>
- [5] Christie, M., Carey, M., Robertson, A., & Grainger, P. (2015). Putting transformative learning theory into practice. *Australian Journal of Adult Learning*, 55(1), 9-30. [https://www.researchgate.net/publication/275465220\\_Putting\\_transformative\\_learning\\_theory\\_into\\_practice](https://www.researchgate.net/publication/275465220_Putting_transformative_learning_theory_into_practice).
- [6] Dagar, V., & Yadav, A. (2016). Constructivism: A paradigm for teaching and learning. *Arts and Social Sciences Journal*, 7(4). [https://www.researchgate.net/publication/308084623\\_Constructivism\\_A\\_Paradigm\\_for\\_Teaching\\_and\\_Learning](https://www.researchgate.net/publication/308084623_Constructivism_A_Paradigm_for_Teaching_and_Learning).
- [7] Earl, L., & Timperly, H. (2019). *Professional learning conversations: Challenges in using evidence for improvement*. Springer. [https://staibabussalamsula.ac.id/wp-content/uploads/2024/05/PROESIONAL-LEARNING-CONVERSATION-staibabussalamsula.ac\\_id.pdf](https://staibabussalamsula.ac.id/wp-content/uploads/2024/05/PROESIONAL-LEARNING-CONVERSATION-staibabussalamsula.ac_id.pdf)
- [8] Glover, A., Bleasdale, C., Clifton, G., & Thomas, A. (2024). "It's good to talk": Exploring effective professional conversations in teacher education. *International Journal of Changes in Education*, 1-9. <https://oro.open.ac.uk/102196/1/102196.pdf>.
- [9] Higginbottom, K., Newman, L., West-Sooby, K., & Wood, A. (2022). Intentional teaching for risky play: Practitioner researchers move beyond their comfort zones. *Australasian Journal of Early Childhood*, 48(1). <https://journals.sagepub.com/doi/full/10.1177/18369391221112740>.
- [10] Jimoyiannis, A. (2015). Digital literacy and adult learners. In *The SAGE encyclopaedia of educational technology* (pp. 213-216). SAGE Publications. [https://epale.ec.europa.eu/sites/default/files/digital\\_literacy\\_and\\_adult\\_learners.pdf](https://epale.ec.europa.eu/sites/default/files/digital_literacy_and_adult_learners.pdf)
- [11] Konings, K. D., Mordang, S., Smeenk, F., Stassen, L., & Ramani, S. (2021). Learner involvement in the co-creation of teaching and learning: AMEE guide No. 138. *Medical Teacher*, 43(8), 924-936. <https://www.tandfonline.com/doi/epdf/10.1080/0142159X.2020.1838464?needAccess=true>.
- [12] Lamb, J., Carvalho, L., Gallagher, M., & Knox, J. (2022). The post-digital learning spaces of higher education. *Post-digital Science and Education*, 4(1), 1-12. [https://www.researchgate.net/publication/356691550\\_The\\_Postdigital\\_Learning\\_Spaces\\_of\\_Higher\\_Education](https://www.researchgate.net/publication/356691550_The_Postdigital_Learning_Spaces_of_Higher_Education).
- [13] Leggett, N. (2023). Intentional teaching and the intentionality of educators: Time for careful, considerate, collaborative, and reflective practice. *Early Childhood Education Journal*, 53, 1-9. <https://link.springer.com/article/10.1007/s10643-023-01550-3>
- [14] Merriam, S. (2017). Adult learning theory: Evolution and future directions. *Journal of Lifelong Learning*, 26(1), 21-37. [https://www.iup.edu/pse/files/programs/graduate\\_programs\\_r/instructional\\_design\\_and\\_technology\\_ma/paace\\_journal\\_of\\_lifelong\\_learning/volume\\_26\\_2017/merriam.pdf](https://www.iup.edu/pse/files/programs/graduate_programs_r/instructional_design_and_technology_ma/paace_journal_of_lifelong_learning/volume_26_2017/merriam.pdf).
- [15] Morgan-Bowyer, K. L. (2023). Addressing the need for an appropriate adult learning environment to increase student learner retention and success. *The Dissertation in Practice at Western University*. <https://ir.lib.uwo.ca/cgi/viewcontent.cgi?article=1419&context=oip>.
- [16] Navarro-Garcia, A., Peris-Ortiz, M., & Rueda-Armengot, C. (2015). Value co-creation, collaborative learning and competences in higher education. In Peris-Ortiz, M., & Lindahl, J. (Eds.). *Sustainable learning in higher education* (pp. 37-45). Springer. [https://www.researchgate.net/profile/Antonio-Navarro-Garcia/publication/287621834\\_Value\\_Co-creation\\_Collaborative\\_Learning\\_and\\_Competences\\_in\\_Higher\\_Education/links/57a2f02108aeb1604836461d/Value-Co-creation-Collaborative-Learning-and-Competences-in-Higher-Education.pdf#page=55](https://www.researchgate.net/profile/Antonio-Navarro-Garcia/publication/287621834_Value_Co-creation_Collaborative_Learning_and_Competences_in_Higher_Education/links/57a2f02108aeb1604836461d/Value-Co-creation-Collaborative-Learning-and-Competences-in-Higher-Education.pdf#page=55)
- [17] Nazeef, N., Khan, A., & Ali, J. (2024). Impact of collaborative learning on student's academic performance in teacher's education program. *Journal of Asian Development Studies*, 13(1), 1054-1068. <https://poverty.com.pk/index.php/Journal/article/view/446/398>.
- [18] Nja, C., Anari, M., Erim, C., Idiege, K., Ilhami, A., Ukah, J., Eneyo, O., Uwe, U., & Cornelius-Ukpepi, B. (2023). Learning space, students' collaboration, educational outcomes, and interest: Exploring the physical, social and psychological mediators. *Heliyon*, 9. [https://www.cell.com/heliyon/pdf/S2405-8440\(23\)02663-4.pdf](https://www.cell.com/heliyon/pdf/S2405-8440(23)02663-4.pdf)

- [19] Okeke, C., & Van der Westhuizen, G. (2020). Learning from professional conversation: A conversation analysis study. *South African Journal of Education*, 40(1). [https://www.researchgate.net/publication/340209561\\_Learning\\_from\\_professional\\_conversation\\_A\\_conversation\\_analysis\\_study](https://www.researchgate.net/publication/340209561_Learning_from_professional_conversation_A_conversation_analysis_study).
- [20] Onopriienko, I., Onopriienko, K., & Bourekkadi, S. (2023). Immersive technologies in adult learning as an innovative marketing tool in the educational market. *Business Ethics and Leadership*, 7(2), 63-72. 2. [https://essuir.sumdu.edu.ua/bitstream/123456789/92372/1/Onopriienko\\_bel\\_2\\_2023.pdf](https://essuir.sumdu.edu.ua/bitstream/123456789/92372/1/Onopriienko_bel_2_2023.pdf)
- [21] Owen, R., Berry, K., & Brown, L. J. E. (2021). Enhancing older adults' well-being and quality of life through purposeful activity: A systematic review of intervention studies. *The Gerontologist*, 62(6). [https://pure.manchester.ac.uk/ws/portalfiles/portal/186878868/Owen\\_et\\_al\\_2021\\_Systematic\\_Review\\_Author\\_Accepted\\_Manuscript.pdf](https://pure.manchester.ac.uk/ws/portalfiles/portal/186878868/Owen_et_al_2021_Systematic_Review_Author_Accepted_Manuscript.pdf).
- [22] Rathmell, K., Brown, N., & Kilburg, R. (2019). Transformation to academic leadership: The role of mentorship and executive coaching. *Consulting Psychology Journal Practice and Research*, 71(3), 141-160. <https://psycnet.apa.org/journals/cpb/71/3/141.pdf>
- [23] Rebmann, K., & Clark, C. (2017). Open access research via collaborative educational blogging: A case study from library & information science. *Open Praxis*, 9(3), 345-357. <https://www.learntechlib.org/d/180664/>
- [24] Sá dos Reis, C. (2022). A personal journey to build leadership skills through collaboration to support radiography research and evidence-based practice. *Journal of Medical Imaging and Radiation Sciences*, 53(4). [https://www.jmirs.org/article/S1939-8654\(22\)00304-6/pdf](https://www.jmirs.org/article/S1939-8654(22)00304-6/pdf)
- [25] Shah, R. K. (2019). Effective constructivist teaching learning in the classroom. *Online Submission*, 7(4), 1-13. <https://files.eric.ed.gov/fulltext/ED598340.pdf>
- [26] Storey, V., & Wagner, A. (2024). Integrating artificial intelligence (AI) into adult education. *International Journal of Adult Education and Technology*, 15(1), 1-15. <https://www.igi-global.com/viewtitle.aspx?titleid=345921>
- [27] Thornburg, D. (2013). From the campfire to the holodeck: Creating engaging and powerful 21st century learning environments. John Wiley & Sons. <https://www.wiley.com/en-us/From+the+Campfire+to+the+Holodeck%3A+Creating+Engaging+and+Powerful+21st+Century+Learning+Environments-p-9781118633939>
- [28] Wang, L. (2023). The impact of student-centered learning on academic motivation and achievement: A comparative research between traditional instruction and student-centered approach. *Journal of Education Humanities and Social Sciences*, 22, 346-356. [https://www.researchgate.net/publication/376973509\\_The\\_Impact\\_of\\_Student-Centered\\_Learning\\_on\\_Academic\\_Motivation\\_and\\_Achievement\\_A\\_Comparative\\_Research\\_between\\_Traditional\\_Instruction\\_and\\_Student-Centered\\_Approach](https://www.researchgate.net/publication/376973509_The_Impact_of_Student-Centered_Learning_on_Academic_Motivation_and_Achievement_A_Comparative_Research_between_Traditional_Instruction_and_Student-Centered_Approach)
- [29] Zammit, J. (2024). Could virtual reality be the next approach for international students learning Maltese? *Educational Technology Research and Development*, 72, 3471-3493. <https://link.springer.com/article/10.1007/s11423-024-10375-9>.