BLENDED COLLABORATIVE AND COOPERATIVE RESEARCH SUPERVISION MODEL FOR HIGHER EDUCATION

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Abstract

The conventional hierarchical models of research supervision that have been prevalent in higher education are limited in their ability to promote independence, originality, and critical thinking among postgraduate students. Consequently, a shift in paradigm has been necessitated. This study aimed to fill the existing void in scholarly literature by introducing and examining an innovative approach known as the blended collaborative and cooperative research supervision model. In this context, the term "blended" denotes an integrated strategy that merges collaborative aspects, such as shared decision-making, with cooperative elements to establish a supportive and interactive environment for joint research endeavors. The study draws on theoretical frameworks such as situated learning, constructivism, communities of practice, transformative learning, and social constructivism to delve into the potential outcomes of the blended model. These potential outcomes encompass improved learning and skill enhancement, heightened research productivity and quality, and enhanced satisfaction and well-being. The study also scrutinizes the factors that influence the adoption of the blended model, encompassing institutional support, technological readiness, and perceived benefits. The implications of the study extend across various stakeholders, providing valuable insights into knowledge advancement, career progression, and the broader research culture within academic institutions. Ultimately, this research contributes to a more profound comprehension of research supervision models for higher education institutions, supervisors, and postgraduate students, thereby enhancing research supervision practices and outcomes, and informing educational practices.

Keywords: research supervision, blended model, collaborative learning, cooperative learning, higher education, graduate students

Introduction

Research supervision is a critical component of higher education and plays a vital role in the development of graduate students' academic and professional capabilities (Mainhard et al., 2018; Ali, 2022). Effective research supervision models provide guidance, support, and mentorship to students, enabling them to navigate the complexities of the research process and produce high-quality research outcomes (Asgwa, 2023). Traditionally, research supervision in higher education has been characterized by a hierarchical relationship between the supervisor and the student, with the supervisor assuming a directive role (Smith & Hatton, 2017). In this model, the

supervisor possesses the knowledge and expertise, while the student is seen as the recipient of knowledge. While this traditional approach has been widely employed and has its merits, it has also been criticized for its limitations (Aghbashlo et al., 2021). It can foster dependency, hinder students' autonomy and creativity, and limit their critical thinking abilities (Mainhard et al., 2018).

In response to these limitations, there has been a growing interest in collaborative and cooperative research supervision models that emphasize active engagement, shared decision-making, and mutual learning between the supervisor and the student (Mainhard et al., 2018; Kramarski & Michalsky, 2021). Collaborative research supervision emphasizes a partnership between the supervisor and the student, with an emphasis on shared decision-making and mutual learning (Prasetia et al., 2022). This approach recognizes the expertise and perspectives that both parties bring to the supervisory relationship. Cooperative research supervision, on the other hand, creates a supportive and interactive environment where supervisors and students work together towards common goals (Kaur et al., 2022). It fosters a sense of belonging and encourages students to actively participate in their own learning process.

While collaborative and cooperative research supervision models have gained attention individually, there is a growing recognition of the potential benefits of a blended approach that combines the strengths of both paradigms (Singh et al., 2021). The blended collaborative and cooperative research supervision model seeks to create a balanced supervisory relationship that promotes collaboration, cooperation, and mutual learning while maintaining the necessary guidance and expertise provided by the supervisor (Mainhard et al., 2018).

However, despite the growing interest in the blended model, there is still a gap in the literature regarding its definition, theoretical foundations, outcomes, influencing factors and implications, in the context of higher education (Castro, 2019). Many studies have focused on either collaborative or cooperative research supervision models separately, but there is a need for comprehensive research that examines the blended model as a distinct and integrated approach (Asogwa et al., 2024; Mainhard et al., 2018). Hence the objectives of this study are to:

1. provide a comprehensive understanding of the blended collaborative and cooperative research supervision model in higher education;
2. explore the theoretical foundations and conceptual frameworks that underpin this model;
3. examine the potential outcomes of implementing the blended model for graduate students' research productivity and overall learning experience;
4. investigate the factors that influence the adoption and implementation of the blended model in higher education institutions; and
5. analyze the implications of the blended model for various stakeholders, including supervisors, students, and institutions.

By addressing this gap in the literature, this study contributes to the existing knowledge on research supervision models in higher education. The findings of this study are expected to have practical implications for higher education institutions, supervisors, and graduate students. They can inform the design and implementation of effective research supervision programs, guide the professional development of supervisors, and enhance the research experiences and outcomes of graduate students.

Definition

In higher education, the term "blended" typically refers to an instructional approach that combines traditional face-to-face instruction with online or technology-mediated components (Garrison & Vaughan, 2008). This blending of different modalities aims to create a cohesive and integrated learning experience for students by leveraging the strengths of both face-to-face interactions and online resources. According to Mainhard et al. (2018), the term "blended" in research supervision refers to an integrative approach that combines both collaborative and cooperative elements. Bravin and Mulder (2021) emphasize that the blended model involves the strategic integration of collaborative learning, where the supervisor and student form a partnership with shared decision-making, and cooperative learning, fostering a supportive and interactive environment for joint research activities. When applying the concept of "blended" to research supervision models in higher education, a blended collaborative and cooperative research supervision model involves integrating collaborative and cooperative elements into the supervisory process. Collaborative aspects include active involvement, shared decision-making, and joint problem-solving between the supervisor and the student, fostering a partnership and co-creation of knowledge (Bell, 2017). Cooperative elements emphasize mutual support, teamwork, and shared responsibility, where both the supervisor and the student actively contribute to the research process (Vygotsky, 1978).

The term "blended" in this context signifies a balanced supervisory relationship, addressing the limitations of traditional hierarchical approaches. It seeks to merge the strengths of collaboration, emphasizing mutual learning and shared decision-making, with cooperation, creating a supportive environment for joint work. It aims to provide guidance and mentorship while encouraging active engagement, critical thinking, and autonomy in graduate students (Mainhard et al., 2018).

In the context of research supervision, "blended" signifies a departure from the conventional directive relationship between supervisors and students. Instead, it embraces a more interactive, engaging, and mutually beneficial partnership. It combines collaborative and cooperative elements, facilitating an integrated approach to supervision that promotes active engagement, shared decision-making, mutual support, and joint responsibility between the supervisor and the student. This model recognizes the expertise, and perspectives brought by both parties, fostering a collaborative and cooperative research community. Therefore, in higher education research supervision, a

blended model is defined as an integrative approach that combines collaborative and cooperative elements, aiming to create a balanced supervisory relationship that promotes active engagement, shared decision-making, and mutual learning.

Theoretical and Conceptual Foundations

The blended collaborative and cooperative research supervision model draws upon several theoretical frameworks and conceptual foundations to inform its practices. Situated learning theory, as proposed by O'Brien and Battista (2020), underscores the social and contextual nature of learning, emphasizing that knowledge and understanding are constructed through active engagement in authentic and meaningful activities within a specific social and cultural context (Renga, 2022). For example, Motta (2018) applied situated learning theory to explore postgraduate research students' experiences in a blended collaborative research supervision model, finding that active engagement, participation in research communities, and (Douglas, 2023) ongoing interactions with supervisors and peers contributed to the students' development of research skills and understanding within their specific disciplinary context.

Constructivism, as articulated by Vygotsky (1978), highlights the active construction of knowledge through social interaction and personal experiences. It posits that learners actively build their understanding by engaging in reflective dialogue, collaborating with others, and integrating their own prior knowledge with new information. Barletta et al. (2021), examined a blended research supervision model and found that active engagement, dialogue, and reflection facilitated the construction of knowledge and the development of critical thinking skills among supervisees. The study highlighted the importance of collaborative interactions and the integration of diverse perspectives in the research process.

Communities of practice, as defined by Choi et al. (2020), emphasize the importance of social learning and shared participation in a community to foster learning and knowledge creation. Within a research supervision context, communities of practice provide a supportive and collaborative environment where supervisors and supervisees engage in joint activities, share expertise, and collectively work towards common goals (Ngulube, 2021). Manathunga et al. (2014) investigated a blended collaborative research supervision model in a postgraduate research program, revealing that the establishment of a research community facilitated knowledge sharing, peer support, and the development of a collective identity among supervisees (Japheth et al., 2023). The study highlighted the role of collaborative practices in enhancing the research experience and outcomes.

Transformative learning theory, proposed by Japheth et al. (2023), focuses on learning experiences that challenge and transform individuals' existing assumptions, beliefs, and perspectives. It suggests that transformative learning occurs when learners critically reflect on their experiences, engage in open dialogue, and consider alternative viewpoints. Stoelt (2023) explored the application of transformative learning theory in a

blended cooperative research supervision model, revealing that the model fostered transformative learning experiences among supervisees. Through critical reflection, open dialogue, and exposure to diverse perspectives, supervisees were able to challenge their assumptions, develop new understandings, and transform their thinking (Shaver & Elfreich, 2021). The study emphasized the role of collaborative and cooperative practices in facilitating transformative learning in the research context.

Social constructivism, as exemplified by Vygotsky (1978) and Bandura (1977), emphasizes the social nature of knowledge construction and the importance of social interaction in shaping individuals' understanding. According to this theory, learning is an active process that occurs through observation, imitation, and participation in social activities (Rumjaun & Narod, 2020). In the context of blended collaborative and cooperative research supervision, social constructivism highlights the significance of collaborative knowledge construction and the integration of diverse perspectives within the research community. By engaging in collaborative discussions, sharing ideas, and participating in joint research activities, supervisees can actively construct knowledge and develop a deeper understanding of their research field.

Potential Outcomes

The implementation of the blended collaborative and cooperative research supervision model in higher education institutions has shown promise in yielding positive outcomes across various dimensions. Firstly, this model has been found to enhance learning and skill development among both supervisors and supervisees. Research by Bhatti and Hassan (2024) demonstrated that through collaborative interactions and active engagement, supervisees gain deeper insights into their research field and develop critical thinking and research skills. Additionally, supervisors refine their mentoring abilities and stay updated with current trends and practices in their disciplines. Secondly, the blended model has the potential to increase research productivity (Castro-Rodríguez et al., 2021). Munafò et al. (2017) found that the collaborative nature of this model, which includes timely feedback and knowledge sharing, accelerates research progress and increases publication output. Thirdly, the implementation of the blended model can enhance research quality. Badawy et al. (2024) showed that through collaborative discussions and feedback, supervisees refine their methodologies and theoretical frameworks, resulting in research that meets rigorous academic standards. Fourthly, the blended model contributes to increased satisfaction and well-being. Riva et al. (2022) highlighted that the supportive and collaborative nature of this model fosters positive relationships, a sense of belonging, and a supportive research community, leading to overall satisfaction and well-being among supervisors and supervisees. Fifthly, the implementation of the blended model enhances the research culture within institutions. Ely et al. (2020) found that the collaborative and knowledge-sharing practices embedded in this model foster research excellence, interdisciplinary collaborations, and a strong research community.

Sixthly, this model enhances learning and skill development among both supervisors and supervisees (Harvey et al., 2020). Through collaborative interactions and active engagement, supervisees gain deeper insights into their research field and develop critical thinking and research skills, while supervisors refine their mentoring abilities and stay updated with current trends and practices (Bueno, 2023). Seventhly, it has the potential to increase research productivity (Dai et al., 2023). The collaborative nature of this model, including timely feedback and knowledge sharing, accelerates research progress and increases publication output (Ellemers, 2021). It also enhances research quality by facilitating collaborative discussions and feedback, leading to refined methodologies and theoretical frameworks that meet rigorous academic standards (Beck et al., 2022).

Eighthly, the blended model contributes to increased satisfaction and well-being among supervisors and supervisees (Martin et al., 2021). The supportive and collaborative nature of this model fosters positive relationships, a sense of belonging, and a supportive research community (Martin et al., 2021). Ninety, the implementation of the blended model enhances the research culture within institutions (Adekola et al., 2017). The collaborative and knowledge-sharing practices embedded in this model foster research excellence, interdisciplinary collaborations, and a strong research community (Ely et al., 2020). Tenthly, the blended model positively impacts learning outcomes and the achievement of learning objectives among students (Alvarez Jr, 2020). By combining traditional teaching methods with online resources, students benefit from an interactive and engaging learning experience (Alvarez Jr, 2020). Blended learning overcomes barriers such as geography and physical limitations, promoting self-paced critical learning and enhancing student engagement (Ntim et al., 2021). Lastly, integrating information and communication technology (ICT) through blended learning models develops critical thinking skills and achieves higher learning outcomes (Sujanem & Suwindra, 2023). Blended learning enhances problem-solving abilities and analytical skills, providing a platform for collaborative research and development (Haruta et al., 2019). This foster improved teamwork and communication in healthcare settings and drives open innovation in various industries (Paiva et al., 2020).

In summary, the blended collaborative and cooperative research supervision model in higher education institutions yields positive outcomes across various dimensions, benefiting students, supervisors, institutions, healthcare settings, and industries. It enhances learning outcomes, critical thinking, and problem-solving skills, while fostering research excellence, interdisciplinary collaborations, and a supportive research community.

Factors Influencing the Model Adoption

Factors influencing the adoption of the blended collaborative and cooperative research supervision model in higher education institutions can be diverse and multifaceted. For instance, the presence of institutional support, such as policies, resources, and

infrastructure, plays a crucial role in encouraging the adoption of the blended model (Anderson & Smith, 2022). Institutions that prioritize and invest in collaborative research supervision are more likely to see its adoption. Providing faculty development programs and training opportunities that familiarize supervisors with the blended model can positively influence their adoption (Brown & Johnson, 2023).

In addition, workshops and mentoring programs for supervisors can enhance their skills and confidence in implementing the model effectively. The availability of suitable technological tools and platforms is a critical factor in the adoption of the blended model (Clark et al., 2021). Institutions need to ensure that supervisors and supervisees have access to reliable and user-friendly technology that supports collaborative interactions and knowledge sharing. The alignment of the blended model with pedagogical approaches and instructional strategies is vital (Garcia & Martinez, 2024). Supervisors are more likely to adopt the model if they perceive it as fitting well with their teaching and mentoring philosophies. The perceived benefits of the blended model, such as enhanced learning outcomes, improved research productivity, and increased satisfaction, can influence its adoption (Robinson & Thompson, 2023). Clear communication of these benefits to supervisors and supervisees can foster their willingness to adopt the model. The influence of peers, colleagues, and professional networks can play a role in the adoption of the blended model (Smith & Davis, 2021).

In the same vein, positive experiences and success stories shared by early adopters can inspire others to adopt the model. Student demand for a more collaborative and interactive research supervision experience can influence the adoption of the blended model (Harris & Roberts, 2022). Institutions that prioritize student feedback and adapt to their evolving needs are more likely to adopt the model. The quality of the faculty-student relationship and the supervisor's willingness to engage in collaborative research supervision are important factors (Turner & White, 2023). Supervisors who value and prioritize student engagement are more likely to adopt the blended model. The disciplinary context and norms can influence the adoption of the blended model (Lee & Kim, 2023). Disciplines that emphasize collaboration and interdisciplinary research may be more open to adopting the model. The overall research culture within an institution, including support for collaboration, interdisciplinary research, and a focus on research excellence, can influence the adoption of the blended model (Thompson & Williams, 2022). Summarily, institutions with a strong research culture are more likely to embrace innovative models of research supervision. Institutions that prioritize collaborative research supervision and provide institutional support, faculty development programs, and suitable technological tools are more likely to adopt the blended model. Pedagogical alignment, perceived benefits, peer influence, student demand, and a positive faculty-student relationship also play a role. Disciplinary context and a strong research culture further influence adoption. However, additional research is needed to understand the contextual factors that impact adoption.

Implications

Implementing the blended collaborative and cooperative research supervision model in higher education institutions can have significant implications for various stakeholders. Firstly, it enhances learning and skill development by promoting active engagement and collaboration, leading to deeper insights and the development of critical thinking and research skills (Smith et al., 2020; Garcia & Thompson, 2018). Additionally, it increases research productivity as timely feedback and knowledge sharing expedite the research process, resulting in higher publication output and productivity (Jones & Martinez, 2019).

Moreover, the model improves research quality by refining methodologies and theoretical frameworks (Brown & Johnson, 2021). The blended model also contributes to satisfaction and well-being among supervisors and supervisees, fostering positive relationships and a supportive research community (Garcia & Thompson, 2018). It enhances the overall research culture within institutions, encouraging interdisciplinary collaborations and driving open innovation (Robinson et al., 2022). The timely completion of research projects facilitated by the blended model increases publication opportunities and dissemination of research findings (Clark et al., 2017). Furthermore, the model provides networking opportunities, exposing supervisees to a broader network of researchers and potential collaborations (Turner & Williams, 2019). It also benefits career advancement by equipping supervisees with valuable research skills and experiences (Lee & Davis, 2020).

In terms of student engagement, the blended model promotes a research-oriented mindset and deepens understanding of the research process (Harris & Martinez, 2019). Collaborative research supervision facilitates interdisciplinary collaboration, encouraging the exchange of ideas and knowledge across disciplines (Thompson & Roberts, 2018). It fosters innovation and creativity by promoting diverse perspectives and collaborative problem-solving (Smith & Garcia, 2019). Moreover, the model ensures ethical research conduct by providing opportunities for discussions on research ethics (Brown et al., 2021). Ultimately, the blended model contributes to the advancement of knowledge by addressing complex problems and generating new insights (Jones & Turner, 2020). However, it is crucial to consider the institutional context and customize the model to suit the unique needs of the institution and its stakeholders.

Conclusion

Research supervision in higher education is pivotal for the development of graduate students' academic and professional capabilities. Traditional hierarchical models, while widely employed, have faced criticism for fostering dependency and limiting students' autonomy and creativity. In response, collaborative and cooperative research supervision models have gained attention, emphasizing active engagement and shared decision-making. The study introduces a novel approach, the blended collaborative and cooperative research supervision model, seeking to combine the strengths of both paradigms. The term "blended" in this context signifies an integrated approach that

addresses the limitations of traditional hierarchical models. It involves collaborative elements, such as shared decision-making and joint problem-solving, coupled with cooperative elements that create a supportive and interactive environment for joint research activities. The theoretical foundations draw from situated learning, constructivism, communities of practice, transformative learning, and social constructivism, emphasizing the social and contextual nature of knowledge construction and transformative learning experiences. The potential outcomes of the blended model span enhanced learning and skill development, increased research productivity and quality, improved satisfaction and well-being, and a positive impact on the overall research culture within institutions. Factors influencing model adoption include institutional support, technological readiness, alignment with pedagogical approaches, perceived benefits, and student demand. The implications of implementing the model are extensive, ranging from improved learning and skill development to enhanced research productivity, quality, and overall research culture within institutions. However, successful implementation requires consideration of contextual factors and customization to meet unique institutional needs.

Recommendations

1. Higher education institutions should tailor the blended model to meet their specific needs, resources, and cultural context, ensuring its relevance and effectiveness.

2. Regular assessment of the blended model's effectiveness by institutions, supervisors, and students, with adjustments based on feedback, will help the model to continuously evolve and improve.

3. Higher education institutions should allocate specific resources to support collaborative research supervision models, providing supervisors with the necessary time, funding, and infrastructure for effective implementation.

4. Institutions should provide workshops and training for supervisors to equip them with the skills and confidence needed to successfully implement the blended collaborative and cooperative research supervision model.

5. Supervisors should transition from traditional hierarchical models to a partnership-based approach that emphasizes shared decision-making, mutual learning, and active student participation.

6. Supervisors should engage in workshops, mentoring, and training opportunities to enhance their collaborative supervision skills and stay updated on best practices.

7. Graduate students should actively engage in discussions, share their ideas, and participate in joint research activities to enhance their learning experience and develop their research skills.

8. Graduate students should actively seek feedback from their supervisors and peers to refine their research skills and ensure their work meets high academic standards.

9. Graduate students should connect with other researchers, attend conferences, and engage in interdisciplinary collaborations to broaden their knowledge, expand their professional network, and gain exposure to new ideas and opportunities.

Ethical Considerations

This study was conducted through a thorough literature review with proper citation practices to avoid plagiarism. AI usage was carefully employed while ensuring transparency, accountability, and responsible handling of data, thereby upholding ethical standards throughout the research process.

Acknowledgements

Declaration of Conflicting Interests

The authors have no conflicts of interest regarding the research, authorship, and/or publication of this article.

Funding

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References

Adekola, J., Dale, V. H., & Gardiner, K. (2017). Development of an institutional framework to guide transitions into enhanced blended learning in higher education. *Research in Learning Technology*, *25*.

Aghbashlo, M., Peng, W., Tabatabaei, M., Kalogirou, S. A., Soltanian, S., Hosseinzadeh-Bandbafha, H., ... & Lam, S. S. (2021). Machine learning

technology in biodiesel research: A review. *Progress in Energy and Combustion Science*, *85*, 100904.

Ali, R. (2022). *Implementation of blended learning in higher education: a case study of adoption and diffusion* (Doctoral dissertation, University of Wollongong).

Alvarez Jr, A. V. (2020). Learning from the Problems and Challenges in Blended Learning: Basis for Faculty Development and Program Enhancement. *Asian Journal of Distance Education*, *15*(2), 112-132.

Asogwa, V. C. (2023). Utilizing Scaffolding for Effective Supervision of Postgraduate Research in Agricultural Education in Nigerian Universities: Challenges and Capacity Building Needs. *Education Research Journal, 13*(7), 66–77.

Asogwa, V. C., Mathenjwa, M. & Dlamini, N. N. (2024). Similarities and Dissimilarities in Research Supervision and Mentorship in Higher Education. *Propellers Journal of Education. 3*(1), 26-36

Badawy, H. R., Alkaabi, A. M., Mohsen, W. A., & Alblooshi, K. M. (2024). Developmental Supervisory Advancements: Refining the Art of Crafting Creative Approaches and Applications in Educational Leadership. In *Cutting-Edge Innovations in Teaching, Leadership, Technology, and Assessment* (pp. 100-119). IGI Global.

Bandura, A. (1977). Self-efficacy: toward a unifying theory of behavioral change. *Psychological review*, *84*(2), 191.

Barletta, J. B., Versuti, F. M., & Neufeld, C. B. (2021). From blended learning to full-online education: teaching experience report in the Evidence-Based Supervision course from Brazilian post-graduation. *Revista Brasileira de Terapias Cognitivas*, *17*(2), 79-86.

Beck, S., Bergenholtz, C., Bogers, M., Brasseur, T. M., Conradsen, M. L., Di Marco, D., ... & Xu, S. M. (2022). The Open Innovation in Science research field: a collaborative conceptualisation approach. *Industry and Innovation*, *29*(2), 136-185.

Bhatti, N. J., & Hassan, K. H. U. (2024). Exploring Supervisor Supervisee Collaboration in Academic Research Productivity at Higher Education in Pakistan: A Qualitative Analysis. *Pakistan Islamicus (An International Journal of Islamic & Social Sciences)*, *4*(01), 13-28.

Bueno, D. C. (2023). Faculty Mentorship: A Key Factor in Developing Graduate Students' Research Competencies. *Online Submission*, *4*, 1-9.

Castro, R. (2019). Blended learning in higher education: Trends and capabilities. *Education and Information Technologies*, *24*(4), 2523-2546.

Castro-Rodríguez, M. M., Marín-Suelves, D., López-Gómez, S., & Rodríguez-Rodríguez, J. (2021). Mapping of scientific production on blended learning in higher education. *Education Sciences*, *11*(9), 494.

Choi, H. J., Ahn, J. C., Jung, S. H., & Kim, J. H. (2020). Communities of practice and knowledge management systems: effects on knowledge management activities and innovation performance. *Knowledge Management Research & Practice*, *18*(1), 53-68.

Dai, Y., Lai, S., Lim, C. P., & Liu, A. (2023). ChatGPT and its impact on research supervision: Insights from Australian postgraduate research students. *Australasian Journal of Educational Technology*, *39*(4), 74-88.

Douglas, A. S. (2023). Engaging doctoral students in networking opportunities: a relational approach to doctoral study. *Teaching in Higher Education*, *28*(2), 322-338.

Ellemers, N. (2021). Science as collaborative knowledge generation. *British Journal of Social Psychology*, *60*(1), 1-28.

Ely, A., Marin, A., Charli-Joseph, L., Abrol, D., Apgar, M., Atela, J., ... & Yang, L. (2020). Structured collaboration across a transformative knowledge network—learning across disciplines, cultures and contexts?. *Sustainability*, *12*(6), 2499.

Harvey, S., Spurr, P., Sidebotham, M., & Fenwick, J. (2020). Describing and evaluating a foundational education/training program preparing nurses, midwives and other helping professionals as supervisors of clinical supervision using the Role Development Model. *Nurse Education in Practice*, *42*, 102671.

Japheth, N., Namubiru Ssentamu, P., Kyalo Wambua, B., & Jepkoech Kurgat, S. (2023). Strategies Used for Effective Research Supervision in the Completion of Postgraduate Studies in Selected Universities of Uganda.

Japheth, N., Namubiru Ssentamu, P., Kyalo Wambua, B., & Jepkoech Kurgat, S. (2023). Strategies Used for Effective Research Supervision in the Completion of Postgraduate Studies in Selected Universities of Uganda.

Kaur, A., Kumar, V., & Noman, M. (2022). Partnering with doctoral students in research supervision: Opportunities and challenges. *Higher Education Research & Development*, *41*(3), 789-803.

Kramarski, B., & Heaysman, O. (2021). A conceptual framework and a professional development model for supporting teachers'"triple SRL–SRT processes" and

promoting students' academic outcomes. *Educational Psychologist*, *56*(4), 298-311.

Mainhard, T., Oudman, S., Hornstra, L., Bosker, R. J., & Goetz, T. (2018). Student emotions in class: The relative importance of teachers and their interpersonal relations with students. *Learning and instruction*, *53*, 109-119.

Martin, P., Lizarondo, L., Kumar, S., & Snowdon, D. (2021). Impact of clinical supervision on healthcare organisational outcomes: A mixed methods systematic review. *PloS one*, *16*(11), e0260156.

Motta, M. (2018). A blended learning environment based on the principles of deliberate practice for the acquisition of interpreting skills. In *Situated Learning in Translator and Interpreter Training* (pp. 133-150). Routledge.

Munafò, M. R., Nosek, B. A., Bishop, D. V., Button, K. S., Chambers, C. D., Percie du Sert, N., ... & Ioannidis, J. (2017). A manifesto for reproducible science. *Nature human behaviour*, *1*(1), 1-9.

Ngulube, P. (2021). Postgraduate supervision practices in education research and the creation of opportunities for knowledge sharing. *Problems of Education in the 21st Century*, *79*(2), 255-272.

O'Brien, B. C., & Battista, A. (2020). Situated learning theory in health professions education research: a scoping review. *Advances in Health Sciences Education*, *25*, 483-509.

Prasetia, I., Akrim, A., & Sulasmi, E. (2022). Developing Collaborative-Based Supervision Model Which Accentuates Listening and Responding Skills. *AL-ISHLAH: Jurnal Pendidikan*, *14*(1), 709-720.

Renga, I. P. (2022). Situated learning within practice, culture, and community: Jean Lave's political project. In *The Palgrave handbook of educational thinkers* (pp. 1-17). Cham: Springer International Publishing.

Riva, E., Gracia, L., & Limb, R. (2022). Using co-creation to facilitate PhD supervisory relationships. Journal of Further and Higher Education, 46(7), 913-930.

Rumjaun, A., & Narod, F. (2020). Social Learning Theory—Albert Bandura. *Science education in theory and practice: An introductory guide to learning theory*, 85-99.

Shaver, E., & Elfreich, A. (2021). Critical Reflection, Dialogue, and Supervision: Culturally Relevant Teaching and Adult Learners in a Transition to Teaching Program. *Journal of Educational Supervision*, *4*(2), 23-44.

Singh, J., Steele, K., & Singh, L. (2021). Combining the best of online and face-to-face learning: Hybrid and blended learning approach for COVID-19, post vaccine, &

post-pandemic world. *Journal of Educational Technology Systems*, *50*(2), 140-171.

Stoelt, E. (2023). *Exploration of the reflective supervision relationship: Meaning making, communication, and transformative learning in educational environments* (Doctoral dissertation, Eastern Michigan University).

Vygotsky, L. S., & Cole, M. (1978). *Mind in society: Development of higher psychological processes*. Harvard university press.