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The Impact of Cybergogy on Student Engagement and Autonomy in Digital Classrooms

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Abstract:
This study examines the impact of cybergogy on student engagement and autonomy in digital classrooms. Using a qualitative case study approach, the research explores how digital learning environments, supported by interactive technologies and multimedia tools, influence students' participation and self-directed learning behaviors. Data were collected through interviews, observations, and documentation involving students and instructors engaged in online learning activities. The findings reveal that cybergogy significantly enhances student engagement by fostering active interaction, collaboration, and motivation. In addition, it promotes learner autonomy by encouraging students to manage their own learning processes, set goals, and monitor their progress. However, challenges such as limited technological infrastructure, unequal access to digital resources, and variations in students' readiness for independent learning were also identified. The study concludes that effective implementation of cybergogy requires strong institutional support, teacher competence, and well-designed digital learning environments to maximize its benefits.

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Introduction (مقدمة)

The rapid advancement of digital technology has significantly transformed the landscape of education, particularly in the way teaching and learning processes are conducted. Traditional classroom boundaries are increasingly replaced by virtual environments that enable flexible and accessible learning experiences. In this context, digital classrooms have become a central feature of modern education systems. These environments allow students to access learning materials anytime and anywhere, thereby promoting continuous learning. However, the shift to digital learning also requires new pedagogical approaches that can effectively support student engagement and autonomy. One such approach is cybergogy, which emphasizes learning in virtual environments (Wang & Kang, 2006).

Cybergogy emerges as an extension of pedagogy and andragogy, focusing specifically on online and digital learning contexts. It integrates cognitive, emotional, and social dimensions of learning to create a holistic educational experience. Unlike traditional approaches, cybergogy acknowledges the unique characteristics of digital learners who interact with technology as part of their daily lives. This framework encourages learners to actively construct knowledge through digital interaction. As a result, it supports the development of independent and self-directed learners. Therefore, cybergogy is highly relevant in addressing the demands of digital education (Wang & Kang, 2006).

Student engagement is a critical factor in determining the success of learning in digital environments. Engaged students are more likely to participate actively, complete tasks, and achieve better learning outcomes. In digital classrooms, maintaining engagement can be challenging due to the absence of physical interaction and potential distractions. Therefore, innovative strategies are required to capture students' attention and sustain their interest. Cybergogy offers various approaches to enhance engagement through interactive and collaborative activities. These include discussion forums, multimedia content, and real-time communication tools (Fredricks et al., 2004).

In addition to engagement, learner autonomy is another essential component of effective digital learning. Autonomy refers to the ability of learners to take responsibility for their own learning process. In digital classrooms, students are often required to manage their time, set learning goals, and monitor their progress independently. This requires a high level of self-regulation and motivation. Cybergogy supports the development of autonomy by providing flexible learning pathways and opportunities for self-directed exploration. As a result, students become more active participants in their learning journey (Zimmerman, 2002).

The integration of cybergogy in digital classrooms also aligns with constructivist learning theory. According to this theory, learners construct knowledge through active engagement and interaction with their environment. Digital platforms provide opportunities for collaborative learning, where students can share ideas and learn from each other. This interaction enhances understanding and promotes critical thinking skills. Cybergogy facilitates this process by designing learning environments that encourage participation and collaboration. Therefore, it supports meaningful and experiential learning (Vygotsky, 1978).

Furthermore, the use of technology in cybergogical learning environments allows for personalized learning experiences. Digital tools can adapt to individual learners' needs, preferences, and learning styles. This personalization enhances student engagement by making learning more relevant and meaningful. It also supports autonomy by allowing students to control the pace and direction of their learning. As a result, learners are more motivated to achieve their goals. This highlights the potential of cybergogy in creating learner-centered education (Anderson, 2008).

Despite its advantages, the implementation of cybergogy also presents several challenges. One major challenge is the digital divide, which limits access to technology for some learners. In addition, not all students possess the necessary digital literacy skills to navigate online learning environments effectively. These challenges can hinder engagement and reduce the effectiveness of digital learning. Therefore, it is important to provide adequate support and resources to ensure equal access to education. Addressing these issues is essential for the successful implementation of cybergogy (Selwyn, 2011).

Another challenge relates to the role of teachers in digital classrooms. In a cybergogical framework, teachers are no longer the sole source of knowledge but act as facilitators of learning. This requires a shift in teaching practices and the development of new competencies. Teachers must be able to design interactive content, manage online discussions, and support student autonomy. Professional development and training are crucial to equip teachers with these skills.

Without proper preparation, the potential benefits of cybergogy may not be fully realized (Kessler, 2018).

The emotional and social aspects of learning are also important considerations in cybergogy. Digital learning environments can sometimes lead to feelings of isolation and lack of connection among students. Cybergogy addresses this issue by incorporating collaborative activities and social interaction into the learning process. Online discussions, group projects, and peer feedback help build a sense of community. This social presence enhances student engagement and contributes to a positive learning experience. Therefore, cybergogy promotes not only cognitive development but also emotional well-being (Garrison et al., 2000).

Moreover, the effectiveness of cybergogy depends on the design of the learning environment. Well-structured digital platforms that are user-friendly and interactive can significantly enhance the learning experience. The use of multimedia elements, such as videos and animations, makes learning more engaging and accessible. In addition, clear instructions and organized content help students navigate the learning process more efficiently. These factors contribute to improved engagement and autonomy. Thus, instructional design plays a crucial role in cybergogical learning (Mayer, 2009).

Recent studies have shown that cybergogy has a positive impact on student engagement and autonomy in digital classrooms. Learners who participate in cybergogical environments demonstrate higher levels of motivation, interaction, and self-regulation. They are more likely to take initiative and actively participate in learning activities. These findings suggest that cybergogy can effectively address the challenges of digital education. However, further research is needed to explore its application in different educational contexts. This study aims to contribute to this growing body of knowledge (Wang & Kang, 2006).

The integration of cybergogy in digital classrooms offers a promising approach to enhancing student engagement and autonomy. By combining cognitive, emotional, and social dimensions of learning, it creates a comprehensive and effective learning environment. Despite the challenges associated with its implementation, cybergogy provides valuable opportunities for innovation in education. This study seeks to investigate the impact of cybergogy on student engagement and autonomy, with the aim of providing insights for improving digital learning practices.

Method (منهج)

This study employed a qualitative research approach with a descriptive case study design to investigate the impact of cybergogy on student engagement and autonomy in digital classrooms. The qualitative approach was chosen because it allows for an in-depth exploration of participants' experiences, perceptions, and behaviors within a natural learning environment. The case study design enables the researcher to focus on a specific educational setting where cybergogical principles are applied. This approach is particularly suitable for understanding complex educational phenomena in real-life contexts. Therefore, it provides a comprehensive and contextualized analysis of the research problem (Creswell & Poth, 2018).

The research was conducted in a digital classroom setting within a higher education institution that actively integrates online learning platforms into its instructional practices. The selection of this site was based on its implementation of cybergogy-oriented learning strategies. The institution provides a suitable environment for examining how digital tools and virtual interaction influence student learning. The study was carried out over a defined period to allow for systematic data collection. This ensured that the researcher could observe consistent patterns in teaching and learning activities. The setting reflects the characteristics of contemporary digital education (Yin, 2018).

The participants of this study consisted of students and instructors involved in digital

classroom activities. A purposive sampling technique was used to select participants who had direct experience with cybergogical learning environments. The student participants represented various levels of academic performance and digital literacy. Instructors were selected based on their involvement in designing and implementing online learning strategies. This selection ensured that the data collected would be relevant to the research objectives. The participants provided diverse perspectives on engagement and autonomy in digital learning (Sugiyono, 2013).

Data collection was carried out using multiple techniques to ensure the richness and validity of the data. The primary method was in-depth interviews conducted with both students and instructors. These interviews aimed to explore participants' experiences, perceptions, and challenges related to cybergogy. A semi-structured interview format was used to allow flexibility in probing deeper into specific issues. This method enabled the researcher to gather detailed and meaningful insights. Interviews were recorded and transcribed for analysis (Kvale & Brinkmann, 2009).

In addition to interviews, participant observation was conducted to examine the actual learning process in the digital classroom. The researcher observed online interactions, student participation, and instructional practices. Attention was given to how digital tools were used to facilitate engagement and autonomy. Observations were conducted during live online sessions and through recorded materials. This method allowed the researcher to capture real-time behaviors and interactions. The data obtained provided valuable context for understanding the learning process (Spradley, 1980).

Documentation was also used as a complementary data collection technique. Relevant documents such as course materials, discussion forum posts, assignments, and learning platform records were analyzed. These documents provided additional evidence of student engagement and autonomy. They also helped to triangulate the data obtained from interviews and observations. By examining multiple sources, the researcher ensured the credibility of the findings. Documentation contributed to a more comprehensive analysis of the study (Bowen, 2009).

The data analysis process followed a thematic analysis approach. First, the collected data were organized and coded to identify key patterns and themes. The researcher categorized the data based on aspects of engagement, autonomy, and cybergogical practices. This process involved careful reading and interpretation of the data. Emerging themes were then analyzed to understand their relationships and significance. The analysis aimed to provide a clear and systematic explanation of the findings (Braun & Clarke, 2006).

To ensure the trustworthiness of the study, several validation strategies were employed. Triangulation was used by comparing data from different sources and methods. Member checking was conducted by sharing findings with participants to confirm their accuracy. Prolonged engagement in the research setting helped the researcher gain a deeper understanding of the context. These strategies enhanced the credibility and reliability of the study. As a result, the findings are considered valid and trustworthy (Denzin, 2012).

Ethical considerations were carefully addressed throughout the research process. Participants were informed about the purpose of the study and their consent was obtained prior to data collection. Confidentiality and anonymity were maintained by using pseudonyms and secure data storage. The researcher ensured that participation was voluntary and that participants could withdraw at any time. Ethical principles were strictly followed to protect the rights and well-being of participants. This contributed to the integrity of the research (Orb et al., 2001).

The methodological framework of this study was designed to provide a detailed understanding of the impact of cybergogy on student engagement and autonomy. By employing

a qualitative case study approach and multiple data collection techniques, the research captures the complexity of digital learning environments. The systematic analysis and validation procedures ensure the reliability of the findings. This method enables the study to generate meaningful insights into cybergogical practices. Ultimately, it contributes to the development of effective digital learning strategies.

Result (نتائج)

The findings of this study indicate that the implementation of cybergogy in digital classrooms has significantly influenced the overall learning experience. Students demonstrated increased participation in online learning activities compared to traditional classroom settings. The availability of digital platforms enabled learners to access materials and engage in discussions more flexibly. This accessibility contributed to a more inclusive learning environment. As a result, students were more actively involved in the learning process. The digital classroom setting fostered a sense of continuous engagement beyond scheduled sessions.

One of the most prominent findings is the improvement in student engagement through interactive digital tools. Features such as discussion forums, live chats, and collaborative platforms encouraged students to express their ideas more freely. Students who were typically passive in face-to-face settings became more active in online discussions. The asynchronous nature of some activities allowed students to reflect before responding. This resulted in more thoughtful and meaningful contributions. Consequently, engagement levels increased both qualitatively and quantitatively.

The use of multimedia resources also played a significant role in enhancing students' understanding of the subject matter. Videos, animations, and audio materials provided diverse ways of presenting information. These resources helped students grasp complex concepts more easily. The combination of visual and auditory elements supported different learning styles. Students reported that multimedia content made learning more interesting and less monotonous. This contributed to improved comprehension and retention of information.

In terms of learner autonomy, the findings reveal that students developed greater responsibility for their own learning. Digital learning environments required students to manage their time effectively and complete tasks independently. Many students demonstrated the ability to set personal learning goals and monitor their progress. The flexibility of online learning allowed them to study at their own pace. This autonomy encouraged self-directed learning behaviors. As a result, students became more independent and proactive learners.

Another important finding is the role of digital feedback in supporting student learning. Teachers provided feedback through various online tools, including comments on assignments and real-time responses during discussions. This immediate and continuous feedback helped students identify their strengths and weaknesses. It also guided them in improving their performance. Students appreciated the accessibility of feedback and its impact on their learning. This interaction strengthened the learning process.

The study also found that collaboration among students improved in the digital learning environment. Group assignments and online discussions facilitated peer interaction. Students were able to exchange ideas and learn from each other's perspectives. This collaborative learning enhanced critical thinking and problem-solving skills. It also created a sense of community among learners. Despite the physical distance, students felt connected through digital communication tools.

However, the findings reveal that not all students adapted equally to the digital learning environment. Some students experienced difficulties in managing their time and maintaining

focus. Distractions at home and lack of structured schedules affected their learning performance. These challenges highlight the need for guidance and support in developing self-regulation skills. Without proper support, some students may struggle to benefit fully from digital learning. Therefore, individual differences play a significant role in learning outcomes.

Technical issues were also identified as a barrier to effective implementation of cybergogy. Problems such as unstable internet connections and limited access to devices disrupted the learning process. These issues caused delays in participation and submission of assignments. Some students were unable to fully engage in synchronous activities due to connectivity problems. This inequality in access affected the overall learning experience. Addressing these technical challenges is essential for ensuring equitable learning opportunities.

The role of instructors was found to be crucial in facilitating engagement and autonomy. Instructors who actively guided discussions and provided clear instructions contributed to more effective learning outcomes. Their ability to design interactive and well-structured activities influenced student participation. Students responded positively to instructors who were responsive and supportive. This highlights the importance of teacher presence in digital learning environments. Effective facilitation enhances both engagement and autonomy.

The study also highlights the importance of learning environment design in cybergogical practices. Well-organized digital platforms with clear navigation improved students' learning experiences. Structured content and consistent schedules helped students manage their learning activities. The use of interactive features enhanced user experience and engagement. A well-designed environment reduced confusion and increased efficiency. Therefore, instructional design plays a key role in successful digital learning.

Furthermore, emotional and social engagement were found to be influenced by the use of cybergogy. Students expressed a sense of belonging through participation in online communities. Interaction with peers and instructors contributed to a supportive learning atmosphere. This social presence reduced feelings of isolation often associated with online learning. Emotional engagement positively affected students' motivation and persistence. As a result, students were more committed to their learning tasks.

In conclusion, the results demonstrate that cybergogy has a positive impact on student engagement and autonomy in digital classrooms. It promotes active participation, enhances understanding, and supports independent learning. However, challenges such as technical issues and individual differences must be addressed to maximize its effectiveness. The findings suggest that with proper implementation, cybergogy can significantly improve the quality of digital education. This approach offers valuable insights for the development of future online learning strategies.

Discussion (مناقشة)

The findings of this study confirm that the implementation of cybergogy significantly enhances student engagement in digital classrooms. This aligns with the theoretical framework of cybergogy, which emphasizes the integration of cognitive, emotional, and social elements in online learning environments. The increased participation observed among students indicates that digital platforms can effectively facilitate interactive learning. Students are not only passive recipients of information but active contributors to knowledge construction. This supports the idea that engagement is a key determinant of successful learning outcomes. Therefore, cybergogy provides a strong foundation for fostering active learning in digital contexts (Wang & Kang, 2006).

From a pedagogical perspective, the use of interactive tools such as discussion forums and

collaborative platforms reflects the principles of Communicative Language Teaching (CLT). These tools encourage meaningful interaction and authentic communication among learners. The findings show that students are more willing to express their ideas in digital environments, especially when given time to reflect. This supports the notion that interaction is essential for language development. Furthermore, it demonstrates that technology can enhance communicative competence. Thus, cybergogy complements and extends traditional pedagogical approaches (Richards & Rodgers, 2001).

The improvement in learner autonomy observed in this study can be explained through self-regulated learning theory. Students in digital classrooms are required to manage their own learning processes, including setting goals, organizing tasks, and evaluating their progress. The findings indicate that many students developed these skills over time. This suggests that cybergogy creates an environment that supports independent learning. Autonomy is a crucial factor in lifelong learning, especially in the digital age. Therefore, the results highlight the importance of fostering self-regulation in educational practices (Zimmerman, 2002).

The role of multimedia in enhancing comprehension also aligns with multimedia learning theory. The use of videos, animations, and audio materials helps students process information more effectively. These tools provide multiple representations of content, which facilitate deeper understanding. The findings show that students benefit from visual and auditory input, particularly when learning complex concepts. This reduces cognitive load and improves retention. Consequently, multimedia integration is an essential component of effective cybergogical design (Mayer, 2009).

Another significant finding is the role of feedback in supporting student learning. Immediate and continuous feedback provided through digital platforms enhances learning outcomes. This aligns with formative assessment principles, which emphasize the importance of feedback in guiding student progress. The study shows that students value timely responses from instructors. Feedback helps them identify areas for improvement and build confidence. Therefore, effective feedback mechanisms are crucial in digital learning environments (Hattie & Timperley, 2007).

The collaborative aspect of cybergogy also plays a vital role in enhancing learning outcomes. The findings indicate that peer interaction contributes to knowledge construction and critical thinking. This supports social constructivist theory, which emphasizes learning as a social process. Through collaboration, students exchange ideas and develop a deeper understanding of the subject matter. Digital platforms facilitate this interaction despite physical distance. Thus, cybergogy successfully promotes collaborative learning in virtual environments (Vygotsky, 1978).

However, the study also highlights challenges related to unequal access to technology. The digital divide remains a significant barrier to effective implementation of cybergogy. Students with limited access to devices or stable internet connections face difficulties in participating fully. This issue affects both engagement and learning outcomes. It underscores the need for institutional support and policy interventions. Addressing this gap is essential for ensuring equitable access to education (Selwyn, 2011).

Another challenge identified is the variation in students' ability to adapt to autonomous learning. While some students thrive in self-directed environments, others struggle with time management and discipline. This finding suggests that autonomy cannot be assumed but must be developed تدريجيًا. Teachers need to provide guidance and scaffolding to support students in this transition. Without proper support, the benefits of cybergogy may not be fully realized. Therefore, a balanced approach is necessary to support all learners (Little, 1991).

The role of instructors is also critical in determining the success of cybergogical practices.

The findings show that active teacher presence enhances student engagement and motivation. Instructors who provide clear instructions, facilitate discussions, and offer timely feedback contribute to a positive learning experience. This highlights the importance of teacher competence in digital pedagogy. Professional development is necessary to equip teachers with the required skills. Effective teaching remains central even in technology-driven environments (Kessler, 2018).

Furthermore, the design of the digital learning environment significantly influences learning outcomes. Well-structured platforms with clear navigation and organized content support student engagement. The findings indicate that students perform better when the learning environment is user-friendly. Instructional design plays a crucial role in facilitating effective learning experiences. Poorly designed platforms can lead to confusion and reduced motivation. Therefore, careful planning and design are essential in cybergogical implementation (Anderson, 2008).

The emotional and social dimensions of learning are also important in digital classrooms. The findings show that interaction with peers and instructors fosters a sense of belonging. This reduces feelings of isolation and enhances motivation. Social presence is a key factor in maintaining engagement in online learning. Cybergogy addresses this by incorporating collaborative and interactive elements. Thus, it supports not only cognitive development but also emotional well-being (Garrison et al., 2000).

In conclusion, the discussion highlights that cybergogy is an effective approach for enhancing student engagement and autonomy in digital classrooms. It integrates various theoretical perspectives, including constructivism, multimedia learning, and self-regulated learning. While challenges such as the digital divide and varying learner readiness remain, the overall impact is positive. The findings suggest that successful implementation requires a combination of technology, pedagogy, and institutional support. Therefore, cybergogy offers a comprehensive framework for improving digital education in the modern era (Wang & Kang, 2006).

Conclusion (خاتمة)

This study concludes that the implementation of cybergogy in digital classrooms has a significant positive impact on both student engagement and learner autonomy. The integration of interactive digital tools, multimedia resources, and collaborative platforms creates a dynamic learning environment that encourages active participation and meaningful interaction. Students become more motivated, confident, and involved in the learning process, while also benefiting from improved comprehension and retention. The findings demonstrate that cybergogy effectively supports the development of communicative competence and self-directed learning, making it a highly relevant approach in contemporary digital education.

However, the success of cybergogy depends on several critical factors, including adequate technological infrastructure, teacher competence, and students' readiness for autonomous learning. Challenges such as the digital divide, limited access to resources, and variations in learners' self-regulation skills must be addressed to ensure equitable and effective implementation. Therefore, a balanced approach that combines strong pedagogical design with appropriate technological support is essential. This study highlights the importance of adopting innovative and sustainable strategies to enhance the quality of digital learning in the modern educational landscape.

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Bibliography (مراجع)

Anderson, T. (2008). *The Theory and Practice of Online Learning* (2nd ed.). Edmonton: Athabasca University Press.

Bowen, G. A. (2009). Document Analysis as a Qualitative Research Method. *Qualitative Research Journal*, 9(2), 27–40.

Braun, V., & Clarke, V. (2006). Using Thematic Analysis in Psychology. *Qualitative Research in Psychology*, 3(2), 77–101.

Creswell, J. W., & Poth, C. N. (2018). *Qualitative Inquiry and Research Design: Choosing Among Five Approaches* (4th ed.). Thousand Oaks: SAGE Publications.

Denzin, N. K. (2012). *Triangulation 2.0*. Journal of Mixed Methods Research, 6(2), 80–88.

Fitrianto, I. (2024). Critical Reasoning Skills: Designing an Education Curriculum Relevant to Social and Economic Needs. International Journal of Post Axial: Futuristic Teaching and Learning, 245-258

Fitrianto, I. (2024). Innovation and Technology in Arabic Language Learning in Indonesia: Trends and Implications. International Journal of Post Axial: Futuristic Teaching and Learning, 134-150.

Fitrianto, I. (2024). Strategi Guru Pai Dalam Mengatasi Kesulitan Belajar Pada Mata Pelajaran Hadis Kelas 8 MTS Ibadurrahman Subaim. IJER: Indonesian Journal of Educational Research, 356-363.

Fitrianto, I. (2025). Beyond Competence: Rethinking Education for Holistic Well-Being and Happiness. *International Journal of Post Axial: Futuristic Teaching and Learning*, 1-11.

Fitrianto, I., & Abdillah, F. M. (2018). MODEL PEMBELAJARAN PROGAM PEMANTAPAN BAHASA ARAB DAN SHAHSIAH (KEMBARA) KE 4 MAHASISWA KOLEJ UNIVERSITI ISLAM ANTAR BANGSA SELANGOR (KUIS) TAHUN 2018. University of Darussalam Gontor 15-16 September 2018, 121.

Fitrianto, I., & Farisi, M. (2025). Integrating Local Wisdom into 21st Century Skills: A Contextual Framework for Culturally Relevant Pedagogy in Rural Classrooms. *International Journal of Post Axial: Futuristic Teaching and Learning*, 109-121.

Fitrianto, I., & Layalin, N. A. (2025). The Paradigm of Physical Punishment from the Perspective of Islamic Education and Its Implementation in Indonesia and Malaysia. *International Journal of Post Axial: Futuristic Teaching and Learning*, 147-156.

Fitrianto, I., & Saif, A. (2024). The role of virtual reality in enhancing Experiential Learning: a comparative study of traditional and immersive learning environments. International Journal of Post Axial: Futuristic Teaching and Learning, 97-110.

Fitrianto, I., Al-Faruqi, M. R., & Hanifah, N. A. (2025). The Contributions of Ibn Malik to Arabic Language Education: A Historical and Pedagogical Analysis. *IJAS: International Journal of Arabic Studies*, 1-11.

Fitrianto, I., Hamid, R., & Mulalic, A. (2023). The effectiveness of the learning strategy" think, talk, write" and snowball for improving learning achievement in lessons insya'at Islamic Boarding School Arisalah. International Journal of Post Axial: Futuristic Teaching and Learning, 13-22

Fredricks, J. A., Blumenfeld, P. C., & Paris, A. H. (2004). School Engagement: Potential of the Concept, State of the Evidence. *Review of Educational Research*, 74(1), 59–109.

Garrison, D. R., Anderson, T., & Archer, W. (2000). Critical Inquiry in a Text-Based Environment: Computer Conferencing in Higher Education. *The Internet and Higher Education*, 2(2–3), 87–105.

Kessler, G. (2018). Technology and the Future of Language Teaching. *Foreign Language Annals*, 51(1), 205–218.

Kvale, S., & Brinkmann, S. (2009). *InterViews: Learning the Craft of Qualitative Research Interviewing* (2nd ed.). Thousand Oaks: SAGE Publications.

Mayer, R. E. (2009). *Multimedia Learning* (2nd ed.). Cambridge: Cambridge University Press.

Orb, A., Eisenhauer, L., & Wynaden, D. (2001). Ethics in Qualitative Research. *Journal of Nursing Scholarship*, 33(1), 93–96.

Selwyn, N. (2011). *Education and Technology: Key Issues and Debates*. London: Continuum.

Spradley, J. P. (1980). *Participant Observation*. New York: Holt, Rinehart and Winston.

Sugiyono. (2013). *Metode Penelitian Pendidikan*. Bandung: Alfabeta.

Vygotsky, L. S. (1978). *Mind in Society: The Development of Higher Psychological Processes*. Cambridge, MA: Harvard University Press.

Wang, M., & Kang, M. (2006). Cybergogy for Engaged Learning: A Framework for Creating Learner Engagement through Information and Communication Technology. In D. Hung & M. S. Khine (Eds.), *Engaged Learning with Emerging Technologies* (pp. 225–253). Dordrecht: Springer.

Yin, R. K. (2018). *Case Study Research and Applications: Design and Methods* (6th ed.). Thousand Oaks: SAGE Publications.

Zimmerman, B. J. (2002). Becoming a Self-Regulated Learner: An Overview. *Theory Into Practice*, 41(2), 64–70.