

Examining first-year student retention in higher education: teaching approaches and their impact on persistence

Rudzani Israel Lumadi

Associate Professor, Department of Educational Leadership and Management,
University of South Africa, South Africa
<https://orcid.org/0000-0001-9466-2854>

Abstract

First-year student retention is a critical issue in higher education, affecting both institutional success and student achievement. This study examines the impact of teaching approaches on first-year students' decisions to persist or withdraw from their studies. Using a qualitative research design, data were collected through semi-structured interviews and document analysis from purposively selected participants at Duck University (pseudonym), which included students, faculty members, and academic advisors. Thematic analysis underscored the importance of student-centered teaching methods, active learning strategies, and ongoing academic support in promoting engagement and persistence. Key factors such as interactive classroom environments, personalized feedback, and faculty mentorship emerged as crucial influences on students' motivation and sense of belonging. The findings suggest that integrating innovative pedagogical approaches with strong institutional support enhances student retention by promoting deeper learning and academic resilience. This study advocates for a holistic framework that prioritizes pedagogical innovation, student engagement, and inclusive learning environments to reduce withdrawal rates and support first-year students in their academic journey.

Keywords: Academic support, higher education, Pedagogical innovation, persistence, Student engagement

Introduction

Student retention in higher education remains a global concern, influencing both individual academic outcomes and institutional sustainability. First-year students are particularly susceptible to dropout due to a combination of academic, social, and institutional challenges. While earlier studies emphasized the role of academic preparedness and socio-economic background, recent research increasingly recognizes the pivotal role of teaching and learning approaches in promoting engagement and persistence. According to Yorke and Thomas (2003), "student success is closely associated with the quality of the learning experience, including teaching quality, curriculum design, and academic support."

Theoretical frameworks have significantly shaped understanding in this area. Tinto's (1993) Student Integration Model argues that "students are more likely to persist when they are academically and socially integrated into the university environment. Similarly, the Student Involvement Theory underscores that learning and development are strongly influenced by the amount of student involvement in academic and extracurricular activities (Tao et al., 2022). Sinval et al. (2024) emphasize the significance of proactive institutional efforts, stating that targeted institutional interventions can mitigate first-year attrition by addressing the academic and emotional needs of students." Despite growing awareness, many institutions still rely heavily on traditional, lecture-based instruction. These passive methods often fail to engage students meaningfully, contributing to increased withdrawal rates. In contrast, active learning strategies such as flipped classrooms and problem-based learning "have been found to improve learning outcomes by fostering deeper understanding and sustained motivation (Hwang & Chen, 2023). Faculty-student interaction also plays a critical role in student persistence. As Larsen and James (2022) note, "students who perceive their instructors as supportive and accessible report higher levels of academic confidence and belonging." Conversely, limited engagement with faculty can lead to academic isolation and a heightened risk of dropout. Structural elements, including flexible curricula and early intervention programs, are similarly influential. According to Yorke and Longden (2018), structured academic and social support mechanisms contribute positively to student retention when aligned with pedagogical practices.

Given these dynamics, this study investigates how various teaching and learning approaches influence first-year student persistence and withdrawal decisions. By examining instructional strategies, faculty engagement, and institutional support, the research aims to identify best practices for enhancing retention. Ultimately, this study

contributes to the expanding body of literature by exploring the interplay between pedagogy and persistence in higher education.

Problem Statement

First-year student retention in higher education remains a critical challenge with significant implications for student success and institutional sustainability. Traditional lecture-based teaching methods, often lacking interactivity and engagement, have been linked to increased dropout rates. In contrast, active learning approaches such as problem-based learning, collaborative projects, and technology-enhanced instruction promote deeper understanding and academic motivation, thereby improving retention. Despite this, many institutions, like Duck University, continue to rely on conventional methods that inadequately support first-year students. The misalignment between support systems and teaching strategies further exacerbates retention challenges, as students with limited academic support, minimal faculty interaction, and few engagement opportunities are more likely to withdraw. While previous research has focused on institutional policies, there is a pressing need to examine how specific teaching methodologies influence student persistence. This study investigates the relationship between instructional approaches and retention, aiming to identify effective teaching practices that enhance first-year student success and reduce attrition rates.

The educational

Student retention, particularly in the context of first-year students, remains a pivotal concern in higher education. A growing body of literature suggests that teaching and learning approaches significantly influence students' decisions to persist or withdraw. Traditional pedagogical methods, primarily lecture-based instruction, have been criticized for their lack of active student engagement, which often leads to disengagement and higher dropout rates (Tight, 2020). In contrast, innovative teaching strategies, such as active learning and student-centred approaches, have shown promise in improving retention rates (Tight, 2020). Understanding the role of these teaching strategies is essential for developing effective approaches that promote student success and persistence.

First-year student retention is a complex issue influenced by various factors, with teaching methods playing a critical role. Research consistently points to the relationship between student engagement and retention, with active learning environments showing a notable advantage over traditional lecture-based settings. Ssemugenyi (2023) demonstrated that students in active learning environments outperformed their peers in traditional classrooms, achieving nearly half a standard deviation improvement in academic performance. Similarly, Cress, Collier, and Reitenauer (2023) found that institutions integrating experiential learning, mentorship programs, and collaborative learning spaces reported lower dropout rates. These findings highlight the importance of engagement-driven pedagogical strategies in enhancing student persistence.

Much of the existing research emphasizes the positive correlation between student engagement and retention. Faculty-student interactions, in particular, have been identified as pivotal in fostering retention. Students who perceive their instructors as supportive and approachable are more likely to persist in their studies. Despite the widespread support for active learning, some studies indicate contradictions regarding the effectiveness of different teaching approaches across academic disciplines. For instance, Tirado-Olivares et al. (2021) found that when lecture-based instruction is coupled with formative assessments, retention rates can be comparable to those seen with active learning methods. Furthermore, the increasing adoption of online and hybrid learning models raises new questions about their impact on first-year student retention. Given the limited research on this topic, further studies are necessary to evaluate the long-term effects of these emerging teaching modalities.

While active learning and student-centred approaches are consistently linked to higher retention rates, contradictions remain in the literature, particularly concerning the effectiveness of teaching methods across different academic disciplines. Some research suggests that the integration of formative assessments in traditional lecture-based formats can achieve similar retention outcomes to more interactive teaching methods (Tirado-Olivares et al., 2021). Furthermore, the impact of online and hybrid learning environments on student retention remains underexplored. As digital education becomes more prevalent, it is crucial to assess how these teaching methods compare to traditional face-to-face instruction in fostering first-year student persistence. This gap in the literature warrants further exploration.

To address these gaps, future research should focus on the impact of emerging pedagogical strategies, such as AI-driven learning, on first-year student retention (Mupaikwa, 2024). Longitudinal studies could provide valuable insights into retention trends across various teaching methods and student demographics. Furthermore, research should investigate how academic and support services can complement effective teaching strategies to provide holistic support to first-year students. By addressing these areas, institutions can develop evidence-based policies that enhance student success and reduce dropout rates.

Theoretical Framework

This study is underpinned by Tinto's Student Integration Model, which provides a foundational framework for understanding first-year student retention in higher education. Tinto (1993) posits that students are more likely to persist when they experience both academic and social integration within the university environment. Meaningful engagement with faculty, peers, and institutional support structures fosters a sense of belonging, which is essential for student persistence (Tirado-Olivares et al., 2021). The model highlights the value of teaching strategies such as collaborative learning and peer mentoring, which create opportunities for interaction and integration. Institutions that align their pedagogical practices with Tinto's model are better positioned to improve first-year retention through inclusive and supportive learning environments.

To further strengthen the conceptual foundation, the study also draws on Astin's (1984) Theory of Student Involvement, which emphasizes that the quantity and quality of student involvement in academic and co-curricular activities significantly influence learning and development. According to Astin, "the more students are involved in academic and campus life, the more they learn and persist." This aligns with research suggesting that first-year students who actively participate in classroom discussions, group work, and campus initiatives demonstrate higher levels of commitment and retention (Kuh et al., 2020). By integrating Astin's theory, the study reinforces the importance of designing instruction that encourages active participation and sustained engagement. Informed by these theories, the study advocates for teaching approaches that promote interaction, critical thinking, and academic resilience. These frameworks collectively guide the analysis of how instructional methods impact first-year student persistence. Future research should examine the potential of innovative strategies, such as AI-driven learning (Mupaikwa, 2024), and conduct longitudinal studies across varied educational contexts to identify scalable, evidence-based retention solutions.

Method

Research Design

This study employed a qualitative research design to explore the influence of teaching and learning approaches on first-year student retention in higher education. The focus was on understanding how instructional practices and institutional support mechanisms affect students' decisions to persist or withdraw. A qualitative approach was deemed appropriate as it allowed for an in-depth examination of participants' lived experiences, perceptions, and narratives, offering rich insights that quantitative methods might not capture (Creswell & Poth, 2016).

Sampling

A purposive sampling strategy was employed to select participants capable of providing relevant and meaningful insights into the teaching and learning experiences of first-year students. The sample comprised first-year students, faculty members, and academic advisors from a specific higher education institution, which is referred to by a pseudonym to ensure confidentiality. This approach allowed for a diverse range of perspectives, facilitating a comprehensive understanding of the challenges and successes faced by students during their transition to university life. Data were collected through semi-structured interviews and focus groups, enabling participants to share their experiences in depth. These individuals were chosen based on their direct involvement with or experience in teaching, supporting, or being a part of first-year learning environments. This sampling method ensured that participants had first-hand knowledge of the institutional context, instructional practices, and student support systems.

Data Collection

Data collection was conducted using two primary methods: semi-structured interviews and document analysis. Semi-structured interviews provided flexibility to probe deeper into participants' perspectives while maintaining consistency in key themes across interviews. Document analysis was employed to augment the interview data by scrutinising pertinent institutional documents, including retention reports, descriptions of academic support programmes, and teaching and learning policy documents. This comprehensive approach allowed for a deeper understanding of the context in which the interviews were conducted, revealing potential discrepancies between stated policies and actual practices. By triangulating the data from these various sources, a more nuanced perspective on the experiences of both staff and students emerged.

Procedures of Data Collection

Semi-structured interviews were conducted face-to-face or via secure video conferencing platforms, depending on participant availability and preference. Each interview lasted between 45 and 60 minutes and was guided by an interview protocol focusing on teaching methods, student engagement strategies, institutional support services, and their perceived impact on retention and persistence. Participants were encouraged to reflect on their experiences within the institutional context, providing concrete examples where possible. With informed consent, all interviews were audio-recorded and transcribed verbatim to ensure data accuracy and fidelity. Anonymity and

confidentiality were maintained throughout the process. In parallel, institutional documents were collected and analysed to understand the official frameworks guiding teaching, learning, and retention. These documents included strategic plans, teaching and learning policies, academic development programme outlines, and internal reports on first-year student performance and retention trends.

Data Analysis

The collected data were analysed using an inductive thematic analysis approach following Braun and Clarke's (2006) six-phase framework. The steps included: Familiarization with the data, generating initial codes, searching for themes, reviewing themes, defining and naming themes and producing the report. Manual coding was employed to identify recurring patterns and emerging themes related to instructional approaches, student engagement, and persistence. The constant comparative method was also applied to refine themes and ensure consistency across the dataset. This process allowed for a nuanced understanding of how teaching and learning practices influence first-year student retention within the specific institutional context. To enhance the trustworthiness and credibility of the findings, methodological triangulation was employed by cross-verifying data from interviews and document analysis. Reflexivity was maintained throughout the research process to ensure that interpretations were grounded in participants' authentic voices.

Findings

This study adopted a qualitative approach to investigate the impact of teaching methodologies on first-year student retention in higher education. The analysis of data collected from students, lecturers, and academic advisors led to five key themes that illustrate the primary factors affecting student persistence and withdrawal. These findings are contextualized within existing literature to provide a comprehensive understanding of the relationship between teaching strategies and student retention.

Theme 1: Teaching Methodologies and Student Engagement

The findings highlight the critical role of teaching methodologies in fostering student engagement and persistence. First-year students reported that interactive and student-centered teaching approaches, such as group discussions, case studies, and problem-solving activities, significantly enhanced their learning experiences. One student noted that "active learning strategies make lectures more engaging and help me connect with the material in a meaningful way. It keeps me motivated to complete my degree."

Lecturers supported this perspective, emphasizing the importance of diverse instructional strategies in maintaining student interest and confidence. One lecturer stated that "engaging teaching methods not only enhance comprehension but also foster a sense of belonging, which contributes to students' decision to persist." These findings align with Tinto's (2012) research, which emphasizes that active learning strategies enhance student retention by promoting engagement and providing a more personalized educational experience.

Academic advisors further corroborated these views, indicating that students involved in interactive learning activities exhibited higher levels of commitment and were less likely to withdraw. This supports the assertion by Al-Hassani & Wilkins (2022) that: "student-centred teaching methods contribute to academic resilience and persistence".

Theme 2: Learning Environment and Academic Support

The study also underscores the importance of a supportive learning environment and academic resources in promoting first-year student retention. Students highlighted that access to academic support services, such as tutoring, mentoring, and counselling, was essential in helping them navigate academic challenges. One student remarked, "having access to tutoring and mentoring made a huge difference. Knowing that help is available when I struggle gives me the confidence to keep going."

Lecturers acknowledged the role of academic support beyond the classroom, including office hours and personalized feedback, in contributing to student success and retention. One lecturer noted that "when students feel supported both academically and emotionally, they are more likely to remain enrolled."

These findings align with the research of Al-Hassani & Wilkins (2022), who emphasize that strong institutional support structures reduce student attrition by addressing both academic and personal challenges. Academic advisors further stressed the importance of early intervention programs in preventing withdrawal, echoing the findings of Shah, Kift, & Thomas (2021) that targeted academic support is a key determinant of student persistence.

Theme 3: Feedback and Communication

Another key finding of the study relates to the role of feedback and communication in shaping first-year student retention. Students emphasized that receiving timely and constructive feedback was instrumental in

understanding their academic progress and refining their learning strategies. One student remarked, “getting prompt and clear feedback on assignments allows me to make improvements and stay on track, which keeps me motivated.”

Lecturers acknowledged the significance of feedback in fostering academic development and resilience. One lecturer explained that “effective feedback encourages a growth mindset, helping students to persist despite challenges.” This aligns with Rajapakse (2024), who argues that structured feedback mechanisms enhance student motivation and retention by promoting self-regulated learning.

Academic advisors also highlighted the necessity of clear communication regarding academic expectations and progress, stating that transparent feedback mechanisms help students navigate challenges and decrease withdrawal rates. This finding is supported by Nicol & Macfarlane-Dick (2006), who assert that “formative feedback is crucial for student self-efficacy and persistence.”

Theme 4: Course Structure and Workload

The study further revealed that course structure and workload significantly influence first-year student retention. Students reported that heavy workloads and poorly structured courses contributed to stress and, in some cases, withdrawal considerations. One student shared, “the transition to university was overwhelming, and the workload in my first year was too intense. I almost dropped out because I couldn’t handle the pressure.”

Conversely, students who experienced well-organized courses with clear expectations reported higher persistence levels. A student explained, “when the course structure is manageable and expectations are clear, I feel more in control and motivated to continue.”

Lecturers acknowledged the importance of balancing academic rigor with student well-being. One lecturer stated that “it is crucial to design courses that challenge students while providing the necessary support to help them succeed.” Academic advisors reinforced this perspective, noting that they frequently assist students with time management strategies and academic planning to reduce stress and withdrawal rates.

These findings align with Herodotou, Naydenova, Boroowa, Gilmour, & Rienties (2020), who highlight the strong correlation between course workload, structure, and student retention. Additionally, research by Gill (2021) suggests that excessive academic stress is a major predictor of student attrition, underscoring the need for well-structured curricula to enhance persistence.

Theme 5: Institutional Culture and Sense of Belonging

The final theme explores the role of institutional culture and a sense of belonging in student retention. The study found that students who felt integrated into the university community were more likely to persist. One student shared, “feeling like I belong here has made all the difference. The support from peers and faculty keeps me motivated to continue.”

Lecturers emphasized the importance of fostering an inclusive and supportive classroom environment to enhance student engagement and retention. One lecturer stated that “when students feel valued and included, they are more likely to stay because they develop a strong connection with their peers and the institution.”

Academic advisors echoed these sentiments, highlighting that universities that: “cultivate a positive institutional culture and provide opportunities for student engagement contribute significantly to retention.” This finding is consistent with Bentrin & Henning (2023), who demonstrate that a sense of belonging is a key predictor of student persistence. Furthermore, research by Gipson (2023) and Richard & Kwan-Soo (2022) emphasizes that social integration significantly impacts academic success, reinforcing the need for institutional policies that promote inclusivity and student engagement.

Discussion- Conclusions

The study sought to find out how various teaching approaches influence first-year student retention and persistence in higher education. The findings reveal that a combination of active learning, collaborative learning environments, academic support services, timely feedback, structured coursework, institutional culture, and strong faculty-student relationships play a critical role in fostering student engagement, motivation, and long-term commitment. Active learning strategies such as group discussions, case studies, and project-based learning were consistently associated with increased student engagement and improved academic performance. Lecturers reported that students responded more positively to interactive teaching methods that encouraged participation, critical thinking, and accountability. Similarly, collaborative learning, particularly through peer-led workshops and structured study groups, emerged as a significant contributor to academic persistence and social integration.

Academic support services including tutoring, academic advising, and supplemental instruction were identified as essential in assisting students to navigate academic demands and overcome challenges. Timely, constructive,

and formative feedback further reinforced student motivation and kept them on track academically. However, the study also acknowledged the difficulty of providing personalized feedback in large classes, highlighting the need for innovative, scalable feedback mechanisms. The importance of well-structured coursework featuring clear objectives, coherent progression, and manageable workloads was emphasized as a factor in reducing academic stress and preventing burnout. A supportive institutional culture and a strong sense of belonging also emerged as key elements influencing persistence. Students who experienced meaningful and encouraging interactions with both faculty and peers demonstrated enhanced academic confidence and a deeper sense of commitment to their studies.

The findings underscore the imperative for higher education institutions to adopt student-centred teaching methodologies and to invest in academic and psychosocial support systems that address the comprehensive needs of first-year students. An inclusive and nurturing academic environment—one that values diversity, encourages participation, and promotes equity can have a transformative impact on student retention outcomes. Faculty development initiatives should prioritize equipping lecturers with the skills necessary for implementing inclusive and engaging teaching practices. In addition, academic advisors and support staff should be empowered to proactively identify and support at-risk students through early intervention strategies, including data-driven early warning systems and personalized support frameworks. Data-informed decision-making remains essential in shaping effective and equitable retention strategies. By analysing institutional data on academic performance, student engagement, and demographic indicators, universities can design and implement tailored support interventions that respond to the diverse needs of their student populations.

Looking forward, future research should investigate the intersection of pedagogical approaches with external factors such as socioeconomic background, mental health, and familial support. Exploring these dimensions can contribute to a more holistic understanding of student retention and inform the development of comprehensive strategies to support diverse learners.

In conclusion, the study affirms that a multifaceted, student-centred approach to teaching and academic support significantly enhances first-year student retention in higher education. Institutions that prioritize inclusive pedagogies, broaden academic support structures, and foster a culture of care, engagement, and belonging are better positioned to ensure successful transitions into university life and to reduce student attrition. A sustained commitment to innovation, inclusivity, and evidence-based practice will be vital in shaping a higher education environment where all students are equipped to thrive.

Recommendations

This study highlights the need for student-centered teaching approaches to enhance first-year student retention and persistence in higher education. Active learning strategies, such as problem-based learning and group discussions, should be integrated into curricula to improve engagement and comprehension. Faculty training in inclusive pedagogical methods is essential for accommodating diverse learning styles. Expanding academic support services, including tutoring, mentorship, and career counselling, can help students navigate academic challenges and reduce dropout rates. Early intervention programs should be implemented to identify and support at-risk students proactively. Creating a sense of belonging is crucial for student retention. Universities should establish peer mentoring, student engagement initiatives, and inclusivity programs to foster community and support student well-being. Social structures such as student organizations and counselling services can enhance motivation and persistence. Institutional policies must be continuously assessed and refined to address the evolving needs of first-year students. Regular feedback mechanisms should guide improvements in teaching, curriculum, and student support services. Collaboration between university administrators and policymakers is necessary to ensure academic and financial support contributes to retention. Future research should explore external factors, such as economic conditions and mental health support, to develop comprehensive strategies for long-term student success.

References

- Ahmed, J. W., (2024). Problem-Based Learning: A Strategy to Foster 21st Century Critical Thinking and Perseverance in Building Technology Students. *Bijote - bichi journal of technology education*, 7(1), 99 - 111. Retrieved from <https://bijote.com/index.php/BIJOTE/article/view/293>
- Al Hassani, A. A., & Wilkins, S. (2022). Student retention in higher education: the influences of organizational identification and institution reputation on student satisfaction and behaviors. *International Journal of Educational Management*, 36(6), 1046-1064. <https://www.emerald.com/insight/0951-354X.htm>
- Astin, A. W., (1984). Student involvement: A developmental theory for higher education. *Journal of College Student Personnel*, 25, 297-308

Atobatele, F. A., Kpodo, P. C., & Eke, I. O. (2024). Faculty engagement in international student success: a review of best practices and strategies. *International Journal of Applied Research in Social Sciences*, 6(3), 440-459. <https://doi.org/10.51594/ijarss.v6i3.968>

Bentrim, E., & Henning, G. W. (Eds.). (2023). *The impact of a sense of belonging in college: Implications for student persistence, retention, and success*. Taylor & Francis.

Bickerstaff, S., Beal, K., Raufman, J., Lewy, E. B., & Slaughter, A. (2022). *Five Principles for Reforming Developmental Education: A Review of the Evidence*. Center for the Analysis of Postsecondary Readiness.

Bond, M., Buntins, K., Bedenlier, S., Zawacki-Richter, O., & Kerres, M. (2020). Mapping research in student engagement and educational technology in higher education: A systematic evidence map. *International journal of educational technology in higher education*, 17, 1-30.. <https://doi.org/10.1186/s41239-019-0176-8>

Braun, V., & Clarke, V., (2006). Using thematic analysis in psychology. *Qualitative research in psychology*, 3(2), 77-101.

Cress, C. M., Collier, P. J., & Reitenauer, V. L. (2023). *Learning through serving: A student guidebook for service-learning and civic engagement across academic disciplines and cultural communities*. Taylor & Francis.

Creswell, J. W., & Poth., C. N. (2016). *Qualitative inquiry and research design: Choosing among five approaches*. Sage publications.

Dzaiy, A. H. S., & Abdullah, S. A. (2024). The use of active learning strategies to foster effective teaching in higher education institutions. *Zanco Journal of Human Sciences*, 28(4), 328-351. <https://doi.org/10.21271/zjhs.28.4.18>

Dzaiy, A. H. S., & Abdullah, S. A. (2024). The use of active learning strategies to foster effective teaching in higher education institutions. *Zanco Journal of Human Sciences*, 28(4), 328-351. <https://doi.org/10.21271/zjhs.28.4.18>

Gipson, T. L. (2023). *Understanding How High School African American Males Articulate Their Experiences of Mattering and Marginality at School to Teachers and Administrators*. Arkansas State University.

Hanson, J. L., Balmer, D. F., & Giardino, A. P. (2011). Qualitative research methods for medical educators. *Academic pediatrics*, 11(5), 375-386.

Harrington, C., & Thomas, M., (2023). *Designing a motivational syllabus: Creating a learning path for student engagement*. Taylor & Francis.

Harrison, R., Meyer, L., Rawstorne, P., Razee, H., Chitkara, U., Mears, S., & Balasooriya, C., (2020). Evaluating and enhancing quality in higher education teaching practice: a meta- review. *Studies in Higher Education*, 47(1), 80–96. <https://doi.org/10.1080/03075079.2020.1730315>

Herodotou, C., Naydenova, G., Boroowa, A., Gilmour, A., & Rienties, B. (2020). How Can Predictive Learning Analytics and Motivational Interventions Increase Student Retention and Enhance Administrative Support in Distance Education?. *Journal of Learning Analytics*, 7(2), 72-83. <https://doi.org/10.18608/jla.2020.72.4>

Hwang, G. J., & Chen, P. Y., (2023). Effects of a collective problem-solving promotion-based flipped classroom on students' learning performances and interactive patterns. *Interactive Learning Environments*, 31(5), 2513-2528.

Ibsen, K., & Rosholm, M., (2024). What Works? Interventions Aimed At Reducing Student Dropout in Higher Education. <http://dx.doi.org/10.2139/ssrn.4759865>

Islam, Md. K., Sarker, Md. F. H., & Islam, M. S., (2022). Promoting student-centred blended learning in higher education: A model. *E-Learning and Digital Media*, 19(1), 36-54. <https://doi.org/10.1177/20427530211027721>

Ives, J., & Castillo-Montoya, M., (2020). First-Generation College Students as Academic Learners: A Systematic Review. *Review of Educational Research*, 90(2), 139-178. <https://doi.org/10.3102/0034654319899707>

Larsen, A., & James, T., (2022). A sense of belonging in Australian higher education: The significance of self-efficacy and the student-educator relationship. *Journal of University Teaching and Learning Practice*, 19(4), 1-15. <https://search.informit.org/doi/10.3316/informit>.

Mahoney, J. L., Weissberg, R. P., Greenberg, M. T., Dusenbury, L., Jagers, R. J., Niemi, K., Schlinger, M., Schlund, J., Shriver, T. P., VanAusdal, K., & Yoder, N., (2021). Systemic social and emotional learning: Promoting educational success for all preschool to high school students. *American Psychologist*, 76(7), 1128–1142. <https://doi.org/10.1037/amp0000701>

Mandinach, E.B., 2012. A perfect time for data use: Using data-driven decision making to inform practice. *Educational Psychologist*, 47(2), pp.71-85. <https://doi.org/10.1080/00461520.2012.667064>

Mugizi, W., Katuramu, A. O., Dafiewhare, A. O., & Kanyesigye, J. (2021). Student-Centred Pedagogical Approach and Student Engagement at a Private University in Western Uganda. *Education Journal*, 10(5), 193-203. doi: 10.11648/j.edu.20211005.14

Mupaikwa, E. (2024). Artificial Intelligence-Driven Instruction and Its Impact on Heutagogy and Student Engagement. In *AI Algorithms and ChatGPT for Student Engagement in Online Learning* (pp. 101-123). IGI Global. DOI: 10.4018/979-8-3693-4268-8.ch007

- Nieuwoudt, J. E., & Pedler, M. L. (2023). Student Retention in Higher Education: Why Students Choose to Remain at University. *Journal of College Student Retention: Research, Theory & Practice*, 25(2), 326-349. <https://doi.org/10.1177/1521025120985228>
- Rajapakse, R., (2024). The Impact of Feedback on the Progress of Teaching Learning Process and the Overall Student Performance. 4869045. <https://ssrn.com/abstract=4869045>
- Remenick, L. (2019). Services and support for nontraditional students in higher education: A historical literature review. *Journal of Adult and Continuing Education*, 25(1), 113-130. <https://doi.org/10.1177/1477971419842880>
- Richard, B., & Kwan-Soo, S., (2022). Determinants of Working International Students' Life Satisfaction: The Mediating Role of Sense of Belonging. *International Journal of Advanced Culture Technology*, 10(4), 322-336. <https://doi.org/10.17703/IJACT.2022.10.4.322>
- Shah, M., Kift, S., & Thomas, L. (2021). Student retention and success in higher education. Springer International Publishing.
- Shaibou, A. H., (2024). Strategies to Enhance Student Engagement and Retention in Higher Education Learning Environments. *British Journal of Multidisciplinary and Advanced Studies*, 5(5), 13–31. <https://doi.org/10.37745/bjmas.2022.04182>
- Sinval, J., Oliveira, P., Novais, F., Almeida, C. M., & Telles-Correia, D., (2024). Exploring the impact of depression, anxiety, stress, academic engagement, and dropout intention on medical students' academic performance: A prospective study. *Journal of Affective Disorders*. <https://doi.org/10.1016/j.jad.2024.09.116>
- Ssemugenyi, F. (2023)., Teaching and learning methods compared: A pedagogical evaluation of problem-based learning (PBL) and lecture methods in developing learners' cognitive abilities. *Cogent Education*, 10(1). <https://doi.org/10.1080/2331186X.2023.2187943>
- Tao, Y., Meng, Y., Gao, Z., & Yang, X., (2022). Perceived teacher support, student engagement, and academic achievement: a meta-analysis. *Educational Psychology*, 42(4), 401–420. <https://doi.org/10.1080/01443410.2022.2033168>
- Tariq, M. U. (Ed.). (2024). *AI-Driven Learning and Engagement in Higher Education*. IGI Global.
- Tight, M. ,(2020). Student retention and engagement in higher education. *Journal of further and Higher Education*, 44(5), 689-704. <https://doi.org/10.1080/0309877X.2019.1576860>
- Tirado-Olivares, S., Cózar-Gutiérrez, R., García-Olivares, R., & González-Calero, J. A. (2021). Active learning in history teaching in higher education: The effect of inquiry-based learning and a student response system-based formative assessment in teacher training. *Australasian Journal of Educational Technology*, 37(5), 61–76. <https://doi.org/10.14742/ajet.7087>
- Wittayakom, S., Kanjanavisutt, C., & Rumpagaporn, M. W., (2024). Online Training by Active Learning Approaches: A Systematic Literature Review. *Higher Education Studies*, 14(4), 53-72. <https://doi.org/10.5539/hes.v14n4p53>
- Xavier, M. [Marlon], & Meneses, J., [Julio] (2020). Dropout in Online Higher Education: A scoping review from 2014 to 2018. Barcelona: eLearn Center, Universitat Oberta de Catalunya. <https://doi.org/10.7238/uoc.dropout.factors.2020>
- Yorke, M., & Thomas, L., (2003). Improving the Retention of Students from Lower Socio-economic Groups. *Journal of Higher Education Policy and Management*, 25(1), 63–74. <https://doi.org/10.1080/13600800305737>