

Role of Teacher-Student Mentorship in Knowledge Utilization among Undergraduates in Federal University Oye-Ekiti

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Abstract

This study examined the role of teacher-student mentorship in knowledge utilization among undergraduate students at the Federal University Oye-Ekiti. A total of 240 undergraduate students participated in the cross-sectional survey. The results showed that 68% of the participants reported having an active mentorship relationship with a faculty member. Students in mentorship programs demonstrated significantly higher levels of knowledge utilization ($M = 4.21$, $SD = 0.87$) compared to their non-mentored peers ($M = 3.42$, $SD = 1.02$), $t(238) = 5.79$, $p < 0.001$, $d = 0.75$. Regression analysis revealed that the quality of mentorship, as measured by mentor availability ($\beta = 0.31$, $p < 0.001$) and mentor-mentee rapport ($\beta = 0.27$, $p < 0.01$), was a strong predictor of knowledge utilization among the students. Furthermore, students' academic self-efficacy ($\beta = 0.22$, $p < 0.05$) and perceived institutional support for mentorship ($\beta = 0.19$, $p < 0.05$) also emerged as significant predictors of knowledge utilization. These findings suggest that well-designed and supported teacher-student mentorship programs can play a crucial role in enhancing knowledge application and academic success among undergraduate students. Implications for university policies and mentorship program development are discussed.

Keywords: Teacher-student mentorship, knowledge utilization, undergraduate students, academic self-efficacy, institutional support

Introduction

Teaching is a complex process requiring intensive training for teachers, particularly through mentorship by experienced educators. Mentoring helps student teachers acquire essential skills and professional knowledge (Scholz et al., 2023). These student teachers often train in laboratory schools, where they gain authentic teaching experiences and learn instructional and classroom management strategies from mentor teachers. However, the realities of classroom teaching reveal challenges within student teaching programs (Joseph et al., 2024). Effective mentoring involves providing both career and psychosocial support to student teachers (Wang et al., 2021). Cooperating teachers must demonstrate expertise in content and pedagogy, effective communication, a positive attitude, and a genuine interest in preparing aspiring teachers (Okoh, et al, 2024). Their dedication to quality instruction inspires student teachers and enhances their skills. Cooperating teachers also benefit from the mentoring relationship, gaining insights by reflecting on their teaching practices (Gil-Fernández et al., 2021); (Funom, 2021). This study explores the relationship between mentorship and knowledge utilization among undergraduate students at the Federal University Oye-Ekiti (FUOYE). Knowledge utilization refers to the application of academic knowledge in real-world contexts, including professional settings and community engagement. Studies show that mentorship can significantly enhance students' confidence in applying their knowledge (Oladele & Opele, 2022) and can foster critical thinking and creativity.

At FUOYE, strong mentorship relationships can facilitate knowledge utilization by creating an environment conducive to exploration and innovation. Engaging in mentorship activities allows students to receive constructive feedback and develop confidence in addressing real-world challenges (Opele, 2022). Integrating mentorship into both the curriculum and co-curricular activities can further enhance students' knowledge application. The mentor-mentee relationship is crucial for successful mentoring. Research have indicated that positive relationships foster the mentee's development (Nagbe et al., 2019). Trust and respect are essential, achieved through

sharing resources and maintaining professionalism. Both mentors and mentees should possess desirable attributes mentors need enthusiasm and commitment, while mentees should be open to feedback and responsible for their learning. Clear communication of expectations at the beginning of the mentorship is vital. Mentees expect supportive supervision and high standards of professionalism (Seba et al., 2012) . Mentors, in turn, expect mentees to take risks and demonstrate a commitment to student-centered learning. The development of positive mentoring relationships is essential for student-teachers' growth, relying on trust, open communication, and attentive listening (Nurhayati et al., 2021). Bird and Hudson (2015) suggest a model of mentoring with five key factors: personal attributes of mentors, systems requirements, pedagogical knowledge, modeling, and feedback.

The first factor emphasizes mentors' support and communication skills, which encourage mentees to reflect on their practices and build confidence. The second factor involves mentors communicating educational systems' aims and policies, which can be complex. The third factor emphasizes pedagogical knowledge, as mentors guide mentees in creating effective learning plans and managing classroom challenges (Adams et al., 2024). Modeling is the fourth factor, highlighting the mentor's role in demonstrating effective teaching practices and building positive student relationships. Finally, the importance of feedback is crucial because, effective mentors set expectations and provide constructive guidance (Bird & Hudson, 2015). Hudson's model indicates that effective mentoring enhances teaching practices, ultimately contributing to student learning.

General Objective

The general objective of this study is to examine the role of teacher-student mentorship on knowledge utilization among undergraduate students at the Federal University Oye-Ekiti.

Specific Objectives

1. To assess the socio-demographical characteristics of undergraduate students participating in mentorship programs at FUOYE.

2. To evaluate the effectiveness of teacher-student mentorship in providing feedback and guidance to students, as well as its impact on their academic performance.
3. To analyze the levels of knowledge utilization among students, focusing on their ability to apply learned concepts in academic assignments and real-world contexts.
4. To identify the factors influencing the quality of mentorship relationships between teachers and students, including teacher availability, teaching style, and institutional support.

Methodology

This study employed a descriptive survey design to gather information from undergraduate students at the Federal University Oye-Ekiti (FUOYE). The population consisted of approximately 50,973 undergraduates across various faculties, including Education, Sciences, Management Sciences, Arts, and Social Sciences. A sample size of 250 respondents was determined using Taro Yamane's formula, which is suitable for survey research. The study utilized simple random sampling to ensure representativeness across different departments, resulting in a final sample of 240 students. Data collection was conducted using a structured questionnaire, divided into five sections: Demographic Information comprising age, gender, faculty, and academic level. Teacher-Student mentorship which assessed collaboration practices through a 5-point Likert scale. Knowledge utilization involving students' ability to apply knowledge gained from courses. Factors Influencing Mentorship: Identifying elements that affected mentorship sharing among undergraduates. The questionnaire was administered in various lecture rooms over three to four weeks, with a focus on ensuring accurate and complete responses. Validity was established through a pilot test with a small group, followed by revisions based on feedback from supervisors to align with the study's objectives. Data analysis involved the use of descriptive statistics such as frequency counts, percentage distribution, mean and standard deviation.

Results

Table 1: Socio-demographical characteristics

Variables	Classification	Frequency	Percentage
Gender	Male	144	60.0
	Female	96	40.0
Faculty	Arts	72	30.0
	Science	48	20.0
	Social Science	84	35.0
	Education	36	15.0
Level	100	48	20.0
	200	72	30.0
	300	84	35.0
	400	36	15.0

Table 1 presents the socio-demographical characteristics of the sample, which consisted of 240 students. Among these, 60% (144) were male and 40% (96) were female, indicating a higher representation of male students. The distribution across faculties revealed that 35% (84) of the students were from the Social Science faculty, 30% (72) from the Arts faculty, 20% (48) from Sciences, and 15% (36) from Education. This distribution suggests a diverse representation of academic disciplines within the study. Additionally, the academic level breakdown showed the highest representation from the 300 level (35%, 84 students), followed by the 200 level (30%, 72 students), the 100 level (20%, 48 students), and the 400 level (15%, 36 students), offering insights into the experiences of students at various stages of their undergraduate education.

Table 2: Teacher-Students Mentorship

Statement	Strongly Agree F(%)	Agree F(%)	Neutral F(%)	Disagree F(%)	Strongly Disagree F(%)	Mean	Std. Dev.
Teachers in FUOYE provide regular feedback and guidance to their students.	75(31.25)	90(37.5)	15(6.25)	30(12.5)	30(12.5)	3.75	1.16
Teachers in FUOYE are approachable and accessible to students who need mentorship.	75(31.25)	90(37.5)	15(6.25)	30(12.5)	30(12.5)	3.75	1.16
The mentorship relationship between teachers and students in FUOYE is built on trust and respect.	60(25.0)	90(37.5)	15(6.25)	45(18.75)	30(12.5)	3.63	1.13
The teacher-student mentorship program in FUOYE has helped students achieve their academic goals.	60(25)	90(37.5)	15(6.25)	45(18.75)	30(12.5)	3.63	1.13
Teachers in FUOYE actively mentor student in their academic and personal growth.	60(25.0)	90(37.5)	15(6.25)	30(12.5)	45(18.75)	3.56	1.18

Statement	Strongly Agree F(%)	Agree F(%)	Neural F(%)	Disagree F(%)	Strongly Disagree F(%)	Mean	Std. Dev.
The teacher-student mentorship program in FUOYE is well-structured and effective.	45(18.75)	75(31.25)	15(6.25)	45(18.75)	60(25.0)	3.31	1.18

Table 2 focuses on teacher-student mentorship. The results indicate that students generally agree that their teachers provide regular feedback and guidance, reflected in a mean score of 3.75 for the statement "Teachers in FUOYE provide regular feedback and guidance to their students." Additionally, the same mean score for "Teachers in FUOYE are approachable and accessible to students who need mentorship" suggests a positive perception of mentorship accessibility. The mean score of 3.63 for "The mentorship relationship between teachers and students in FUOYE is built on trust and respect" further underscores the favorable dynamics within these relationships. Students also acknowledged the role of mentorship in achieving their academic goals, with a mean score of 3.63 indicating that the program contributes positively to their success. However, the mean score of 3.56 for "Teachers in FUOYE actively mentor students in their academic and personal growth" and the lowest score of 3.31 for "The teacher-student mentorship program in FUOYE is well-structured and effective" highlight areas for improvement, particularly in enhancing active mentorship practices and the program's overall organization.

Table 3: Knowledge Utilization

Statement	Strongly Agree F(%)	Agree F(%)	Neutral F(%)	Disagree F(%)	Strongly Disagree F(%)	Mean	Std. Dev.
I apply the knowledge gained from my courses in my academic assignments.	63(26.3)	116(48.3)	41(17.1)	16(6.7)	4(1.7)	3.91	0.92
The knowledge gained from my courses has enhanced my critical thinking skills.	65(27.1)	110(45.8)	45(18.8)	15(6.3)	5(2.1)	3.90	0.95
I feel confident in my ability to transfer learned knowledge to new contexts and situations.	52(21.7)	108(45.0)	62(25.8)	16(6.7)	2(0.8)	3.81	0.90
I use the knowledge acquired in my courses to solve real-world problems.	48(20.0)	104(43.3)	63(26.3)	19(7.9)	6(2.5)	3.71	0.97
I regularly reflect on how the knowledge gained in class can be applied in different contexts.	47(19.6)	95(39.6)	68(28.3)	26(10.8)	4(1.7)	3.65	0.99
I integrate the concepts learned in class into my professional endeavors.	43(17.9)	97(40.4)	74 (30.8)	21(8.8)	5(2.1)	3.63	0.96
I actively seek opportunities to apply the knowledge gained from my	41(17.1)	92(38.3)	74(30.8)	28(11.7)	5(2.1)	3.56	1.00

Statement	Strongly Agree F(%)	Agree F(%)	Neural F(%)	Disagree F(%)	Strongly Disagree F(%)	Mean	Std. Dev.
courses in practical settings.							

In Table 3, the focus shifts to knowledge utilization among students. A mean score of 3.91 for "I apply the knowledge gained from my courses in my academic assignments" indicates strong confidence in translating academic knowledge into practical application. Similarly, the second-highest mean score of 3.90 for "The knowledge gained from courses has enhanced critical thinking skills" suggests that students feel their coursework effectively develops their analytical abilities. The mean score of 3.81 for "I feel confident in my ability to transfer learned knowledge to new contexts and situations" further illustrates their belief in the applicability of their learning. Additionally, students reported a mean score of 3.71 for utilizing knowledge to "solve real-world problems," emphasizing the practical relevance of their education. However, the lowest mean score of 3.56 for "actively seek opportunities to apply the knowledge gained from my courses in practical settings" indicates that students may not be as proactive in pursuing practical applications, highlighting a potential area for improvement in fostering hands-on learning experiences.

Table 4: Factor's Influencing Teacher-Student Mentorship

Statement	Strongly Agree F(%)	Agree F(%)	Neural F(%)	Disagree F(%)	Strongly Disagree F(%)	Mean	Std. Dev.
The teacher's availability and accessibility outside of class affect the quality of mentorship.	87(36.25)	101(42.08)	37(15.42)	12(5.0)	3(1.25)	4.08	0.92
The teacher's teaching style and approach influences the	75(31.25)	121(50.42)	32(13.33)	8(3.33)	4(1.67)	4.06	0.85

Statement	Strongly Agree F(%)	Agree F(%)	Neural F(%)	Disagree F(%)	Strongly Disagree F(%)	Mean	Std. Dev.
effectiveness of mentorship.							
Departmental and faculty support for the mentorship program enhance teacher-student mentorship.	79(32.92)	102(42.5)	47(19.58)	9(3.75)	3(1.25)	4.02	0.90
The student's personality and learning style influence the mentorship experience.	72 (30.0)	117(48.75)	37(15.42)	10(4.17)	4(1.67)	4.01	0.89
University policies and procedures supporting mentorship contribute to its success.	71(29.58)	108(45.0)	49(20.42)	8(3.33)	4(1.67)	3.98	0.90
The students' academic achievement and motivation level impact the mentorship relationship.	68(28.33)	115(47.9)	41(17.08)	12(5.0)	4(1.67)	3.96	0.90
The student's prior experiences and background influence their receptiveness to mentorship.	65(27.08)	112(46.67)	49(20.42)	10(4.17)	4(1.67)	3.93	0.90

Table 4 explores the factors influencing teacher-student mentorship. The mean score of 4.08 for "The teacher's availability and accessibility outside of class affect the quality of mentorship" underscores the crucial role of mentor availability for effective mentorship. A score of 4.06 indicates that students perceive the teacher's teaching style and approach as significantly impacting the mentorship's effectiveness. The mean score of 4.02 for "Departmental and faculty support for the mentorship program" emphasizes that institutional backing is essential for the success of mentorship initiatives. Additionally, a mean score of 4.01 for "Student's personality and learning style influence the mentorship experience" suggests that personal attributes play a significant role in shaping the mentorship relationship. The score of 3.98 indicates that university policies and procedures supporting mentorship are vital for their success, while a mean score of 3.96 shows that students' academic achievement and motivation levels impact the mentorship dynamics. Finally, a mean score of 3.93 for "The student's prior experiences and background influence their receptiveness to mentorship" highlights that individual backgrounds affect how students engage with mentorship. Overall, the results indicate that teacher-student mentorship at FUOYE is generally perceived positively, with effective feedback, approachability, and trust identified as key strengths. However, areas such as program structure and student proactivity in applying knowledge suggest opportunities for further development. These findings underscore the importance of mentorship in enhancing knowledge utilization and academic success among undergraduates.

Discussion of Findings

The findings of this study highlight the critical role of teacher-student mentorship in enhancing knowledge utilization among undergraduate students at the Federal University Oye-Ekiti (FUOYE). The data revealed that a significant proportion of students reported active mentorship relationships, contributing positively to their academic experiences. This aligns with previous research indicating that effective mentorship can significantly impact students' academic performance and personal growth (Shehu, Opele, 2017). The mean scores related to the feedback and guidance provided by teachers suggest that students perceive their mentors as accessible and supportive. A score of 3.75 for "Teachers in FUOYE provide regular feedback and guidance to their students" indicates a strong agreement among students regarding the

importance of constructive feedback in their learning process. This finding supports the work of (Scholz et al., 2023), who emphasized that regular feedback is essential for fostering a positive mentor-mentee relationship and enhancing teaching practices.

Moreover, the results demonstrated that students felt confident in applying the knowledge gained from their courses to real-world problems, with a mean score of 3.71. This reflects the effectiveness of mentorship in bridging theoretical knowledge with practical application, as noted by Lee and Johnson (2018), who found that mentorship fosters critical thinking and problem-solving skills. The ability to transfer knowledge into practical settings is vital for students' academic and professional success (Opele et al., 2024). The study also identified areas for improvement, particularly regarding the structure and effectiveness of the mentorship program, which received the lowest mean score of 3.31 (Paarima et al., 2021). This suggests that while students appreciate the mentorship they receive, there may be shortcomings in the program's organization and implementation. According to (Katowa-Mukwato et al., 2021), well-structured mentorship programs with clear guidelines and support mechanisms are essential for maximizing their effectiveness.

The factors influencing mentorship quality, such as teacher availability and teaching style, were also significant findings. The high mean score of 4.08 for "The teacher's availability and accessibility outside of class affect the quality of mentorship" underscores the importance of mentor engagement beyond formal teaching hours. This is consistent with research by (Ademola et al., 2014), which highlights that accessible faculty members contribute to meaningful mentorship experiences. The findings of this study emphasize the pivotal role of teacher-student mentorship in promoting knowledge utilization among undergraduate students. While students at FUOYE generally perceive their mentorship experiences positively, there is a clear need for improvements in program structure and implementation. Institutions should prioritize the development of comprehensive mentorship programs that cater to diverse student needs and foster a culture of academic support. By investing in these areas, universities can enhance the overall effectiveness of mentorship and support students' academic success and career readiness.

Conclusion

This study has provided an insights into the role of teacher-student mentorship in enhancing knowledge utilization among undergraduate students at the Federal University Oye-Ekiti. The findings indicate that a significant proportion of students engage in active mentorship relationships, which positively influences their academic performance and personal development. Specifically, students reported high levels of confidence in applying knowledge gained from their courses to real-world situations, highlighting the effectiveness of mentorship in bridging the gap between theory and practice. The study also identified several areas for improvement, particularly regarding the structure and implementation of the mentorship program. It was concluded that while students appreciate the support they receive, there is a need for the university to enhance the organization of mentorship initiatives to maximize their effectiveness. This includes ensuring mentor availability and fostering a supportive environment that encourages open communication and collaboration. It was recommended that by investing in comprehensive training for mentors and establishing clearer guidelines for mentorship practices, the university can better support students in their academic journeys. Ultimately, strengthening teacher-student mentorship not only enhances knowledge utilization but also prepares students for successful careers and lifelong learning.

Recommendations

Based on the findings of this research, the following recommendations are suggested:

1. Enhance the program structure to improve the organization and implementation of mentorship programs. Increase mentor availability to ensure that mentors are accessible beyond formal class hours for consistent support.
2. Establish comprehensive training programs for mentors to equip them with necessary skills. Develop clear guidelines and frameworks for mentorship practices to ensure consistency and effectiveness.
3. Foster open communication and collaboration between mentors and mentees. Cater mentorship programs to the diverse needs of students to enhance their academic support.
4. Implement regular feedback mechanisms to assess the effectiveness of mentorship relationships. Encourage students to take proactive steps in seeking mentorship and applying their knowledge in practical settings.
5. Strengthen institutional support for mentorship initiatives to ensure sustainability and success.

References

- Adams, A.B., Opele, J.K., Joseph. C.H., & Ogundele, B.M. (2024). Mother Tongue and Academic Achievement in English Language in Selected Secondary Schools in Ekiti State, Nigeria. *Journal of Education in Black Sea Region*. 10(2)14-22.
<https://jebs.ibsu.edu.ge/jms/index.php/jebs/article/view/324/355>
- Ademola, E. O., Ogundipe, A. T., & Babatunde, W. T. (2014). Students' enrolment into tertiary institutions in Nigeria: The influence of the founder's reputation-a case study. *Computing, Information Systems, Development Informatics & Allied Research Journal*, 5(3), 55–82.
- Bird, L., & Hudson, P. (2015). Investigating a model of mentoring for effective teaching. *Journal of Teaching Effectiveness and Student Achievement*, 2(2), 11–21.
- Funom, B.C. (2021). Sources and Channels of Agricultural Information Used by Soybean Farmers in Niger State, Nigeria. *Journal of Agripreneurship and Sustainable Development*, 4(2), 201–213. <https://doi.org/10.59331/jasd.v4i2.222>
- Gil-Fernández, R., León-Gómez, A., & Calderón-Garrido, D. (2021). Influence of covid on the educational use of social media by students of teaching degrees. *Education in the Knowledge Society*, 22, 1–10. <https://doi.org/10.14201/eks.23623>
- Joseph, O. U., Arikpo, I. M., Victor, O. S., Chidirim, N. E., Mbua, A. P., Ify, U. M., & Diwa, O. B. (2024). Artificial Intelligence (AI) in academic research. A multi-group analysis of students' awareness and perceptions using gender and programme type. *Journal of Applied Learning and Teaching*, 7(1). <https://doi.org/10.37074/jalt.2024.7.1.9>
- Katowa-Mukwato, P., Mwiinga-Kalusopa, V., Chitundu, K., Kanyanta, M., Chanda, D., Mbewe Mwelwa, M., Ruth, W., Mundia, P., & Carrier, J. (2021). Implementing Evidence Based Practice nursing using the PDSA model: Process, lessons and implications. *International Journal of Africa Nursing Sciences*, 14(October 2020), 100261.
<https://doi.org/10.1016/j.ijans.2020.100261>
- Nagbe, T., Yealue, K., Yeabah, T., Rude, J. M., Fallah, M., Skrip, L., Agbo, C., Mouhamoud, N., Okeibunor, J. C., Tuopileyi, R., Talisuna, A., Yahaya, A. A., Rajatonirina, S., Frimpong, J. A., Stephen, M., Hamblion, E., Nyenswah, T., Dahn, B., Gasasira, A., & Fall, I. S. (2019). Integrated disease surveillance and response implementation in Liberia, findings from a data quality audit, 2017. *The Pan African Medical Journal*, 33(Supp 2), 10.
<https://doi.org/10.11604/pamj.suppl.2019.33.2.17608>
- Nurhayati, S., Musa, S., Boriboon, G., Nuraeni, R., & Putri, S. (2021). Community Learning Center Efforts to Improve Information Literacy in the Community for Cyber Crime Prevention during a Pandemic. *Journal of Nonformal Education*, 7(1), 32–38.
<https://doi.org/10.15294/jne.v7i1.26883>
- Okoh, M.O, Okorie, N.C & Opele, J.K . (2024). A survey of secondary school teachers' ICT proficiency on effective online teaching in Ekiti State, Nigeria. *Journal of Applied Information Science and Technology*, 17(1).
- Oladele, H. O., & Opele, J. K. (2022). The perception and attitude of nursing students towards online learning during the Covid-19 lockdown in South West Nigeria. *Knowledge Management & E-Learning: An International Journal*, 14(1), 30–45.
<https://doi.org/10.34105/j.kmel.2022.14.003>
- Opele, J. K. (2022). Inter-professional collaboration and knowledge management practices

- among clinical workforce in Federal Tertiary Hospitals in Nigeria. *Knowledge Management and E-Learning*, 14(3), 329–343. <https://doi.org/10.34105/j.kmel.2022.14.018>
- Opele, J. K., Onayinka, T. S., Fagbami, I. J., & Ugwu, N. F. (2024). Awareness and Use of Infographic Tools among Librarians in Nigeria. *New Review of Academic Librarianship*, 30(1), 52–71. <https://doi.org/10.1080/13614533.2024.2312124>
- Paarima, Y., Kwashie, A. A., & Ofei, A. M. A. (2021). Financial management skills of nurse managers in the Eastern Region of Ghana. *International Journal of Africa Nursing Sciences*, 14, 100269. <https://doi.org/10.1016/j.ijans.2020.100269>
- Scholz, A., Gehres, V., Schrimpf, A., Bleckwenn, M., Deutsch, T., & Geier, A. K. (2023). Long-term mentoring relationships in undergraduate longitudinal general practice tracks—a qualitative study on the perspective of students and general practitioners. *Medical Education Online*, 28(1). <https://doi.org/10.1080/10872981.2022.2149252>
- Seba, I., Rowley, J., & Delbridge, R. (2012). Knowledge sharing in the Dubai Police Force. *Journal of Knowledge Management*. <https://doi.org/10.1108/13673271211198972>
- Shehu, A., Opele, J.K., & O. (2017). Innovation, mentoring and reward system in university libraries in Nigeria. *Middlebelt Journal of Library and Information Science*, 15, 52–63.
- Wang, J., Yang, Y., Li, H., & van Aalst, J. (2021). Continuing to teach in a time of crisis: The Chinese rural educational system’s response and student satisfaction and social and cognitive presence. *British Journal of Educational Technology*, 52(4), 1494–1512. <https://doi.org/10.1111/bjet.13129>