



Evaluating the Learning Experiences of Quantity Surveying Undergraduates in the Built Environment in Selected Tertiary Institutions in Nigeria

Gbemisola Ajoke Akinola* & Mobolaji Oluwadarasimi Adeola

Department of Quantity Surveying, Federal Polytechnic, Ilaro, Ogun State, Nigeria
 gbemisola.akinola@federalpolytechnicilaro.edu.ng; adeolamobolaji72@gmail.com

*Orcid ID: 0009-0003-5272-3921

Abstract

Given the growing emphasis on student-centered learning and quality education, this study examined the learning experiences of built environment undergraduates in Nigerian tertiary institutions, particularly Quantity surveying students, focusing on the quality of learning and its impact on career intentions. Using a quantitative approach, data were collected from 174 final year students (ND II, HND II and 500 level) in the 2024/2025 academic session across 3 polytechnics and 2 universities via an online Google Form questionnaire. The collected data were analyzed using descriptive and inferential statistics in Statistical Package for Social Sciences (SPSS 23). The findings indicated that students' experience in 27 out of 35 factors considered were perceived to be good, while the remaining 8 were fair. The results of the t-test revealed no statistically significant difference in the experience of polytechnics and universities undergraduates for 25 out of 35 factors. The findings further indicated no statistically significant difference in polytechnics and universities undergraduates' willingness to recommend quantity surveying programme to others, their likelihood of choosing quantity surveying as a career after graduation and plans to further education or training in quantity surveying. This research will be helpful for academic staff and tertiary institution management to formulate strategies aimed at improving the quality of learning.

Keywords: Built Environment, Learning Experiences, Quantity Surveying, Tertiary Institutions, Undergraduates

Citation

Akinola, G. A. & Adeola, M. O. (2026). Evaluating the Learning Experiences of Quantity Surveying Undergraduates in the Built Environment in Selected Tertiary Institutions in Nigeria. *International Journal of Women in Technical Education and Employment*, 7(1), 85 – 94.

ARTICLE HISTORY

Received: June 17, 2026

Revised: July 2, 2026

Accepted: July 13, 2026

Introduction

The built environment is undergoing rapid change due to technological advancements and sustainability, necessitating skilled professionals to work at the frontier of new technologies and industrial challenges (Ebekozi et al., 2024). In this regard, tertiary institutions are the connectors between knowledge production and industrial application (Mammadov et al., 2026). There is a strong link between students' learning experience in tertiary institutions and their ability to perform successfully. According to Sa (2023), learning experience goes beyond classroom teachings to

include the totality of academic, social, technological and functional experience that influences students' intellectual and professional development. Lyz et al. (2022) added that administrative, sociocultural aspects of the tertiary institutions' environment, community atmosphere and supporting services of the institution form part of students' learning experience. This has made compulsory the need for tertiary institutions to shift from the traditional teacher-centered learning to student-centered learning that supports engagement, collaboration, creativity and practical competence (Al-Shammari, 2025; Granda-Pinan et al., 2025; Ogunjobi et al., 2025).

Quantity surveyors play a significant role in the built environment, being the professionals responsible for managing finance and contracts throughout the project lifecycle (Yap et al., 2022). Therefore, quantity surveying (QS) undergraduates' education requires a multidisciplinary and experiential learning system that encompasses classroom learning, practical measurement, construction site visits and digital technology application knowledge. Ekundayo et al. (2021) opine that quantity surveying undergraduates need to be prepared for the fragmented and team-based nature of the construction industry, via a collaborative and multidisciplinary learning environment, which will enable students to acquire problem-solving, collaboration, and communication skills necessary for professional practice

In Nigeria, quantity surveying programmes are offered in government and privately owned polytechnics and universities. The programme is regulated by the Quantity Surveyors Registration Board of Nigeria (QSRBN), which is the regulatory body of the Nigerian Institute of Quantity Surveyors (NIQS). Even though the significance of quality learning experiences is becoming globally acknowledged, QS education in many tertiary institutions, especially in developing nations, continues to face several obstacles. Students' learning experiences have been adversely affected by limited infrastructure, congested learning venues, outdated equipment, unstable internet connectivity, inadequate financing, restricted access to digital technologies, archaic curriculum, poor teaching methods, lack of instructors' expertise, and poor industry-academia collaboration, amongst others (Aliu & Dada, 2023; Ibim & Dapiriteye, 2023; John et al., 2025). These deficiencies could lead to graduates being unemployed and having less professional competitiveness in the changing construction sector.

Previous studies on QS undergraduates' learning have been limited to technology adoption (John et al., 2025), curriculum development (Ibim & Dapiriteye, 2023), and academic performance (Akinola & Olagoke-Salami, 2022). Focus on the holistic learning experience of QS undergraduates, encompassing perceptions of their learning

experience, tertiary institution environment, engagement, and readiness for professional practice has been limited. While Yap et al. (2022) investigated QS student learning experiences, the study was based on the perceived significance of the attributes that influence learning and not actually the quality of learning received by the students. Their study is also limited to Malaysia and focused on private higher institutions, thus creating a geographic and population gap in knowledge. As a result, further research is necessary to fully understand QS undergraduates' learning experiences in tertiary institutions in Nigeria.

This study aims to evaluate learning experiences of QS undergraduates in Nigerian tertiary institutions, focusing on the quality of learning and its impact on career intention. By examining these elements, academia and the industry can develop targeted strategies to enhance educational quality, improve student learning outcomes and produce graduates equipped to thrive in a competitive industry. The findings of this study will not only strengthen QS education in Nigeria but also help in developing policies, improving teaching methods, boosting tertiary institution-industry cooperation in QS education, and improving the curriculum. Additionally, it will contribute to the growth of the national construction sector by ensuring a steady production of skilled and competent professionals.

This study is hinged on Experiential Learning Theory (ELT) (Kolb, 1984) and Student Engagement Theory (Kuh, 2009). Kolb's ELT emphasized learning experience in four stages: concrete experience, reflective observation, abstract conceptualization, and active experiment. This theory captures the different learning styles such that no student is left behind. It is particularly relevant to QS education, which requires theoretical and practical knowledge. Theoretical knowledge includes classroom activities and instructions, while practical knowledge involves site experience, industrial training and studio activities. Student engagement theory on the other hand stress that the quality and extent of students' involvement in educational activities and institutional lifestyle has a direct influence on learning, development and long-term success. Students' involvement includes

academic effort, relationships with other students and lecturers, participation in extracurricular activities, and institutional support.

Materials and Methods

This study adopted a positivist, deductive, mono-method quantitative, survey cross-sectional research design as explained in the research onion by Saunders et al. (2023). Quantitative data was gathered via a structured questionnaire, designed using Google Form and administered to quantity surveying undergraduates in selected Polytechnics and Universities offering QS programmes in Nigeria. The questionnaire contains three sections: the first section captures the demographic information of the students, the second section addresses the quality of learning experienced by the students, and the third section addresses the impact the student learning experience has on their career intentions.

A systematic sampling technique was employed to select 3 polytechnics and 2 universities amongst the list of tertiary institutions that have current accreditation with Quantity Surveyors Registration Board of Nigeria (QSRBN) as at the time of this study. The institutions are also accredited by the National Board for Technical Education (NBTE) and the National Universities Commission (NUC), respectively. From the list of institutions that meet the specified criteria, priority was given to leading institutions (names withheld for confidentiality's sake) with good academic records that are government-owned.

Only the final year students were considered as respondents to the survey, that is, 500 level students

in the universities, National Diploma II (ND II) and Higher National Diploma II (HND II) in the polytechnic during the 2024/2025 academic session. A respected lecturer was contacted in the selected institutions to facilitate questionnaire administration. The link to the Google Form questionnaire, with a brief introduction to the questionnaire, was sent to the students' level WhatsApp platform for ease of access. This means of questionnaire administration has been globally adjudged adequate by many researchers, given its high response rate, reliability and internal consistency (Fei et al., 2022; Otero-Batán et al., 2024). The total population of final year students in the selected institutions were 447, that is, 293 (polytechnic) and 154 (universities). Using the Krejcie and Morgan (1970) sample size table, on a prorata basis, a population size of 447 yields a sample size of 207 students.

Descriptive and inferential statistics were used to analyse the data gathered using Statistical Package for the Social Sciences (SPSS) version 22.

Results and Discussion

A total of 174 students responded to the survey, giving a response rate of 84.1% from the sample size of 207 students. This response rate is considered excellent for survey research.

Demographic Information of Respondents

This section presents the demographic profile of the students to contextualize the findings. The analysis was done using frequency and percentage as presented in Table 1.

Table 1: Demographic Information of Respondents

Variable	Category	Frequency (F)	Percentage
Gender	Male	115	66.1
	Female	59	33.9
Age	Below 20	14	8.0
	21-25	130	74.7
	26-30	29	16.7
	Above 30	1	6
	Federal University	61	35.1
Institution	State University	2	1.1
	Federal Polytechnic	91	52.3
	State Polytechnic	20	11.5

Academic Level	500 level	61	35.1
	HND II	40	23.0
	ND II	73	42.0
	Distinction/First Class	9	5.2
Current Academic Standing	Upper Credit/Second Class Upper	73	42.0
	Lower Credit/Second Class Lower	72	41.4
	Third Class	7	4.0
	Pass	13	7.5

Table 1 provides a demographic overview of the 174 respondents. The gender distribution shows a male majority 66.1% (F=115) compared to females 33.9% (F=59), reflecting the male-dominated nature of Quantity Surveying programmes in Nigeria, though female representation suggests growing inclusivity. The age profile is predominantly young, with 74.7% (F=130) aged 21–25, indicating a youthful cohort typical of final-year students. Most respondents are from Federal Polytechnics 52.3% (F=91), followed by Federal Universities 35.1% (F=61), State Polytechnic 11.5% (F=15), and State University 1.1% (F=2). highlighting the dominance of polytechnic education in QS training.

Academic levels show ND II students 42.0% (F=73) as the largest group, followed by 500 Level 35.1% (F=61) and HND II 23.0% (F=40), reflecting a mix of diploma and degree students. Academic standing is strong, with 42.0% (F=73) achieving Upper Credit/Second Class Upper and 5.2% (F=9) at Distinction/First Class, though 41.4% (F=72) are at Lower Credit/Second Class Lower, indicating varied academic performance. This demographic profile suggests a young, polytechnic-focused, and academically diverse sample, providing a specific lens for interpreting their learning experiences.

Quantity Surveying Undergraduates' Learning Experience

To evaluate the quality of QS undergraduates' learning experience in tertiary institutions in Nigeria, students were asked to rate the quality of 35 factors derived from the literature and categorized into 4 on a 5-point Likert scale, where 1= Very poor, 2= Poor, 3= Fair, 4= Good, and 5= Very good as suggested in Bhandari and Nikolopoulou (2023). The 4 categories encompass course-related factors, personal-related factors, lecturer-related factors and institutional-related factors. The responses were analysed using descriptive and inferential statistics. The descriptive statistic involves the mean and ranking of the factors, while inferential statistics involve the T-test to understand if there exists any difference in experience between students in the polytechnic and university. To interpret the mean score of the factors, the midpoint method, where 1.00-1.49 (Very poor), 1.50-2.49 (Poor), 2.50-3.49 (Fair), 3.50-4.49 (Good), and 4.50-5.00 (Very good) was adopted. Construction-related studies such as Akinola et al. (2024), Osuizugbo and Oshodi (2023), Oyedeki et al. (2025), and Shehu and Shehu, (2023) has successfully adopted the midpoint method. The results of these analyses are presented in Table 2.

Based on the mean results of the 35 factors and T-test shown in Table 2, 'relevance of the course content to your future career as a quantity surveyor' has the highest overall ranking (Mean=3.86), closely followed by 'institution's reputation and recognition in the industry (Mean = 3.85), 'family support influence on my academics' (Mean = 3.79), self-motivation to study QS' (Mean = 3.75), and Examination schedule and conduct' (Mean = 3.72). Meanwhile, 'provision and access to internet facility' has the lowest mean and thus ranked 35th (Mean = 3.22), which is below the acceptance threshold of 3.50. There is, however, no significant difference in the experience across university types. Amongst the top 5 factors, only 'institutions reputation and recognition in the industry' has a significant difference across institution types (t-value = 2.507, p = 0.013), suggesting that the polytechnic students do not share the same experience of this factor with the university students. Notably, the top 5 factors cut across course, personal and institutional related factors, leaving out lecturer-related factors. This

result does not agree with the findings of Yap et al. (2025), which state that students place much emphasis on lecturer-related factors than on other factors. This could, however, be a result of geographic differences in the study area.

In the course-related factors category, 4 of the 6 factors were rated good quality, while ‘activity and workshop availability’ (Mean = 3.47) and ‘balance between theoretical and practical knowledge’ (Mean = 3.44) were considered fair by students, indicating the areas requiring attention in the course-related factors. A significant difference was observed for ‘balance between theoretical and practical knowledge’ (t-value = -2.561, $p = 0.011$), indicating a difference in experience by polytechnic and university students. Polytechnic students rated it higher (Mean = 3.59) than university students (Mean 3.17). This could be because right after polytechnic students spend one session in the school, they have the privilege to undergo the Student Industrial Work Experience Scheme (SIWES), and the Higher National Diploma (HND) students must have partaken in Industrial Attachment (IT) before being admitted, unlike the university students who only engage in IT in the second semester of the 400 level. This creates the need to integrate practical experience into the university programme to improve students’ practical experience (Aliu & Aigbavboa, 2018).

All 8 factors (Mean between 3.79 and 3.55) considered under personal-related factors were rated as good quality by the students. These factors encompass family support, self-motivation, group work, living conditions, peer interactions, stress management, study-life balance, and the ability to adapt to different teaching methods. However, a significant difference was observed in ‘collaboration and group work dynamics’ (t-value = 2.623, $p = 0.010$) and ‘impact of peer interactions on learning experience’ (t-value = 3.506, $p = 0.001$). University students recorded a higher mean (3.90; 3.95) than polytechnic students (3.50; 3.44), respectively. This finding signifies a lack of adequate teamwork among polytechnic students. The university students’ collaborative and teamwork experience could be a result of their exposure to group assignments, research projects, and seminar presentations. Given the nature of the construction industry that requires working with several professionals and stakeholders to achieve a common goal, collaborative learning is highly important and should be encouraged in undergraduates (Rahmawati et al., 2022).

Students rated 7 of the 9 factors considered (Mean between 3.68 and 3.51) in the lecturer-related factors category as good quality. These factors cut across topic coverage in the curriculum, fairness and clarity of assessment methods, lecturers’ experience, feedback from lecturers, integration of real-world examples into lectures and lecturers’ availability for guidance. However, ‘support provided by lecturers in understanding complex topics’ (Mean = 3.47) and ‘lecturers’ consideration of students’ differences when teaching’ (Mean = 3.45) were rated as fair based on students’ learning experience. This finding reveals the need for tertiary institution lecturers to improve on delivery methods in teaching complex course content and devise means of teaching different categories of students, despite their learning curve. Notably, students experience differs significantly for ‘fairness and clarity of assignments, exams and project evaluations’ (t-value = -2.013, $p = 0.046$), ‘quality feedbacks and timeliness on assessments from lectures’ (t-value = -2.170, $p = 0.031$), ‘availability and approachability of lecturers for guidance’ (t-value = -2.144, $p = 0.033$), support provided by lecturers in understanding complex topics’ (t-value = -3.184, $p = 0.002$), and ‘lecturers’ consideration of students differences when teaching’ (t-value = -3.474, $p = 0.001$). The polytechnic students recorded a higher mean than the university.

Table 2: Quantity Surveying Undergraduates' Learning Experiences

Category	Factors	Mean	Overall rank	Remark	University Mean	Rank	Polytechnic Mean	Rank	T-test	Sig.
Course Related Factors	Relevance of the course content to your future career as a quantity surveyor	3.86	1	Good	3.92	3	3.82	1	0.657	0.512
	Structure of QS programme and range of courses offered	3.68	6	Good	3.51	20	3.77	3	-1.716	0.088
	Programme flexibility	3.62	13	Good	3.51	20	3.68	9	-1.193	0.234
	Quality of study material	3.61	15	Good	3.60	17	3.62	15	-1.114	0.909
	Activities and workshop availability	3.47	28	Fair	3.32	27	3.55	24	-1.403	0.162
	Balance between theoretical and practical knowledge	3.44	31	Fair	3.17	30	3.59	19	-2.561	0.011*
Personal Related Factors	Family support influence on my academics	3.79	3	Good	3.89	5	3.73	4	0.970	0.333
	Self-motivation to study quantity surveying	3.75	4	Good	3.79	7	3.72	5	0.494	0.622
	Collaboration and group work dynamics	3.65	10	Good	3.90	4	3.50	28	2.623	0.010*
	Living arrangements influence on my academics	3.65	10	Good	3.76	8	3.59	19	1.195	0.234
	Impact of peer interactions on learning experience	3.63	12	Good	3.95	2	3.44	32	3.506	0.001*
	Ability to manage stress and pressure	3.60	17	Good	3.73	10	3.53	25	1.224	0.223
Lecturer Related Factors	Ability to balance academic workload with other responsibilities	3.56	21	Good	3.68	12	3.49	31	1.197	0.233
	Adaptability to different teaching methods	3.55	22	Good	3.60	17	3.51	27	0.554	0.580
	Coverage of the topics in the courses as specified in the curriculum	3.68	6	Good	3.83	6	3.60	17	1.440	0.152
	Fairness and clarity of assignments, exams and project evaluations	3.66	8	Good	3.44	23	3.78	2	-2.013	0.046*
	Lecturers academic and practical experience	3.66	8	Good	3.68	12	3.64	14	0.261	0.795
	Clarity, enthusiasm and expertise of lecturers	3.62	13	Good	3.51	20	3.68	9	-1.096	0.275
Institutional Related Factor	Quality feedbacks and timeliness on assessments from lecturers	3.58	19	Good	3.33	26	3.72	5	-2.170	0.031*
	Integration of real-word examples and industry insights into lectures	3.52	23	Good	3.37	24	3.61	16	-1.410	0.160
	Availability and approachability of lecturers for guidance	3.51	26	Good	3.27	28	3.65	13	-2.144	0.033*
	Support provided by lecturers in understanding complex topics	3.47	28	Fair	3.10	32	3.68	9	-3.184	0.002*
	Lecturers' consideration of students' differences when teaching	3.45	30	Fair	3.06	30	3.67	12	-3.474	0.001*
	Institution's reputation and recognition in the industry	3.85	2	Good	4.11	1	3.70	8	2.507	0.013*
Institutional Related Factor	Examination schedule and conduct	3.72	5	Good	3.75	9	3.71	7	0.231	0.818
	Safety and security services	3.61	15	Good	3.62	15	3.60	17	0.097	0.923
	Opportunities for internships, industrial training and networking	3.60	17	Good	3.67	14	3.56	22	0.627	0.531
	Adequacy of library resources and services	3.58	19	Good	3.62	15	3.56	22	0.381	0.704
	Condition and adequacy of classrooms	3.52	23	Good	3.70	11	3.42	33	1.649	0.101
	Ancillary services	3.52	23	Good	3.57	19	3.50	28	0.474	0.636
	Administrative staff services	3.51	26	Good	3.37	24	3.59	19	-1.402	0.163
	Availability of guidance and counselling services	3.40	32	Fair	3.16	31	3.53	25	-2.170	0.031*
	Provision and accessibility to recreational facilities	3.40	32	Fair	3.21	29	3.50	28	-1.694	0.092
	Provision and adequacy of computer, laboratories and workshop facilities	3.26	34	Fair	3.08	33	3.37	34	-1.708	0.090
	Provision and access to internet facility	3.22	35	Fair	3.02	35	3.33	35	-1.607	0.110

Note: * The mean difference is significant at 0.05 level

students, implying that they have a better experience of these factors.

In the institutional-related category, 12 items were evaluated, out of which 2 occupied the top positions, 3 occupied the middle position, while the remaining 7 occupied the lower positions in the overall ranking. Students' learning experience in 8 of these factors were good, while the remaining 4 factors were considered fair. The factors rated as good are 'institutions' reputation and recognition in the industry' (Mean = 3.85), 'examination schedule and conduct' (Mean = 3.72), 'safety and security services' (Mean = 3.61), 'opportunities for internships, industrial training and networking' (Mean = 3.60), 'adequacy of library resources and services' (Mean = 3.58), 'conditions and adequacy of classrooms' and 'ancillary services' (Mean = 3.52), and 'administrative staff services' (Mean = 3.51). The factors rated as fair are 'availability of guidance and counselling services' and 'provision and accessibility to recreational facilities' (Mean = 3.40), 'provision and adequacy of computer, laboratories and workshop facilities' (Mean = 3.26), and provision and access to internet facility' (Mean = 3.22). The least ranking of computer laboratory and workshop facilities and internet provision is highly concerning, due to the increased reliance of modern QS education on technologies that require these facilities. This inadequacy can limit students'

chances of developing the technology competencies required by the digital construction industry. The study further reveals significant differences in students' experience regarding 'institutions reputation and recognition in the industry' (t-value = 2.507, $p = 0.013$), and 'availability of guidance and counselling services' (t-value = -2.170, $p = 0.031$). The difference in students' experience of institutions' reputation is not surprising, as students generally perceive universities to be higher than polytechnics, thus reflecting why it takes the 1st position in university mean ranking and 8th in polytechnic mean ranking. The difference in experience of guidance and counselling services could be hinged on limited awareness, accessibility challenges, cultural perceptions regarding counselling, or underutilization of available support services within the institution.

Impact of Learning Experience on Career Intention

This study further seeks to evaluate the impact of learning experience on quantity surveying students' career intention. Students were asked to rate the likelihood of the 3 parameters using 1 = Very Unlikely, 2 = Unlikely, 3 = Slightly likely, 4 = Likely, 5 = Very Likely. The result of this analysis is presented in Table 3.

Table 3: Impact of Learning Experience on Career Intention

Variables	Mean	Rank	University Mean	Rank	Polytechnic Mean	Rank	t-test	Sig.
Willingness to recommend the quantity surveying programme to others	3.83	1	4.14	1	3.66	1	3.052	0.003*
Likelihood of choosing quantity surveying as a career after graduation	3.68	2	3.78	2	3.63	2	0.905	0.367
Plans to further education or training in quantity surveying.	3.63	3	3.67	3	3.61	3	0.322	0.748

Note: *The mean difference is significant at 0.05 level

The result in Table 3 shows that QS students generally exhibited positive career intentions since the 3 parameters indicated a mean score above 3.5,

which implies that the learning experience contributes positively to students' commitment toward the QS profession. The overall ranking of the

mean parameters is the same for university and polytechnic rankings. However, there is a significant difference between university and polytechnic students in willingness to recommend the QS programme to others ($t = 3.052$, $p = 0.003$), with university students reporting a higher mean score (4.14) than polytechnic students (3.66). The result of this analysis agrees with Kuh (2009), Lent et al. (1994) and Tinto (1993), who submitted that students that have positive academic, social and supporting learning environment are likely to have strong attachment to the course of study and institution, serve as an advocator to intending students and increased confidence in their professional prowess resulting in strengthened career intentions and commitment to the profession.

Conclusion

The study evaluated the quality of learning experienced by Quantity surveying undergraduates in selected tertiary institutions in Nigeria and the impact of such experience on their career intentions. Results indicated a relatively good quality of experience in 27 factors among 35 factors examined across four categories, giving an overall 77%. The findings suggest that students perceive their learning experience positively, especially in relation to the relevance of curriculum, institutional reputation, family support, self-motivation and examination schedule and conduct.

However, the study reported non-satisfactory experience in workshop availability, balance between theory and practical knowledge, lecturers demystifying complex topics and ability to consider students' level of learning, guidance and counselling services, recreational facilities, adequacy of computers, laboratories and internet facility.

In addition, this evaluation confirms that the learning experience has a direct influence on students' career motive. Students who reported positive learning experiences indicated higher willingness to recommend QS to intending students, continue pursuing QS as a career after graduation, and engage in further education and professional development.

Significant differences were noted between university and polytechnic students in some assessed factors, implying that institutional characteristics determine students' educational experience.

Given these findings, the following recommendations are made:

- Continuous improvement in the QS curriculum to meet industry practices, emerging technologies, and professional competency requirements.
- Tertiary institutions should encourage industrial visits, field work, and project-specific learning to expose students to professional practices.
- Lecturers are to undergo trainings on innovative teaching to improve their lecture deliveries.
- Tertiary institutions are to make provisions for modern facilities that support current quantity surveying technologies and grant accessibilities to these facilities.
- Educational institutions are to improve support services and recreational facilities. Adequate awareness should be provided of students to be informed of such provisions.
- Town and gown collaboration between industry and academia to facilitate mentorship and graduate employment opportunities
- Development of higher institution policy that support polytechnic-university synergies to enable best practices sharing thereby enhancing overall quality of QS education across institutions.

References

- Akinola, G.A., & Olagoke-Salami, S.O. (2022). Academic Performance of Students in the Polytechnic and its Influencing Factors: A gender Based Analysis. *International Journal of Research in Engineering and Science*, 10(9), 566-571.
- Akinola, G.A., Fagbenle, O.I., Ogunde, A.O. (2024). Assessing the Level of Implementation of Cost Reduction Techniques on Educational Building Projects in Public Tertiary Institutions

- in Southwestern Nigeria. *InE3S Web of Conferences* 589, p. 03010. EDP Sciences.
- Aliu, J., Aigbavboa, C. (2018). Upscaling construction education: the role of construction site experiential learning. *In International Conference on Applied Human Factors and Ergonomics*. 472-479. Cham: Springer International Publishing.
- Alli, M. A., & Dada, J. O. (2023). State of university-industry collaboration in quantity surveying profession in Nigeria. *Frontiers in Engineering and Built Environment*, 3(3), 180-191.
- Al-Shammari, M. (2025). *Embracing Student Centered Learning in Higher Education* (Doctoral dissertation, The University of Western Ontario).
- Bhandari, P., Nikolopoulou, K. (2023). *What is a Likert Scale? Guide & Examples*. Scribbr. Retrieved May, 27, 2026, from <https://www.scribbr.com/methodology/likert-scale/>.
- Ebekozien, A., Aigbavboa, C. O., Adekunle, S. A., Aliu, J., & Thwala, W. D. (2024). Training needs of built environment professionals: the role of fourth industrial revolution. *Engineering, construction and architectural management*, 31(11), 4353-4371.
- Ekundayo, D., Shelbourn, M., & Babatunde, S. O. (2021). Collaborative multidisciplinary learning: Quantity surveying students' perspectives. *Industry and Higher Education*, 35(3), 211-222.
- Fei, J., Wolff, J., Hotard, M., Ingham, H., Khanna, S., Lawrence, D., ... & Hainmueller, J. (2022). Automated chat application surveys using WhatsApp: evidence from panel surveys and a mode experiment.
- Granda-Piñán, A. R., Moreno-Rando, M., Vecino-Ramos, S., & Monforte-Chiva, R. (2025). Student-Centred Teaching Competencies in Innovative and Traditional Learning Environments. *Revista Española de Pedagogía*, 83(292), 549-569.
- Ibim, A. A., & Dapiriteye, A. (2023). The Role of Education in Professional Skills Development in Quantity Surveying: Students' Perspective on the Curriculum of Nigerian Tertiary Institutions. *NOLEGEIN Journal of Organizational Behavior Management*, 6(2), 23-35p.
- John, I. B., Owolabi, O., Adekunle, S., & Aigbavboa, C. (2025). Spatial Visualization Skills in Quantity Surveying Education: Students' Perception of 3D Learning Environment. *Journal of Surveying, Construction and Property*, 16(2), 121-136.
- Kolb, D. A. (1984). *Experiential learning: Experience as the source of learning and development*. Englewood Cliffs, NJ: Prentice Hall.
- Krejcie, R. V., & Morgan, D. W. (1970). Determining Sample Size for Research Activities, Educational and Psychological Measurement. *College Station, Durham, North Carolina, USA*.
- Kuh, G.D. (2009). The national survey of student engagement: Conceptual and empirical foundations. *New directions for institutional research*, 141, 5-20 (2009).
- Lent, R.W., Brown, S.D., Hackett, G. (1994). Toward a unifying social cognitive theory of career and academic interest, choice, and performance. *Journal of Vocational Behavior*, 45(1), 79-122.
- Lyz, N. A., Golubeva, E. V., & Istratova, O. N. (2022). Students' educational experience: The conceptualization and development of a tool for the assessment of education quality. *Вопросы образования*, (3 (eng)), 67-98.
- Mammadov, M., Alizade, S., Ibrahimov, A., & Mammadov, N. (2026). Education–technology–economy nexus: Empirical evidence from developing countries. *Porta Universorum*, 2(2), 25-33.

- Ogunjobi, O., Ajimuse, M., Oyegbami, A., Famuwagun, T., Daramola, R., & Ajewole, P. (2025). Innovative Learner-Centred Teaching Method for the 21st Century University Lecturers. *Journal of Innovation in Educational Assessment*, 7(1), 220-239.
- Osuizugbo, I. C., & Oshodi, O. S. (2023). Buildability attributes for improving the practice of construction management in Nigeria. *Built Environment Project and Asset Management*, 13(2), 270-289.
- Otero-Batán, P., Lens-Perol, G., Vázquez-Cancela, O., Salgado-Barreira, A., & Vazquez-Lago, J. M. (2024). Validity and Reliability of a Questionnaire on Attitudes, Knowledge, and Perceptions of Pharmacy Students Regarding the Training Received on Antibiotics and Antimicrobial Resistance during Their University Studies. *Antibiotics*, 13(9), 811.
- Oyedeji, J. O., Oyesomo, C. O., Ogunleye, T. F., & Adedamola, A. W. (2025). Post-occupancy evaluation of public-private partnership delivered housing in Greater Lagos, Nigeria. *Alam Cipta*, 18(2), [Article 5]. <https://doi.org/10.47836/AC.18.2>. Paper 05.
- Rahmawati, Y., Pradipto, E., Mustaffa, Z., Saputra, A., Mohammed, B.S., & Utomo, C. (2022). Enhancing students' competency and learning experience in structural engineering through collaborative building design practices. *Buildings*, 12(4), p.501.
- Sá, M. J. (2023). A multidimensional model of analysis of students' global experience in higher education. *Education Sciences*, 13(3), 232.
- Saunders, M., Lewis, P., Thornhill, A. (2023). Research Methods for Business Students. In Pearson Education Limited (9th ed.), Pearson Higher Ed.
- Shehu, S., & Shehu, R. (2023). Quality performance indicators of building construction projects in Nigeria. *Borneo Journal of Social Sciences & Humanities*, 5(2).
- Tinto, V. (1993). Student persistence through a different lens. *Journal of College Student Retention: Research, Theory & Practice*, 26(4), 959-969.
- Yap, J. B. H., Hew, Q. L. T., & Skitmore, M. (2022). Student learning experiences in higher education: investigating a quantity surveying programme in Malaysia. *Construction Economics and Building*, 22(1), 1-20.