
Bridging the Gap Between Curriculum, Innovative Pedagogy, and Evolving Industry Demands for Future-Ready Graduates

Chukwuka Judith Nkolika

Department of Curriculum and Instructional Technology,
Nwafor Orizu College of Education
Nsugbe.
Email: judithchukwuka70@gmail.com

Abstract The increasing disconnect between academic curricula and industry demands presents a major challenge in preparing graduates for the evolving workforce. This study examines the extent to which tertiary institutions in Anambra State, Nigeria, align their curricula with industry expectations, integrate innovative pedagogical approaches, and foster academia-industry collaboration to enhance graduate employability. A descriptive survey research design was adopted, involving 61 respondents drawn from academic staff, curriculum developers, and industry professionals. Data were collected using a structured questionnaire and analyzed using descriptive and inferential statistical methods, including the Mann-Whitney U test and Spearman's rho correlation analysis. Findings reveal significant gaps between current educational curricula and industry needs, limited integration of employer perspectives, and inadequate practical skill development. While innovative pedagogical approaches were identified as essential for producing industry-ready graduates, their implementation remains inconsistent across institutions. Similarly, academia-industry collaboration, including internship opportunities and research partnerships, was found to be weak, particularly in state institutions. The study pointed out the need for regular curriculum updates, increased technology integration in teaching. It recommends policy reforms, structured internship programs, and investment in skill-based learning as essential strategies for bridging the gap between academic training and labor market expectations.

Keywords: Curriculum alignment, innovative pedagogy, academia-industry collaboration, graduate employability, industry demands.

1. INTRODUCTION

The rapid evolution of industry demands necessitates a responsive and dynamic approach to curriculum design and pedagogy to produce future-ready graduates. Traditional education models, often rigid and theory-driven, may not align with the competencies required in the modern workforce. Thus, integrating innovative pedagogical strategies with curricula that reflect industry trends can enhance graduates' employability and adaptability. Curriculum refers to the structured framework of learning experiences and educational content provided within an academic program (Osagiede & Alordiah, 2024). It encompasses the subjects, courses, teaching methods, assessment techniques, and learning objectives designed to equip students with essential knowledge and skills. A well-designed curriculum aligns with educational standards, societal needs, and industry demands, ensuring that learners gain both theoretical and practical competencies. In contemporary education, curriculum development is an evolving process that incorporates interdisciplinary approaches, technological advancements, and pedagogical innovations to enhance student engagement and career readiness (Köpsén, 2020).

A curriculum that meets industry requirements ensures that graduates possess relevant skills, knowledge, and experiences. Industry-aligned curricula incorporate soft skills, technical proficiency, and emerging technological advancements to prepare students for the labor market (Holloway & Oakes, 2017). For example, many industries increasingly demand digital literacy, problem-solving abilities, and interdisciplinary knowledge. However, a significant gap exists between theoretical knowledge imparted in academic institutions and the practical skills sought by employers (Adebakin & Ayanlowo, 2023). To address this, academic institutions should establish partnerships with industries, seek stakeholder feedback, and incorporate work-integrated learning models (Ogundele, 2022).

Innovative pedagogy refers to modern, dynamic teaching approaches that enhance learning experiences by integrating creativity, technology, and student-centered methods. It moves beyond traditional rote learning to include strategies such as experiential learning, flipped classrooms, problem-based learning, and digital tools

like artificial intelligence and virtual reality. These approaches encourage critical thinking, collaboration, and adaptability, aligning education with evolving industry and societal needs (Aliyu et al, 2023). Innovative pedagogy fosters engagement, personalized learning, and real-world application of knowledge, ensuring students develop essential skills for the future workforce. Innovative pedagogical approaches, such as experiential learning, flipped classrooms, and problem-based learning (PBL), facilitate deeper student engagement and practical skill development. Experiential learning through internships, simulations, and project-based activities helps students apply theoretical knowledge in real-world contexts (Okunade, 2024). Furthermore, flipped classrooms encourage active learning by enabling students to engage with instructional materials before class, allowing classroom time to be dedicated to discussion and hands-on activities (Aghahowa et al, 2023).

Additionally, technology-driven pedagogy, including artificial intelligence (AI), virtual reality (VR), and learning analytics, enhances educational outcomes by personalizing learning experiences and improving student engagement (Akounjom et al, 2024). For instance, AI-powered adaptive learning platforms can tailor instruction to individual student needs, thereby fostering personalized and competency-based education (Osagiede & Alordiah, 2024). Stronger collaborations between academia and industry are essential for reducing the skills gap. Such partnerships provide students with opportunities for apprenticeships, mentorship programs, and real-world problem-solving experiences. Universities that co-develop curricula with industry stakeholders ensure that course content remains updated and relevant. For instance, integrating certifications from industry-recognized bodies within degree programs enhances graduates' marketability (Köpsén, 2020).

Moreover, continuous faculty development programs are necessary to keep educators abreast of evolving industry trends. Professional development through industry immersion, faculty exchange programs, and research collaborations with businesses ensures that educators bring industry-relevant awareness into the classroom (Yadav & Shrawankar, 2025). This holistic approach bridges the divide between academia and the labor market, thereby improving graduate employability.

Despite the benefits of aligning curricula with industry needs and implementing innovative pedagogies, challenges persist. Institutional resistance to change, inadequate funding for technology integration, and limited industry-academia engagement hinder progress (Abbasi et al, 2024). Additionally, the rapid evolution of technological advancements necessitates constant curriculum revisions, which can be difficult to implement at scale.

The motivation for this study stems from the increasing mismatch between higher education curricula and the evolving demands of the modern workforce. Many graduates struggle with employability due to outdated academic content that fails to incorporate industry-relevant skills and competencies (Adewolu-Ogwo, 2024). Traditional pedagogical approaches often emphasize theoretical knowledge over practical applications, leaving students unprepared for real-world challenges. This gap necessitates a reevaluation of curricula and teaching methodologies to align education with current and future labor market needs.

Objectives of the study

1. To examine the extent to which current educational curricula align with evolving industry demands.
2. To assess the effectiveness of innovative pedagogical approaches in preparing students for dynamic workforce requirements.
3. To explore strategies for strengthening collaboration between academia and industry to enhance graduate employability.

Research Questions

1. To what extent does the current educational curriculum align with evolving industry demands?
2. How effective are innovative pedagogical approaches in preparing students for dynamic workforce requirements?
3. What strategies can be adopted to strengthen collaboration between academia and industry to enhance graduate employability?

Hypotheses

1. There is no significant difference between federal and state tertiary institutions in Anambra State regarding the alignment of their curriculum with evolving industry demands.
2. There is no significant difference in the effectiveness of innovative pedagogical approaches in preparing students for the workforce between federal and state tertiary institutions in Anambra State.
3. There is no significant difference in the strategies adopted by federal and state tertiary institutions in Anambra State to enhance collaboration with industry for graduate employability.

2. METHOD

This study adopted a descriptive survey research design to examine the alignment of curriculum with industry demands, the effectiveness of innovative pedagogical approaches, and the extent of academia-industry collaboration in enhancing graduate employability in federal and state tertiary institutions in Anambra State. This research design was chosen because it enables the collection of firsthand data from respondents, offering valuable awareness into how academic programs are structured to meet the evolving needs of the labor market.

The study was conducted in Anambra State, Nigeria, a region recognized for its dynamic educational sector and expanding industrial landscape. Anambra State was selected due to its strategic significance as a hub for tertiary education and economic activities, with several federal and state institutions playing a pivotal role in shaping the future workforce. The state also hosts numerous industries and businesses that absorb graduates from these institutions, making it an ideal location for assessing how well academic programs prepare students for real-world challenges.

The population for this study comprised academic staff, curriculum developers, and industry professionals who are directly involved in the design and implementation of educational programs, as well as those who evaluate the industry readiness of graduates. This diverse group was selected to ensure a well-rounded representation of those influencing curriculum development, pedagogical strategies,

and academia-industry partnerships. Given the need for informed perspectives, a total of 61 respondents were carefully chosen through purposive sampling to ensure that only individuals with relevant expertise contributed to the study. This approach guaranteed that the data collected would be meaningful and directly applicable to the research objectives.

To facilitate data collection, a structured questionnaire was developed as the primary research instrument. The questionnaire was meticulously designed to capture key information on the adequacy of curriculum alignment with industry demands, the effectiveness of pedagogical approaches in preparing students for employment, and the extent of academia-industry collaboration. It included a combination of closed-ended and open-ended questions, allowing for both quantitative analysis and qualitative awareness. This design ensured that respondents could provide not only statistical responses but also detailed explanations where necessary, enriching the study's findings.

The process of data collection involved the distribution of questionnaires through both physical visits and online surveys to ensure broader participation. Respondents were given sufficient time to complete the questionnaire, and where necessary, follow-up visits and calls were made to clarify ambiguous responses and encourage participation. Once collected, the data were analyzed using both descriptive and inferential statistical methods. Descriptive statistics, including mean and percentage distributions, were used to summarize respondents' views on key variables. Additionally, inferential statistical techniques were employed to test the study's hypotheses. The Mann-Whitney U test was used to compare differences in curriculum alignment, pedagogical effectiveness, and academia-industry collaboration between federal and state tertiary institutions, while Spearman's rho correlation analysis was applied to examine the relationships between these variables. The results were systematically presented in tables and charts, ensuring clarity in interpretation and enabling meaningful comparisons.

3. RESULTS

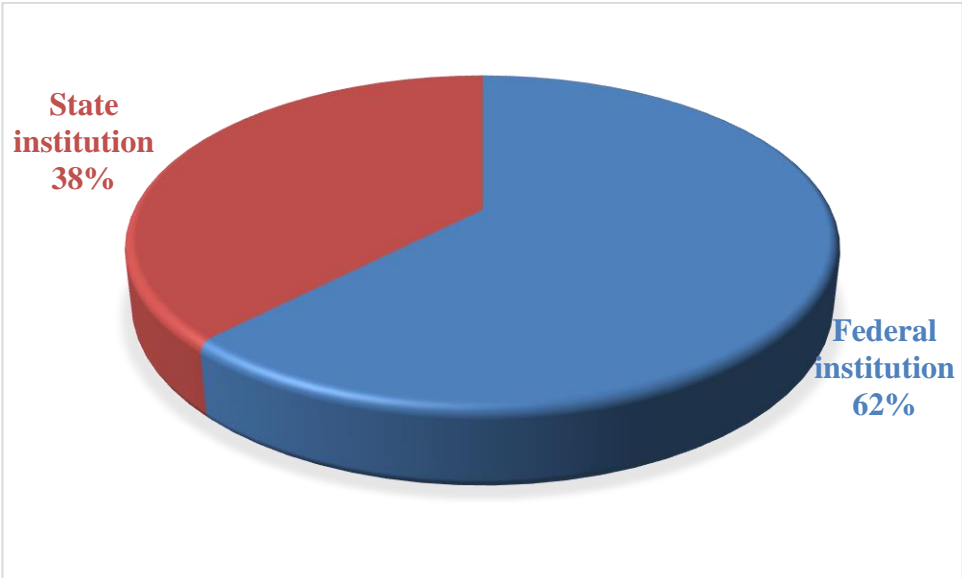


Figure 1: Distribution of Respondents Across Institution Type

The table shows the distribution of respondents by institution type. A majority of the respondents (38, 62.3%) are from federal institutions, while state institutions account for (23, 37.7%) of the sample. This indicates that federal institutions had greater representation in the study. The cumulative percentage reaches 100%, confirming that all respondents were accounted for.

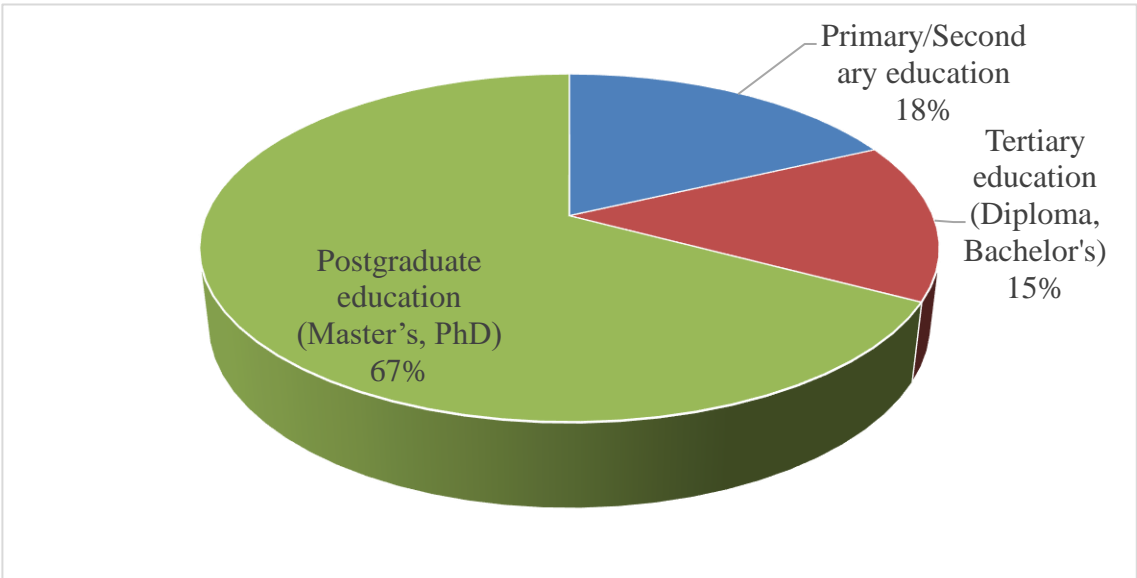


Figure 2: Distribution of Respondents by Educational Level

The table presents the educational levels of respondents. A majority (41, 67.2%) hold postgraduate degrees (Master's or PhD), indicating a highly educated sample. Respondents with tertiary education (Diploma or Bachelor's) constitute (9, 14.8%), while those with primary or secondary education account for (11, 18.0%). The cumulative percentage reaches 100%, confirming all responses were recorded.

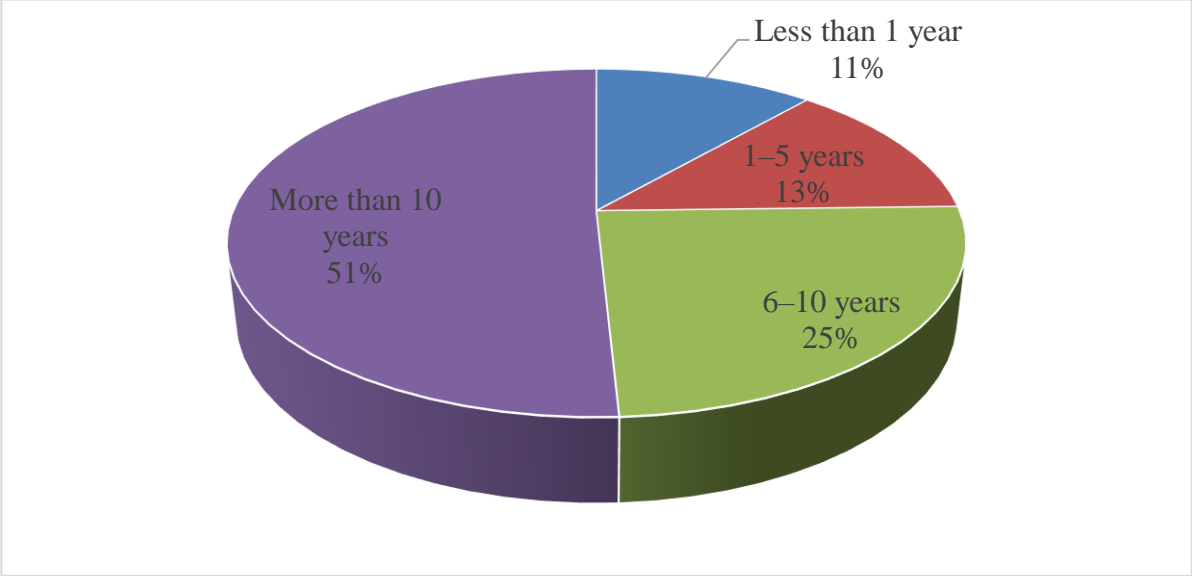


Figure 3: Distribution of Respondents by Years of Teaching/Industry Experience

The table illustrates respondents' years of teaching or industry experience. The largest proportion (31, 50.8%) has more than 10 years of experience, suggesting a highly experienced sample. Those with 6-10 years constitute (15, 24.6%), while (8, 13.1%) have 1-5 years, and (7, 11.5%) have less than a year. The distribution indicates that the majority of respondents have significant professional experience, which may contribute to informed perspectives on curriculum, pedagogy, and industry demands.

Research Question 1: To what extent does the current educational curriculum align with evolving industry demands?

Table 1: Perception of Curriculum Alignment with Industry Demands

		Bootstrap ^a					
		Statistic	Bias	Std. Error	95% Confidence Interval	Lower	Upper
There is no industry N		61	0	0	61	61	
relevance of current Mean		1.75	.00	.16	1.46	2.08	
educational curricula. Std.							
	Deviation	1.260	-.014	.094	1.043	1.402	
There are gaps N		61	0	0	61	61	
between curriculum Mean		3.05	.00	.15	2.74	3.33	
and job market Std.							
needs. Std.							
	Deviation	1.189	-.016	.076	1.002	1.310	
Curriculum is not N		61	0	0	61	61	
regularly updated to Mean		2.72	.00	.16	2.39	3.03	
suit evolving Std.							
	Deviation	1.253	-.014	.058	1.115	1.344	
industry trends. N		61	0	0	61	61	
There exist industry- N		61	0	0	61	61	
driven skills in Mean		2.74	.00	.14	2.44	3.02	
academic programs. Std.							
	Deviation	1.124	-.014	.061	.986	1.223	
Employers' N		61	0	0	61	61	
perspectives are Mean		1.80	.00	.15	1.51	2.13	
integrated in Std.							
	Deviation	1.236	-.014	.084	1.027	1.365	
curriculum for Std.							
adequacy. N		61	0	0	61	61	
Valid N (listwise)		61	0	0	61	61	

a. Unless otherwise noted, bootstrap results are based on 1000 bootstrap samples

The findings in Table 1 reveal mixed perceptions regarding the alignment of the educational curriculum with evolving industry demands. The highest mean score

(3.05) suggests that respondents acknowledge significant gaps between the curriculum and job market needs. The perception that industry-driven skills exist in academic programs (mean = 2.74) and that curricula are not regularly updated (mean = 2.72) further highlight concerns. Conversely, the lowest mean scores indicate skepticism about the industry's relevance in curricula (1.75) and the integration of employers' perspectives (1.80). These results suggest a need for curriculum reforms to better align with industry expectations.

Research Question 2: How effective are innovative pedagogical approaches in preparing students for dynamic workforce requirements?

Table 2: Effectiveness of Innovative Pedagogical Approaches in Workforce Preparation

			Bootstrap ^a				
			Statistic	Bias	Std. Error	95% Interval	Confidence
						Lower	Upper
Modern teaching methods impacts employability.	N		61	0	0	61	61
	Mean		2.85	.00	.15	2.56	3.16
	Std. Deviation		1.223	-.015	.068	1.052	1.331
Pedagogical innovations are important for industry-ready graduates.	N		61	0	0	61	61
	Mean		1.72	.00	.15	1.41	2.03
	Std. Deviation		1.213	-.016	.100	.957	1.365
Technology integration in teaching and learning.	N		61	0	0	61	61
	Mean		2.74	.01	.14	2.44	3.02
	Std. Deviation		1.153	-.013	.069	.991	1.266
Practical skills	N		61	0	0	61	61

development through active learning should be integrated.	Mean	2.87	.00	.16	2.56	3.18
	Std. Deviation	1.271	-.014	.063	1.119	1.368
Student adaptability to workforce changes should be encouraged.	N	61	0	0	61	61
	Mean	2.64	.00	.14	2.34	2.90
	Std. Deviation	1.111	-.014	.064	.969	1.223
Valid N (listwise)	N	61	0	0	61	61

a. Unless otherwise noted, bootstrap results are based on 1000 bootstrap samples

The results in Table 2 indicate varying perceptions regarding the effectiveness of innovative pedagogy in preparing students for workforce demands. The highest mean score (2.87) suggests strong support for integrating practical skills through active learning. Modern teaching methods' impact on employability (mean = 2.85) and the necessity of technology in education (mean = 2.74) further reinforce the need for dynamic teaching strategies. However, the importance of pedagogical innovations for industry-ready graduates scored the lowest (1.72), indicating skepticism.

Research Question 3: What strategies can be adopted to strengthen collaboration between academia and industry to enhance graduate employability?

Table 3: Strategies for Strengthening Academia-Industry Collaboration to Enhance Graduate Employability

		Bootstrap ^a				
		Statistic	Bias	Std. Error	95% Confidence Interval	
					Lower	Upper
Industry partnerships for student skill development.	N	61	0	0	61	61
	Mean	2.98	.00	.16	2.67	3.28
	Std. Deviation	1.245	-.016	.079	1.054	1.364
Internship	N	61	0	0	61	61

opportunities and employability.	Mean	2.90	.00	.15	2.61	3.20
	Std. Deviation	1.207	-.015	.077	1.028	1.330
Academia-industry collaboration in curriculum design.	N	61	0	0	61	61
	Mean	2.98	.00	.16	2.67	3.30
	Std. Deviation	1.258	-.015	.077	1.073	1.376
Research partnerships between universities and industries.	N	61	0	0	61	61
	Mean	2.97	.00	.17	2.62	3.31
	Std. Deviation	1.354	-.014	.068	1.172	1.448
Employer engagement in academic training.	N	61	0	0	61	61
	Mean	1.74	.00	.15	1.44	2.05
	Std. Deviation	1.250	-.015	.097	1.010	1.396
Valid N (listwise)	N	61	0	0	61	61

a. Unless otherwise noted, bootstrap results are based on 1000 bootstrap samples

The findings in Table 3 reveal that industry partnerships for skill development (mean = 2.98) and academia-industry collaboration in curriculum design (mean = 2.98) are among the most strongly supported strategies for enhancing graduate employability. Research partnerships between universities and industries (mean = 2.97) and internship opportunities (mean = 2.90) also received significant support. However, employer engagement in academic training had the lowest mean score (1.74), suggesting weaker adoption.

Table 4: Tests of Normality for Key Study Variables Across Institution Type

	Institution Type	Kolmogorov-Smirnov ^a			Shapiro-Wilk		
		Statistic	df	Sig.	Statistic	df	Sig.
Current educational curriculum alignment with evolving industry demands	Federal institution	.109	38	.200*	.950	38	.088
Effectiveness of innovative pedagogical approaches in preparing students for dynamic workforce requirements	Federal institution	.184	38	.002	.880	38	.001
Strategies to strengthen collaboration between academia and industry to enhance graduate employability	State institution	.187	23	.036	.852	23	.003
	Federal institution	.184	38	.043	.825	23	.001
	State institution	.195	38	.001	.859	38	.000
	State institution	.236	23	.002	.772	23	.000

*. This is a lower bound of the true significance.

a. Lilliefors Significance Correction

The results in Table 4 indicate that for federal institutions, the Shapiro-Wilk test suggests normality for curriculum alignment ($p = .088$) but non-normality for pedagogical effectiveness ($p = .001$) and academia-industry collaboration ($p = .000$). For state institutions, all variables violate normality assumptions ($p < .05$). Similarly, the Kolmogorov-Smirnov test suggests non-normality for most variables, except curriculum alignment in federal institutions ($p = .200$). Given the non-normal distribution of data, non-parametric tests such as the Mann-Whitney U test for group comparisons and Spearman’s rho for correlation analysis are appropriate for hypothesis testing.

Hypothesis 1: There is no significant difference between federal and state tertiary institutions in Anambra State regarding the alignment of their curriculum with evolving industry demands.

Table 5: Ranks for Curriculum Alignment in Federal and State Institutions

Institution Type	N	Mean Rank	Sum of Ranks
Current educational curriculum alignment with evolving industry demands Federal institution	38	28.93	1099.50
State institution	23	34.41	791.50
Total	61		

The **mean rank** for **state institutions (34.41)** in Table 5 is slightly higher than that of **federal institutions (28.93)**, suggesting that state institutions might have a stronger alignment with evolving industry demands. However, statistical testing is required to determine if this difference is significant.

Table 6: Mann-Whitney U Test for Curriculum Alignment

Current educational curriculum alignment with evolving industry demands	
Mann-Whitney U	358.500
Wilcoxon W	1099.500
Z	-1.177
Asymp. Sig. (2-tailed)	.239

a. Grouping Variable: Institution Type

The Mann-Whitney U test results in Table 6 show that the p-value (0.239) > 0.05, indicating no statistically significant difference between federal and state institutions regarding curriculum alignment with industry demands. Since $p = 0.239 > 0.05$, we fail to reject the null hypothesis. This means that there is no significant difference between federal and state tertiary institutions in Anambra State regarding the alignment of their curriculum with evolving industry demands.

Hypothesis 2: There is no significant difference in the effectiveness of innovative pedagogical approaches in preparing students for the workforce between federal and state tertiary institutions in Anambra State.

Table 7: Ranks for Effectiveness of Innovative Pedagogical Approaches

	Institution Type	N	Mean Rank	Sum of Ranks
Effectiveness of innovative pedagogical approaches preparing students for workforce requirements	Federal institution	38	29.13	1107.00
	State institution	23	34.09	784.00
	Total	61		

The mean rank for state institutions (34.09) in Table 7 is higher than that of federal institutions (29.13), indicating that state institutions may perceive innovative pedagogical approaches as slightly more effective in preparing students for the workforce. However, statistical testing is needed to confirm significance.

Table 8: Mann-Whitney U Test for Pedagogical Effectiveness

Effectiveness of innovative pedagogical approaches in preparing students for dynamic workforce requirements	
Mann-Whitney U	366.000
Wilcoxon W	1107.000
Z	-1.071
Asymp. Sig. (2-tailed)	.284

a. Grouping Variable: Institution Type

The p-value (0.284) > 0.05 in Table 8, indicating that the observed difference in mean ranks between federal and state institutions is not statistically significant. Since $p = 0.284 > 0.05$, we fail to reject the null hypothesis. This suggests that there is no significant difference between federal and state tertiary institutions in Anambra State regarding the effectiveness of innovative pedagogical approaches in preparing students for the workforce.

Hypothesis 3: There is no significant difference in the strategies adopted by federal and state tertiary institutions in Anambra State to enhance collaboration with industry for graduate employability.

Table 9: Mann-Whitney U Test for Strategies to Enhance Academia-Industry Collaboration

	Institution Type	N	Mean Rank	Sum of Ranks
Strategies to strengthen	Federal institution	38	28.84	1096.00

collaboration between and enhance employability	State academia institution to Total graduate	23	34.57	795.00
		61		

The **p-value (0.216) > 0.05** in Table 9, meaning the difference in mean ranks between federal and state institutions is **not statistically significant**.

Table 10: Wilcoxon W for Strategies to Enhance Academia-Industry Collaboration

	Strategies to strengthen collaboration between academia and industry to enhance graduate employability
Mann-Whitney U	355.000
Wilcoxon W	1096.000
Z	-1.237
Asymp. Sig. (2-tailed)	.216

a. Grouping Variable: Institution Type

From Table 10, since $p = 0.216 > 0.05$, we fail to reject the null hypothesis. This indicates that there is no significant difference between federal and state tertiary institutions in Anambra State regarding the strategies they adopt to enhance collaboration with industry for graduate employability.

Discussion of Findings

The dynamic nature of today's industries necessitates continuous evolution in educational curricula to ensure graduates are adequately prepared for the workforce. However, several studies have highlighted a misalignment between academic programs and industry demands. For instance, while graduates often possess strong technical skills, employers emphasize the need for enhanced communication abilities and workplace adaptability, highlighting a gap between curriculum content and job market expectations. Similarly, Abbasi et al, (2024) emphasized that higher education curricula in developing countries remain outdated, failing to address the complexities

of an evolving job market. In contrast, some institutions have proactively updated their curricula to bridge these gaps. Yadav and Shrawankar (2025) reported that several universities have incorporated short-term industry-specific certification programs in artificial intelligence and information technology, ensuring graduates acquire relevant skills before entering the workforce. This aligns with research by Köpsén (2020), which found that employer-driven curriculum revisions significantly improved graduate employability outcomes. Employer involvement in curriculum design has also been identified as a critical factor in ensuring relevance. According to Osagiede and Alordiah (2024), industry professionals who participate in curriculum development help maintain academic rigor while ensuring programs align with workforce needs. This collaborative approach ensures that academic content remains responsive to labor market dynamics.

Modern teaching methods have been recognized as essential for improving graduate employability. The research showed that active learning techniques, such as project-based assignments and case studies, significantly enhance students' critical thinking skills, which are crucial for workplace success. This finding agrees with the study by Akounjom et al, (2024), which demonstrated that pedagogical innovations – such as flipped classrooms and experiential learning – help students develop problem-solving skills required in dynamic industries. Technology integration in teaching has further been identified as a crucial element in preparing students for modern workplaces. In a related study, Aghahowa et al, (2023) argued that hybrid and online learning models provide flexibility, catering to diverse learning preferences while ensuring exposure to digital tools commonly used in industries. Similarly, Okunade, A. I. (2024) emphasized that institutions leveraging artificial intelligence and augmented reality in teaching create immersive learning experiences that simulate real-world challenges. Practical skills development through active learning should also be prioritized. According to Aliyu et al, (2023), hands-on learning environments that incorporate real-world problem-solving exercises improve student engagement and better prepare them for workplace challenges. This aligns with the work of

Ogundele (2022), who found that students exposed to practical skill-building workshops were more adaptable to workforce changes compared to those who relied solely on theoretical instruction.

Collaboration between academia and industry plays a vital role in ensuring students gain relevant skills before entering the job market. The study highlighted the importance of industry partnerships in facilitating student skill development, noting that graduates who participated in industry-led training programs exhibited higher employability rates. In contrast, a study by Adebakin and Ayanlowo (2023) found that tertiary institutions with weak industry collaborations faced greater challenges in bridging the skills gap between education and employment. Internships have been identified as a critical strategy for improving employability. Students who engage in structured internship programs demonstrate better workplace readiness than their peers who lack such experiences. This finding is consistent with the work of Adeosun et al, (2022), who emphasized that internship placements provide valuable networking opportunities, improving students' job prospects post-graduation. Collaboration in curriculum design between universities and industries has also been found to enhance graduate preparedness. In a related study, Adewolu-Ogwo (2024) reported that institutions with strong academia-industry ties regularly revise their curricula to align with technological advancements and industry best practices. Employer engagement in academic training enhances student exposure to real-world challenges and practical problem-solving techniques. Moreover, research partnerships between universities and industries play a crucial role in fostering innovation. Accordingly, collaborative research efforts between academic institutions and businesses drive technological advancements, ensuring that academic inquiries remain relevant to societal and industry needs. This was further supported by Holloway and Oakes (2017), who found that industry-funded research projects led to the development of new skills and job opportunities for students.

4. CONCLUSION

The evolving demands of the global workforce necessitate a dynamic and responsive approach to higher education. This study highlights the critical need for curriculum alignment with industry demands, innovative pedagogical approaches, and strengthened academia-industry collaboration to enhance graduate employability. Findings indicate that outdated curricula often fail to equip students with the skills required in modern workplaces, emphasizing the importance of regular curriculum revisions informed by employer perspectives. Additionally, innovative teaching methods—such as technology integration, active learning strategies, and experiential education—play a vital role in preparing students for the complexities of contemporary work environments.

Furthermore, industry partnerships emerge as a key driver of workforce readiness, with internships, research collaborations, and industry-driven curriculum development significantly enhancing student adaptability. The study pointed out that higher education institutions must actively engage with employers to design curricula that reflect real-world challenges and technological advancements. Without such alignment, graduates may struggle to transition effectively into competitive job markets. To bridge these gaps, institutions should adopt a multi-stakeholder approach, fostering continuous dialogue between academia, industry, and policymakers. Future research should explore how emerging technologies, artificial intelligence, and automation influence curriculum development and pedagogical strategies. Ultimately, by integrating industry-relevant skills, pedagogical innovation, and employer partnerships, tertiary institutions can better equip graduates to thrive in a rapidly evolving labor market, ensuring sustainable career opportunities and economic development

BIBLIOGRAPHY

Abbasi, B. N., Wu, Y., & Luo, Z. (2024). Exploring the impact of artificial intelligence on curriculum development in global higher education institutions. *Education and Information Technologies*, 1-35.

- Adebakin, A. B., & Ayanlowo, A. E. (2023). Addressing the challenges of entrepreneurship and innovation in Nigeria: The roles of tertiary education. In *Competitive Advantage, Strategy and Innovation in Africa* (pp. 171-189). Routledge.
- Adeosun, O. T., Shittu, A. I., & Owolabi, T. J. (2022). University internship systems and preparation of young people for world of work in the 4th industrial revolution. *Rajagiri Management Journal*, 16(2), 164-179.
- Adewolu Ogwo, A. (2024). *Higher Education, skills development and students' preparedness for employability: a case study of the University of Lagos, Nigeria (towards a sustained practice approach with the triple helix model of innovation)* (Doctoral dissertation, UCL (University College London)).
- Aghahowa, A., Idiata, D., Asikhia, O., Omoregbe, J., Edoimioya, P., & Osghae, P. (2023). Impact Evaluation of Traditional and Virtual Learning System of Students' Performance: A Case Study of Edo State Institute of Technology and Management, Usen (Edo State Polytechnic). *environments*, 5(6), 7.
- Akounjom, B. J., Babatunde, O., & Aiguoabarueghian, O. M. (2024). The Future Of Vocational Education Trends And Innovations In Blended Teaching Methodologies In Nigeria. *International Journal of Sub-Saharan African Research*, 2(3), 267-277.
- Aliyu, H., Ebikabowei, M., & Kola, A. J. (2023). Problem-based learning in remote learning scenario utilizing climate change virtual reality video in mobile application to train critical thinking. *International Journal of Essential Competencies in Education*, 2(2), 144-159.
- Holloway, E., & Oakes, W. C. (2017, June). Industry Funded Research Impacts on Engineering Faculty's Research Experiences: A Review and Synthesis of the Literature. In *2017 ASEE Annual Conference & Exposition*.
- Köpsén, J. (2020). Demands-based and employer-driven curricula: defining knowledge in higher vocational education and training. *Studies in Continuing Education*, 42(3), 349-364.
- Ogundele, I. S. (2022). *Influence of Teaching Practice and Students Industrial Work Experience Scheme on Business Education Students' Employability Skills*. Kwara State University (Nigeria).

- Okunade, A. I. (2024). The role of artificial intelligence in teaching of science education in secondary schools in Nigeria. *European Journal of Computer Science and Information Technology*, 12(1), 57-67.
- Osagiede, M. A., & Alordiah, C. O. (2024). Cultivating Excellence: A Holistic Framework for Optimizing Student Learning, Curriculum, and Assessment Integration in Agricultural Science Education in Nigeria. *The Educator: A Journal of the School of Education, Moi University*, 4(2), 18-33.
- Yadav, U., & Shrawankar, U. (2025). Artificial Intelligence Across Industries: A Comprehensive Review With a Focus on Education. *AI Applications and Strategies in Teacher Education*, 275-320.