

## **Edupreneurship, Technology, and Quality Assurance in Teacher Training: Al-Hikmah University's Practices and Outcomes**

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### **Abstract**

*This study investigates the impact of edupreneurship on quality assurance, emphasizing the role of technological advancements in teacher training at Al-Hikmah University, Ilorin, Nigeria. Edupreneurship enhances quality assurance by fostering innovation, creativity, and adaptability, promoting new teaching methods and technologies that drive continuous improvement and accountability. This contributes to more effective teacher training and higher educational standards. The study had three main objectives and tested three null hypotheses. A descriptive research design was used, focusing on 875 individuals, comprising 844 education students and 31 lecturers from four departments within the Faculty of Education, with a sample of 110 participants using stratified random sampling technique. Data were collected through a structured questionnaire titled "Relationship between Edupreneurship, Innovative Technology, and Quality Assurance in Teacher Training Questionnaire (REITQATTQ)," with a reliability index of 0.79 (Cronbach Alpha). The questionnaires were personally distributed and collected. Data analysis employed descriptive statistics for research questions and regression analysis to test hypotheses*

*at a 0.05 significance level. The findings revealed a significant positive relationship between edupreneurship and quality assurance, with key drivers being innovation, risk-taking, and creativity. The study concludes that integrating edupreneurship and innovative technology into teacher training programs is vital for improving quality assurance. Recommendations include supporting entrepreneurial initiatives with technology and regularly assessing quality assurance processes to enhance teacher training effectiveness.*

**Keywords:** Innovation Technology, Edupreneurship, Teacher Education, Technology Integration, Teaching Standards

## Introduction

In today's rapidly evolving educational environment, the merging of entrepreneurship with educational innovation has led to the emergence of "edupreneurship." In this model, educators take on entrepreneurial roles to foster positive transformations and tackle new challenges within the education sector (Ghafar, 2020). Edupreneurs adeptly manage the complexities of pedagogical approaches, technological innovations, and business strategies within the education sector to create ventures that greatly enrich the learning experience (Usman, Kess-Momoh, Ibeh, Elufioye, Ilojiana, & Oyeyemi, 2024). Edupreneurship, a portmanteau of education and entrepreneurship, represents a transformative approach within the educational sector. The aim is to bring the innovative mindset and strategic approach of entrepreneurship into education, with the intention of tackling current challenges and opening up new possibilities for both teachers and students (Maruntelu, 2023).

This approach is increasingly relevant in the context of teacher training, where the need for adaptable, innovative, and high-quality education is paramount. Edupreneurship involves the development and implementation of novel educational products, services, and models. These innovations often stem from entrepreneurial thinking, which prioritizes creativity, problem-solving, and efficiency. Edupreneurs, or educational entrepreneurs, leverage these principles to create educational experiences that are engaging, effective, and aligned with the needs of modern society (Suguna, Sreenivasan, Ravi, Devarajan, Suresh, Almazyad, & Mohamed, 2024). In the realm of teacher training, this can manifest as new pedagogical strategies, digital learning tools, and partnerships that enhance the overall quality training experience (Makinde, Ajani & Abdulrahman, 2024).

Quality assurance in teacher training ensures that educational standards are met, and that teachers are adequately prepared to deliver high-quality education. This process involves

systematic evaluation and continuous improvement of teacher training programme, focusing on aspects such as curriculum design, teaching methodologies, and assessment practices (Mukhlisin, Ulfatin, & Muyassaroh, 2024). Effective quality assurance mechanisms are essential for maintaining the credibility and effectiveness of teacher training programme, ensuring that teachers possess the necessary skills and knowledge to succeed in the classroom.

Over the past twenty years, there has been a significant rise in entrepreneurial internationalization, driven by the interdisciplinary nature of international entrepreneurship (IE) studies (Ibeh, Crick, & Etemad, 2019). This area of research connects fields such as international marketing and management, highlighting the influence of technological advancements and the varying pace of the global economy on entrepreneurs' international activities. Technological progress and innovation have played a crucial role in expanding entrepreneurship and providing financial support over the last decade (Odeyemi, Oyewole, Adeoye, Ofodile, Addy, Okoye, & Ololade, 2024; Rasool, 2022). The convergence of technology, innovation, and entrepreneurship has transformed the entrepreneurial landscape, emphasizing the spread of new ideas, disruptive technologies, and stakeholder engagement. The Lebanese entrepreneurial environment offers a distinctive setting for exploring differences in entrepreneurship. While there are billionaires in the country, many Lebanese households live in poverty (Boustani & Hajj, 2023). This inequality shapes individual decisions about starting businesses, influenced by the broader economic conditions. In a developing economy, factors such as market expansion, better access to financing, new business opportunities, and increased confidence can either hinder or encourage the establishment of startups.

Integrating edupreneurship into teacher training involves embedding entrepreneurial principles within the training curriculum and processes. This can include developing and implementing curricula that incorporate entrepreneurial skills and mindsets. This includes problem-solving, critical thinking, creativity, and adaptability (Olatunde-Aiyedun, Ojelade, & Aregbesola, 2024; Nurjaya, Sobarna, Affandi, & Erlangga, 2022). Also, Utilizing resources more effectively, including leveraging technology, forming partnerships with industry, and utilizing innovative teaching methods, and ensuring that teacher training programme are aligned with the needs of the education market, preparing teachers to address contemporary educational challenges and opportunities.

For innovation technology in the African context, particularly Nigeria, the rise of mobile learning platforms, artificial intelligence, and e-learning tools have fostered Edupreneurship. Edupreneurship is essential in promoting innovation in the education sector, as it encourages educators and institutions to develop creative, technology-driven solutions to the challenges of teaching and learning (Adedoyin & Soykan, 2020). In Nigeria, this has led to the establishment of edupreneurial initiatives such as online learning platforms, ICT-based teacher training programs, and ed-tech start-ups.

In teacher education, the integration of innovation technology has become crucial for preparing teachers to meet the demands of 21st-century classrooms. In Nigeria, efforts to enhance technology integration within teacher education programs aim to improve teaching practices and make education more accessible and interactive (Mathew, Abduroof & Gopu, 2021). For instance, incorporating ICT tools in teacher training enables educators to utilize digital resources like mobile apps, online platforms, and interactive whiteboards, making their lessons more dynamic and engaging for today's learners. This technological integration equips teachers with the skills to effectively use digital tools, thereby enhancing their teaching strategies. By doing so, it bridges the gap between traditional methods and modern digital education, ensuring teachers are prepared for the future of learning (Makinde et al., 2024).

Moreover, technology integration in teacher education has a direct impact on teaching standards. In Nigeria and other African countries, national education policies emphasize the importance of developing digital literacy and ICT competencies among teachers to raise the overall quality of education (Ololube et al., 2021). By incorporating technology into teacher training, educators are not only empowered to use innovative tools but are also held to higher teaching standards that prioritize digital competencies. These standards ensure that teachers are capable of providing students with quality education that aligns with the global shift toward digital learning.

Therefore, edupreneurship fosters creativity, problem-solving, and innovation among teachers, allowing them to develop new methods for achieving educational goals. By encouraging teachers to think like entrepreneurs, they are able to meet and exceed teaching standards through the application of technology and innovative pedagogies (Olatunde-Aiyedun et al., 2020). This is particularly relevant in Nigeria, where the need for improved teaching standards is pressing due to the challenges of large class sizes, inadequate resources, and poor teacher training programs.

So, the integration of innovation technology in teacher education supports edupreneurship, allowing educators to develop creative solutions that enhance their teaching practices. This relationship is further reinforced by the need for higher teaching standards, which can be met through effective technology integration. In Nigeria and Africa, this synergy between edupreneurship, technology, and teacher training is critical for transforming the education system and addressing the challenges faced in traditional classrooms.

By fostering a culture of innovation technology and continuous improvement, educational institutions like Al-Hikmah University can set new standards for teacher training and contribute to the overall advancement of the education sector. It is, therefore, against this background that the researchers investigated the relationship between Edupreneurship, innovative technology and Quality Assurance in Teacher Training in Al-Hikmah University, Ilorin, Nigeria.

### **Statement of the Problem**

Integrating technologically driven edupreneurship into teacher training programs has the potential to significantly enhance educational quality and foster classroom innovation. However, the practical application of these concepts, particularly at institutions like Al-Hikmah University in Ilorin, is not thoroughly explored. Despite increasing interest, a major hurdle in the Nigerian context is the **scarcity of resources**. Incorporating technologically driven edupreneurship into teacher training requires significant investments in infrastructure, such as up-to-date ICT facilities, reliable internet access, and modern teaching tools that many Nigerian universities struggle to provide (Mathew et al., 2021). Al-Hikmah University, like many institutions, faces difficulties securing adequate funding to implement these technological solutions, purchase necessary equipment, and provide ongoing professional development for staff. This lack of resources limits the ability to fully implement edupreneurial training programs, as access to technology is critical for fostering innovation and entrepreneurship in education.

Additionally, infrastructural challenges such as erratic power supply and inconsistent internet connectivity further complicate the integration of technology into teacher training. These challenges disproportionately affect rural and underfunded institutions, where even basic educational resources are lacking. This presents a substantial barrier to scaling edupreneurial initiatives across Nigerian universities, leaving many teacher trainees without the necessary tools and exposure to develop entrepreneurial skills effectively (Adedoyin & Soykan, 2020).

Integrating edupreneurship into teacher education at Al-Hikmah University faces significant challenges, primarily due to a lack of professional development programs for faculty. Educators require adequate training to adopt entrepreneurial mindsets and practices; however, limited funding restricts access to essential workshops and training initiatives (Ololube et al., 2021). This gap in training often results in faculty reverting to traditional, teacher-centered pedagogies, which undermines the effectiveness of entrepreneurial content in the curriculum. Furthermore, the conservative culture of education in Nigeria fosters resistance to change among both educators and students, making it difficult to implement innovative teaching methods that align with edupreneurial principles (Olatunde-Aiyedun et al., 2024).

Additionally, the existing quality assurance mechanisms in Nigerian higher education are often inadequate to support the integration of edupreneurship. Effective evaluation tools are essential for measuring the impact of entrepreneurial initiatives on teacher competencies and student outcomes, yet many institutions, including Al-Hikmah University, struggle to establish clear metrics for assessing these programs (Mukhlisin et al., 2024). Broader socio-economic challenges, such as underfunding, political instability, and the emigration of skilled educators, further exacerbate these issues (Mathew et al., 2021). To leverage edupreneurship effectively, comprehensive reforms in curricula, infrastructure investment, faculty training, and quality assurance processes are necessary to foster a more innovative and adaptable education system in Nigeria. By addressing these challenges, Al-Hikmah University and similar institutions can better leverage edupreneurship with innovative technology to improve teacher training programs and contribute to a more innovative education system.

### **Purposes of the Study**

The primary focus of this study is to investigate the relationship between edupreneurship, technology, and quality assurance within the context of teacher training at Al-Hikmah University, Ilorin. The specific objectives are:

1. To evaluate the quality assurance strategies presently utilized in the teacher training program at Al-Hikmah University;
2. To assess the current status of the teacher training program at Al-Hikmah University, particularly in terms of its adherence to quality assurance standards; and

3. To examine how edupreneurial skills and innovative technologies are being incorporated into the quality of teacher training program at the institution.

### **Research Question**

1. What are the quality assurance strategies presently utilized in the teacher training program at Al-Hikmah University?

### **Research Hypotheses**

In line with the research purpose of the study, the following null hypotheses were raised:

**Ho1:** There is no significant relationship between the current state of teacher training programme and quality assurance at Al-Hikmah University, Ilorin.

**Ho2:** There is no significant relationship between the integration of edupreneurial skills with innovative technology and the quality of teacher training programme at Al-Hikmah University, Ilorin.

### **Literature Review**

#### ***Technological Advancements and Edupreneurship in Teacher Training***

The evolvement of technological advancements has reshaped the landscape of entrepreneurship in education. In the context of teacher training, Edupreneurship presents an opportunity to create more dynamic, innovative learning environments. Through the use of digital platforms, e-learning tools, and adaptive learning technologies, teachers are better equipped to meet the diverse needs of modern students. According to Muthmainnah, Al Yakin, Massyat, Lulaj and Bayram (2023), technological integration enhances the quality of teaching methodologies by providing data-driven insights that help educators personalize learning experiences. For example, real-time data analytics can provide continuous feedback on both teacher performance and student engagement, allowing for more timely interventions to improve learning outcomes. Moreover, adaptive learning technologies cater to individual learning styles, promoting a more personalized approach that fosters both teacher and student development (Makinde et al., 2024).

This idea aligns with research by Mukhlisin et al. (2024) who argue that teacher training programs must incorporate entrepreneurial mindsets to remain relevant in the face of technological change. They emphasize the need for educators to be agile, innovative, and capable of leveraging technology not only for their teaching but also for fostering students' creativity and problem-

solving skills. This reflects the global movement toward technology-based entrepreneurship, where innovation and flexibility are essential for success.

### ***The Role of Edupreneurship in Quality Assurance***

Edupreneurship is crucial in promoting quality assurance by driving continuous improvement in teacher training programs. At Al-Hikmah University, the integration of entrepreneurial skills enhances education quality by fostering innovation and adaptability among educators. Research by Williamson (2018), highlights how quality assurance in education is evolving beyond traditional metrics like assessment scores and teacher qualifications. They argue that, to ensure high standards, quality assurance mechanisms must also evaluate a program's ability to integrate technology, foster innovation, and equip teachers with entrepreneurial skills. These skills help teachers think creatively, adapt to new challenges, and design more engaging and effective learning environments.

At the same time, Ubogu (2020) emphasize the need for quality assurance frameworks in Nigeria to include metrics for measuring the impact of edupreneurial initiatives. Such frameworks should assess not only the traditional competencies of teachers but also their ability to innovate and lead in classroom settings. Without these robust evaluation tools, institutions like Al-Hikmah University may struggle to fully assess the effectiveness of their edupreneurial programme.

### ***Edupreneurship and the Future of Teacher Training***

In the broader context of quality assurance and teacher training, edupreneurship offers a transformative approach to developing more innovative and adaptable teachers. As noted by Ubogu (2020), the integration of entrepreneurial practices into teacher training programs ensures that future educators are not only subject-matter experts but also equipped to innovate and lead in rapidly changing educational environments.

At Al-Hikmah University, edupreneurial initiatives, such as digital learning platforms and partnerships with educational technology companies, already reflect this trend. However, for these initiatives to be fully effective, the university needs to develop a comprehensive strategy that addresses resource constraints, aligns stakeholders with the entrepreneurial vision, and incorporates robust quality assurance metrics. Incorporating edupreneurial principles into teacher training is not merely an add-on but a necessity for aligning teacher education with the demands of the 21st century. This transformation will require continuous investment, stakeholder alignment,



and the development of clear, flexible quality assurance frameworks that can measure both traditional educational outcomes and entrepreneurial competencies.

**Table 1: Summary of the key themes on Technological Advancements and Edupreneurship in Teacher Training**

<b>Key Theme</b>	<b>Description</b>	<b>Examples/Insights</b>	<b>Challenges/Recommendations</b>
<b>Technological Advancements</b>	Integration of digital platforms, e-learning tools, and adaptive learning technologies to enhance teacher training and meet diverse student needs.	<ul style="list-style-type: none"> <li>- Real-time data analytics for feedback on teacher performance and student engagement.</li> <li>- Adaptive learning technologies personalize teaching and learning.</li> </ul>	<ul style="list-style-type: none"> <li>- Address resource constraints in underfunded institutions.</li> <li>- Train educators in using advanced tools effectively.</li> </ul>
<b>Edupreneurship in Teacher Training</b>	Fosters innovative, entrepreneurial mindsets among educators to enhance teaching quality and foster creativity in students.	<ul style="list-style-type: none"> <li>- Entrepreneurial skills integrated into programs, promoting adaptability and problem-solving.</li> <li>- Encourages innovation in classroom settings.</li> </ul>	<ul style="list-style-type: none"> <li>- Develop programs that balance subject-matter expertise with entrepreneurial practices.</li> <li>- Align stakeholders with entrepreneurial visions.</li> </ul>
<b>Quality Assurance</b>	Evolving metrics to measure the impact of edupreneurship, integrating technology and innovation into teacher training.	<ul style="list-style-type: none"> <li>- Frameworks to assess innovation, adaptability, and leadership in classrooms.</li> <li>- Ubogu's (2020) metrics for edupreneurial impact in Nigeria.</li> </ul>	<ul style="list-style-type: none"> <li>- Ensure alignment of quality assurance with technology and entrepreneurship.</li> <li>- Include entrepreneurial competencies in teacher evaluation frameworks.</li> </ul>
<b>Global Edupreneurship Trends</b>	Reflects the global movement toward technology-based entrepreneurship, emphasizing agility and innovation for success in education.	<ul style="list-style-type: none"> <li>- Partnerships with EdTech companies at Al-Hikmah University.</li> <li>- Digital platforms supporting flexible, dynamic teacher training.</li> </ul>	<ul style="list-style-type: none"> <li>- Develop a strategy to overcome resource and stakeholder challenges.</li> <li>- Invest in scalable edupreneurial programs.</li> </ul>
<b>Future of Teacher Training</b>	Edupreneurship as a transformative approach to creating innovative	<ul style="list-style-type: none"> <li>- Aligns teacher education with 21st-century demands.</li> <li>- Requires clear</li> </ul>	<ul style="list-style-type: none"> <li>- Continuous investment in technology and resources.</li> <li>- Robust quality assurance that incorporates entrepreneurial</li> </ul>

and adaptable educators.	frameworks for evaluating traditional and entrepreneurial competencies.	skills alongside traditional metrics.
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This table captures the evolution, potential, and challenges of integrating edupreneurship and technological advancements into teacher training. It also highlights key recommendations to address identified gaps.

## Methodology

This study employs a descriptive research design to explore the relationship between edupreneurship with innovative technology and quality assurance in teacher training at Al-Hikmah University, Ilorin. The descriptive research design is chosen because it allows for a comprehensive and systematic examination of the current state of teacher training programme, the integration of edupreneurial skills with innovative technology and the quality assurance mechanisms in place. The population of this study consists of 875 individuals, including students and lecturers from four departments within the Faculty of Education at Al-Hikmah University, Ilorin. From a population of 875 individuals in the Faculty of Education, Al-Hikmah University, a total of 110 participants were selected for the purpose of this study. Stratified random sampling was used to ensure proper representation of both gender and departments. Of the participants, 60 were female and 50 were male, providing a balanced gender perspective. The sample also included participants from four departments, ensuring diverse viewpoints on edupreneurship and quality assurance in teacher training. Specifically, 25 participants (13 females, 12 males) were from Business Education, 30 (15 females, 15 males) from Science Education, 30 (18 females, 12 males) from Arts and Social Sciences Education, and 25 (14 females, 11 males) from Educational Management & Counselling. This method guaranteed proportional representation across the departments, offering a comprehensive view of how these concepts are perceived within the faculty.

The data for this study were obtained through a specially developed questionnaire titled *"Relationship between Edupreneurship, Innovative Technology, and Quality Assurance in Teacher Training Questionnaire" (REITQATTQ)*. This instrument was meticulously crafted to align with the study's objectives, ensuring it effectively gathers detailed insights into the influence of edupreneurial initiatives and technological advancements on quality assurance within teacher training programs at Al-Hikmah University. The reliability of the questionnaire was confirmed

with a Cronbach Alpha value of 0.79, indicating consistency in the responses. Content validity was ensured by developing the questionnaire based on an extensive review of existing literature on edupreneurship, technology, and quality assurance in teacher training. Inputs from experts in the field, including faculty members and educational researchers was sought during the development process to ensure that the items included in the questionnaire accurately reflect the key dimensions of both constructs.

This expert feedback helped refine the instrument, ensuring that it covers all relevant aspects of Edupreneurship, technology and quality assurance in the context of teacher training. The researchers personally distributed and collected all 110 questionnaires from the respondents. This hands-on approach ensured a high response rate and allowed the researchers to address any questions or concerns from participants directly, thereby enhancing the quality of the data collected. The research question raised was answered with simple percentage. For testing the hypotheses, regression analysis was employed at a 0.05 level of significance. Regression analysis is a robust statistical method used to examine the relationship between one or more independent variables and a categorical dependent variable. This analysis method is particularly well-suited to this research, which explores the relationships between variables like the integration of edupreneurial skills, technological advancements, and their impact on quality assurance in teacher training programs. The application of regression analysis in this research provides a robust analytical tool for assessing and enhancing teacher training programs at Al-Hikmah University and comparable educational settings.

## Results

### Demographic Data

The demographic data for this study is categorized by gender as stated below:

**Table 2: Demographic Distribution of Respondents by Sex**

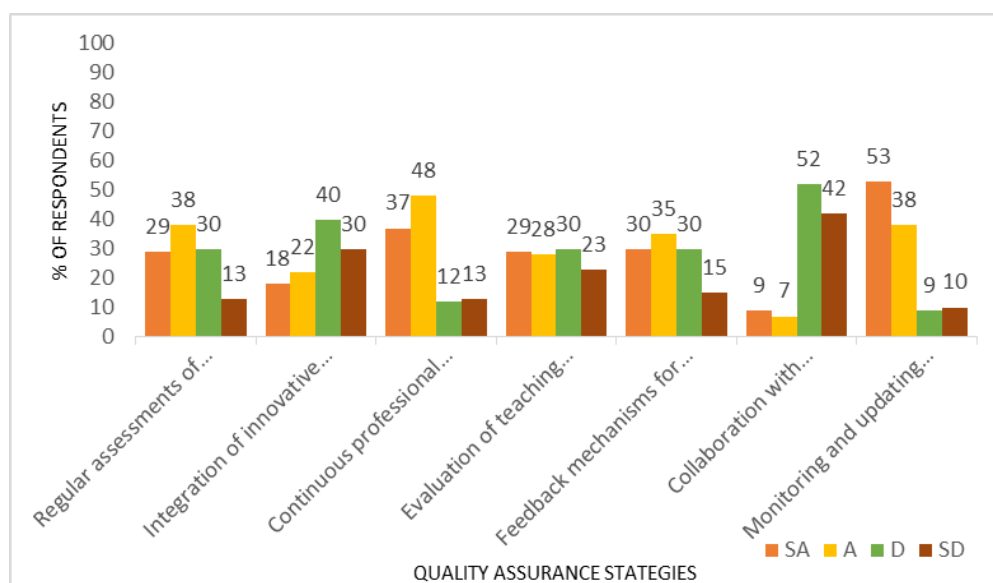
Gender	Lecturers		Students		Total	
	N	%	N	%	N	%
Male	23	2.6%	370	42.3%	393	44.9
Female	08	0.9%	474	54.2%	482	55.1
<b>Total</b>	<b>31</b>	<b>3.5%</b>	<b>844</b>	<b>96.5%</b>	<b>875</b>	<b>100.0%</b>

Source: Field Survey, 2024

Table 2 above presents the distribution of respondents by gender across lecturers and students. Among the 875 participants in the study, 393 (44.9%) are male, and 482 (55.1%) are female. Specifically, within the lecturers' group, which comprises 31 individuals (3.5% of the total population), there are 23 male lecturers (2.6%) and 8 female lecturers (0.9%). In contrast, the student population of 844 (96.5%) includes 370 male students (42.3%) and 474 female students (54.2%). This data highlights a significant predominance of students over lecturers, with female students constituting the majority at 54.2%.

**Research Question:** What are the quality assurance strategies presently utilized in the teacher training program at Al-Hikmah University?

The figure 1 below illustrate the quality assurance strategies presently utilized in the teacher training program and the gap to be filled in Al-Hikmah University as shown from the data collected.



**Figure 1.** Quality assurance strategies in the teacher training program

Figure 1 shows the analysis of quality assurance strategies in the teacher training program at Al-Hikmah University, Ilorin, conducted in 2024, and provides both empirical insights and areas for improvement. Continuous professional development for teachers was a standout strategy, with 37% strongly agreeing (SA) and 48% agreeing (A) on its effectiveness. Similarly, monitoring and updating curriculum content received positive responses, with 53% SA and 38% A, reflecting

strong satisfaction with efforts to keep the curriculum current. Regular assessments of teacher performance and student outcomes received a mixed response, with 29% SA, 38% A, and 30% disagreeing (D), indicating a need for greater consistency. Feedback mechanisms for student evaluation of teaching quality showed a similar trend, with 30% SA, 35% A, and 30% D, suggesting opportunities for improvement. Conversely, significant challenges were evident in integrating innovative technology into teaching, where only 18% SA and 22% A, while 40% D and 20% strongly disagreed (SD). Collaboration with educational technology companies fared the worst, with only 9% SA and 7% A, while 52% D and 32% SD, indicating a pressing need for enhancement in this area. The data underscores that while professional development and curriculum updates are strong points, there is a critical need to address gaps in technological integration and partnerships to improve the overall quality assurance framework.

**Hypothesis One:** There is no statistically significant correlation between the current state of the teacher training program and quality assurance measures at Al-Hikmah University, Ilorin.

The relationship between the current state of the teacher training program and quality assurance at Al-Hikmah University, Ilorin, was analyzed using regression. This method was applied to examine the impact of the independent variable on the dependent variable, as outlined in the null hypothesis. The results are presented in Table 3.

**Table 3: Regression analysis of respondents' views on the relationship between the current state of the teacher training program and quality assurance at Al-Hikmah University, Ilorin.**

Model	B	Std. Error	T	R-Value	R <sup>2</sup> Value	P- Value.
Current State	5.732	.648	8.787			
Quality Assurance	0.053	.015	3.665	.880	.750	<.0001

**Source:** Result of fieldwork, 2024

From the Table 3, the computations indicated an R-value of 0.880 and a p-value below 0.001, demonstrating a statistically significant relationship between the current state of the teacher training program and quality assurance. With the p-value being less than 0.05, the null hypothesis is rejected, confirming the existence of this significant relationship. This finding highlights the critical need to strengthen the structure and implementation of the teacher training program to achieve better quality assurance outcomes.

**Hypothesis Two:** There is no significant relationship between integrating edupreneurial skills and innovative technology and the quality of teacher training at Al-Hikmah University.

**Table 4: Regression Analysis of Respondents opinion on the relationship between the integration of edupreneurial skills with innovative technology and the quality of teacher training programme at Al-Hikmah University, Ilorin**

Model	B	Std. Error	T	R-Value	R <sup>2</sup> Value	P-Value
Edupreneurship Skills with Technology	2.554	1.933	1.337			
Quality of Teacher Training	0.018	.015	1.200	0.088	0.006	0.048

**Source:** Result of fieldwork, 2024

Table 4 showed the summary of the regression analysis revealed an R-value of 0.088 and a p-value of 0.048, indicating a statistically significant but limited impact of integrating edupreneurial skills with innovative technology on the quality of teacher training. The low R<sup>2</sup> value of 0.006 highlights that while these skills play a role in improving training quality, they are not the primary factor. However, the significance of the p-value underscores their importance within a broader strategy for enhancing teacher training programs.

## Discussion of Findings

The analysis of the hypotheses offers valuable insights into the relationship between the current status of the teacher training program, the integration of edupreneurial skills, and quality assurance at Al-Hikmah University, Ilorin. The significant R-value of 0.880 and an R<sup>2</sup> value of 0.75 highlight a strong correlation between the current state of the teacher training program and its quality assurance measures. This implies that well-structured and continuously improved teacher training programs can substantially enhance the quality of education. In the Nigerian context, many universities struggle with underfunded teacher training programme, outdated curricula, and inadequate teaching methodologies. These findings suggest that a concerted effort to revise and improve the structure of teacher training through curriculum updates, modern teaching techniques, and better assessments could address these systemic issues and boost overall educational quality. This is particularly important in Nigeria, where teacher preparation is often cited as a key factor affecting student outcomes (Obanya, 2019). By prioritizing continuous improvements, institutions like Al-Hikmah University can ensure that teacher training aligns with

global best practices, resulting in better-prepared graduates who can contribute to educational reform in Nigeria.

The regression analysis from Hypothesis Two shows that although the integration of edupreneurial skills explains only a small portion (0.6%) of the variance in training quality, the relationship is still statistically significant. This highlights the role that entrepreneurial thinking, combined with technological innovation, can play in modernizing education. In a Nigerian educational landscape where traditional, teacher-centered methods dominate, introducing edupreneurial skills could foster creativity, problem-solving, and adaptability among both teachers and students. However, the relatively low  $R^2$  value also points to the fact that edupreneurial skills should be considered part of a broader, multifaceted strategy to enhance training quality.

In many Nigerian institutions, barriers such as limited funding, inadequate infrastructure, and a lack of professional development opportunities for faculty hinder the effective integration of entrepreneurial education (Odetunde, 2024). Institutions like Al-Hikmah University need to address these logistical and cultural challenges by investing in infrastructure, teacher training, and technological tools that support edupreneurial initiatives. Additionally, university administrators should promote a culture of innovation that encourages faculty to experiment with new teaching methods, and they must develop effective quality assurance mechanisms that can evaluate the impact of these changes.

The broader context of Nigerian education presents significant challenges that are reflected in the findings of this study. Educational quality in Nigeria is often undermined by systemic issues, including inconsistent funding, outdated curricula, and inadequate teacher preparation (Eli-Chukwu, Igbokwe, Ifebude, Nmadu, Iguodala, Uma, Onyeneke, & Akudo, 2023). The findings from Al-Hikmah University illustrate that improving teacher training through the integration of edupreneurship and technology could offer a solution to some of these problems, but only if accompanied by structural changes that address these systemic weaknesses.

Quality assurance mechanisms in Nigerian universities also need to be more flexible to accommodate new, entrepreneurial approaches to teaching. As observed in the study, existing quality assurance frameworks may be too rigid to support dynamic, iterative processes like those required for entrepreneurial education (Larey, Le Roux, & Jacobs, 2024). Universities must develop more adaptive metrics and evaluation tools that can capture the multifaceted impact of edupreneurial initiatives on both teachers and students. Furthermore, success in implementing

these reforms will require strong institutional support, leadership, and strategic vision to overcome resistance from stakeholders who are accustomed to traditional educational models (Olatunde-Aiyedun et al., 2024).

The findings from this study offer important lessons for Nigerian institutions seeking to enhance educational quality through teacher training. By integrating edupreneurship and innovative teaching methods into the curriculum, supported by effective quality assurance mechanisms, universities can better prepare educators to meet the challenges of the 21st century classroom. However, these changes must be accompanied by broader reforms that address systemic issues such as funding, infrastructure, and resistance to change.

## Conclusion

The following major conclusions were drawn from the discussions of the findings:

1. *Current State of Teacher Training and Quality Assurance:* The regression analysis shows a strong correlation ( $R = 0.880$ ) between the current state of the teacher training program and quality assurance at Al-Hikmah University. With an  $R^2$  value of 0.75, it is evident that the teacher training program significantly impacts quality assurance, emphasizing the importance of its structure and execution. This suggests that enhancing the current teacher training program is crucial for improving quality assurance outcomes.
2. *Integration of Edupreneurial Skills with innovative technology and Quality of Training:* The analysis for Hypothesis Two indicates a meaningful but modest relationship ( $R = 0.088$ ) between integrating edupreneurial skills with innovative technology and the quality of the teacher training program. The low  $R^2$  value of 0.006 suggests that while edupreneurial skills with innovative technology contribute to training quality, they are just one of several factors influencing it. This points to the need for a comprehensive approach that includes but is not limited to edupreneurial skills to enhance training quality.

Generally, the findings reject the null hypotheses for both factors, confirming that both the current state of the teacher training program and the integration of edupreneurial skills are significant in influencing quality assurance and training effectiveness. The results align with previous research, which underscores the necessity of robust metrics, institutional support, and a culture of innovation for successful quality assurance in education.



## Recommendations

Drawing from the conclusion that the current state of the teacher training program, along with the integration of edupreneurial skills and innovative technology, significantly influences the quality assurance of the program at Al-Hikmah University, Ilorin, Nigeria, the following recommendations are proposed:

1. **Enhancing Teacher Training Programs for Quality Assurance:** Al-Hikmah University should focus on regularly revising its teacher training curricula to align with contemporary educational standards and practices. Incorporating input from both educators and industry professionals can ensure that the curriculum remains relevant to the evolving demands of the teaching profession, by providing professional development opportunities for educators which is crucial. Faculty members should be encouraged to engage in continuous learning, particularly in innovative pedagogies, to avoid falling back on traditional methods. Also, the university can establish internal quality assurance committees that routinely monitor and assess the effectiveness of teacher training programs using well-defined metrics. These committees could track progress, highlight areas for improvement, and provide recommendations for continual enhancement.
2. **Effectively Integrating Edupreneurial Skills with Innovative Technology:** To overcome faculty resistance, Al-Hikmah University could offer workshops and training sessions that educate faculty on the benefits and methods of integrating edupreneurial skills into their teaching. Ensuring buy-in from the faculty is key, and this could be achieved by offering incentives such as research grants or professional recognition for innovative teaching practices. Similarly, leveraging partnerships with tech companies and industry leaders could help the university gain access to necessary technology and resources to support edupreneurship in the classroom. These partnerships can also provide students with real-world insights into entrepreneurial ventures. Also, addressing funding challenges is essential. The university can seek government grants, private-sector sponsorships, and alumni contributions specifically aimed at supporting technological advancements and entrepreneurial initiatives within the education faculty.
3. **Comprehensive Quality Assurance Strategy:** The university should develop a holistic strategy that includes both the enhancement of teacher training programmes and the integration of entrepreneurial skills and technology. This strategy should be flexible and

adaptable to the dynamic nature of education, allowing for iterative improvements based on regular assessments. Institutional support in the form of leadership buy-in, clear communication of goals, and strategic direction will be pivotal in fostering a culture of innovation. This support can help mitigate resistance to change and ensure that entrepreneurial and technological advancements are embraced by all stakeholders.

4. **Measurement and Accountability:** Al-Hikmah University needs to establish robust metrics to evaluate the effectiveness of edupreneurial initiatives. These metrics should focus on the development of teacher competencies, student learning outcomes, and the overall impact on educational quality. Ensuring accountability in the execution of these programs is critical. Regular reports and evaluations can be shared with stakeholders, including government bodies, to show progress and secure ongoing support. By addressing these recommendations, Al-Hikmah University could more effectively integrate edupreneurship and innovative technology into its teacher training programs, thereby improving quality assurance and enhancing the overall effectiveness of its educational offerings.

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