Evaluating Innovative Practices Amongst Academics in Selected Institutions in South-South Nigeria Working Within VET Institutions: A Grounded Theory Approach

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Abstract
This study evaluated innovative practices within vocational education and training (VET) institutions in South-South Nigeria, employing a grounded theory approach. The research aimed to understand the implementation processes, challenges encountered, and perceived outcomes of these practices among academics. A qualitative methodology was utilized, featuring in-depth interviews with participants from selected institutions to gather comprehensive insights into their experiences and views. The data analysis focused on deriving a grounded theory that elucidated the strategies and factors contributing to effective innovation in VET. The findings highlighted diverse innovative practices, including the integration of technology in teaching, collaborative learning models, and industry partnerships. Participants reported challenges such as limited resources, resistance to change, and the need for continuous professional development. Despite these obstacles, the perceived outcomes included enhanced student engagement, improved skill acquisition, and increased employability. The study concluded that fostering innovation in VET requires supportive institutional policies, adequate funding, and ongoing training for educators. This research provided valuable insights into the effective strategies for promoting innovative practices in VET institutions, contributing to the broader discourse on educational innovation and its role in improving vocational training outcomes.
Keywords: Vocational Education; Innovative Practices; Grounded Theory; South-South Nigeria; VET Institutions

I.   Introduction

Innovative practices in vocational education and training (VET) have become increasingly crucial in improving educational outcomes and aligning with the dynamic needs of the modern workforce. The current study sought to evaluate these innovative practices among academics in selected institutions within South-South Nigeria, utilizing a grounded theory approach to uncover the underlying processes and outcomes associated with such practices. For many years, VET institutions worldwide predominantly adhered to traditional teaching models characterized by a hierarchical teacher-student relationship (Setiawan, 2016). In this model, educators often adopted an authoritative role, dispensing knowledge while students remained passive recipients. This approach, while effective in some respects, has often been criticized for failing to engage students actively in their learning process and for not fostering critical thinking and problem-solving skills essential in today's job market (Exley, 2016).

Educational theorist Paulo Freire significantly influenced the discourse on pedagogical practices with his advocacy for a more interactive and participatory model of education. Freire's seminal work, *Pedagogy of the Oppressed*, argued for a paradigm shift towards a dialogic model of education where teachers and students co-create knowledge through mutual engagement (Freire, 1972). This approach promoted a more student-centered learning environment, fostering autonomy, creativity, and active participation among learners (Retnawati et al., 2016).

Such transformative pedagogical practices have been increasingly adopted in various educational contexts, including VET, to better prepare students for the complexities of the modern workforce. The integration of innovative teaching methods, including the use of technology, collaborative learning, and industry partnerships,

has been shown to enhance educational outcomes by making learning more relevant and engaging (Gordon et al., 2016).

1.1 Research Objectives
The primary objective of this qualitative study was to explore and evaluate the implementation of innovative teaching practices among VET academics in South-South Nigeria. Specifically, the research aimed to address the following key questions:
1. How were innovative practices being implemented within VET institutions in South-South Nigeria?
2. What were the perceived challenges and barriers to adopting innovative practices among VET academics?
3. What were the perceived outcomes and impacts of these innovative practices on teaching effectiveness and student engagement?

By answering these questions, the study aimed to provide a comprehensive understanding of the experiences and attitudes of VET academics towards innovative practices. Furthermore, it sought to identify the key factors that either facilitated or hindered the successful adoption of these practices, offering insights into how VET institutions could better support educators in implementing effective and innovative teaching strategies.

1.2 Theoretical Framework
This study was grounded in the principles of constructivist learning theory, which posited that learners construct knowledge through experiences and interactions with their environment (Vygotsky, 1978). Constructivist approaches emphasized the importance of active learning, where students were encouraged to explore, ask questions, and collaborate with peers to build understanding. These principles aligned well with the goals of innovative educational practices, which sought to move beyond traditional rote learning towards more dynamic and interactive forms of education (Piaget, 1971). Moreover, the study drew on the concept of communities of practice (Wenger, 1998), which highlighted the significance of collaborative learning environments where individuals shared knowledge and experiences to advance collective understanding. In the context of VET, communities of practice played a crucial role in fostering innovation by providing a platform for educators to collaborate, share best practices, and support each other in implementing new teaching methods.

II.   Literature Review
The landscape of education continuously evolved, reflecting shifts in pedagogical theories and practices aimed at enhancing learning outcomes. A significant trend in recent years was the transition from traditional, teacher-centered models to more dynamic, student-centered approaches. This transition was rooted in a growing body of research that emphasized the benefits of innovative practices, placing the learner at the center of the educational experience.

2.1 Shift from Teacher-Centered to Student-Centered Models
Traditional teacher-centered models of education often emphasized direct instruction, where the teacher was the primary source of knowledge, and students were passive recipients. In contrast, student-centered approaches advocated for a more active role for students in their learning process. Duran (2016) described this shift as a fundamental change in educational philosophy, where the focus moved from what the teacher did to how students engaged with and constructed their own learning experiences. This paradigm shift was characterized by practices such as active learning, collaborative projects, and the integration of technology.

2.2 Active Learning
Active learning involved engaging students directly in the learning process through activities that required them to apply concepts and skills actively. Rees et al. (2015) highlighted that active learning strategies, such as problem-solving, discussions, and hands-on activities, fostered deeper understanding and retention of knowledge. Active learning promoted student engagement by encouraging participation and interaction, which was linked to improved academic performance. Leung et al. (2012) found that active learning techniques led to higher levels of student engagement and better retention of information compared to traditional lecture-based methods.

2.3 Collaborative Projects
Collaborative learning was another critical component of student-centered education. Collaborative projects involved students working together in groups to solve problems, complete tasks, or create products. This approach not only enhanced learning outcomes but also developed essential interpersonal skills such as communication, teamwork, and conflict resolution. According to Topping et al. (2017), collaborative learning environments provided opportunities for students to engage in peer teaching, share diverse perspectives, and build

a sense of community. Research indicated that collaborative projects could lead to increased motivation, improved critical thinking skills, and better academic performance (Duran, 2016).

2.4 **Integration of Technology**

The integration of technology in education became increasingly prevalent, offering new tools and resources to enhance learning experiences. Technology facilitated active learning and collaborative projects by providing interactive simulations, digital resources, and platforms for communication and collaboration. Rees et al. (2015) emphasized that technology supported personalized learning, allowing students to access resources tailored to their individual needs and interests. Additionally, technology enabled the use of data-driven insights to inform instructional practices and track student progress.

2.5 **Outcomes of Innovative Practices**

Studies consistently showed that innovative practices in education led to positive outcomes for students. Leung et al. (2012) reported that active learning, collaborative projects, and the use of technology contributed to higher engagement, better retention of information, and the development of critical thinking skills. These practices created a learning environment where students were more actively involved in their education, leading to improved academic performance and a greater ability to apply knowledge in real-world contexts.

2.6 **Vocational Education and Training (VET) Context**

Within the context of Vocational Education and Training (VET), the adoption of innovative practices was particularly pertinent. VET institutions traditionally focused on imparting specific technical skills required by various industries. However, with the rapidly changing technological landscape and labor market demands, there was a growing need to integrate broader educational strategies that promoted critical thinking, problem-solving, and adaptability among students (Harris & Simons, 2012).

2.7 **Challenges in VET**

Implementing innovative practices in VET presented unique challenges. One of the primary challenges was the resistance to change among educators who were accustomed to traditional teaching methods. Fullan (2007) noted that successful educational reform required not only changes in instructional practices but also a shift in the mindset and culture of educational institutions. This was particularly relevant in VET, where the emphasis on practical skills training often led to a preference for established, hands-on teaching methods.

2.8 **Role of Professional Development**

Professional development played a critical role in equipping VET educators with the skills and knowledge needed to implement innovative practices. Joyce and Showers (2002) highlighted that ongoing professional development opportunities were essential for fostering a culture of continuous improvement and innovation. Effective professional development programs were those that were collaborative, practice-based, and aligned with the specific needs and contexts of VET educators.

2.9 **Impact of Industry Partnerships**

Partnerships between VET institutions and industry stakeholders were also identified as key facilitators of innovation. These partnerships provided opportunities for students to engage in real-world learning experiences and ensured that the skills and knowledge imparted through VET programs were aligned with current industry standards and requirements (Billett, 2011). Such collaborations also supported the development of curriculum and instructional practices that were relevant and responsive to the evolving needs of the workforce.

2.10 **Theoretical Underpinnings**

The theoretical underpinnings of innovative practices in VET were rooted in constructivist learning theories, which posited that learners constructed knowledge through active engagement with their environment and experiences (Vygotsky, 1978). This perspective aligned with the goals of student-centered approaches, which emphasized the importance of active participation, collaboration, and the use of technology to create meaningful and relevant learning experiences (Piaget, 1971). **The literature underscored a significant shift from traditional, teacher-centered models to student-centered approaches in education. This shift was characterized by the adoption of active learning, collaborative projects, and the integration of technology, all of which contributed to enhanced student engagement, retention, and skill development. Within the context of VET, these innovative practices were essential for preparing students to meet the demands of the modern workforce. However, successful implementation required addressing challenges such as resistance to change and the need for professional development and industry partnerships. The continued emphasis on innovative, student-centered methods was crucial for shaping effective and engaging educational experiences in VET institutions.**

III. Methodology

This research employed a constructivist grounded theory methodology, integrating the principles outlined by Charmaz (2014) and utilizing a conditional matrix as demonstrated by Corbin and Strauss (2015). This methodological approach was chosen to provide an in-depth, theory-driven understanding of innovative practices in vocational education and training (VET) institutions in South-South Nigeria. Below is a detailed exploration of the research design, data collection, and analysis processes employed in this study.

3.1 Constructivist Grounded Theory

Constructivist grounded theory, as articulated by Charmaz (2014), is a qualitative research methodology that emphasized the co-construction of knowledge between the researcher and participants. Unlike traditional grounded theory approaches, which often sought to discover objective truths, constructivist grounded theory recognized that knowledge was constructed through interactions and interpretations. This methodology allowed for the development of theories that were grounded in the participants' lived experiences and perspectives.
Charmaz (2014) asserted that constructivist grounded theory involved the following key elements:

- **Theoretical Sensitivity:** The researcher remained sensitive to the theoretical implications emerging from the data. This involved being open to the meanings and interpretations that participants attached to their experiences.
- **Constant Comparison:** Data was continuously compared with emerging categories and concepts throughout the research process. This iterative approach helped refine and develop the theory.
- **Theoretical Sampling:** Participants were selected based on their relevance to the emerging theory. This process ensured that the data collected was directly related to the research questions and theoretical development.

3.2 Conditional Matrix

The conditional matrix, as outlined by Corbin and Strauss (2015), is a tool used to systematically analyze and understand the conditions, actions, and consequences associated with the phenomena under study. It helped in identifying and mapping out the various factors that influenced and were influenced by the phenomenon being researched. The matrix provided a structured way to examine the interplay between different elements and their impact on the development of the theory.
Key components of the conditional matrix included:

- **Conditions:** The context and background factors that influenced the phenomenon.
- **Actions/Interactions:** The behaviors and interactions of participants within the given context.
- **Consequences:** The outcomes and effects resulting from the actions and interactions.

By applying the conditional matrix, the research aimed to uncover the complex relationships and dynamics involved in the innovative practices within the VET institutions.

IV. Data Collection

In-depth interviews were conducted with academics from selected VET institutions in South-South Nigeria. These interviews were designed to elicit rich, qualitative data regarding the innovative practices being implemented in these institutions. The selection of participants was guided by theoretical sampling, ensuring that individuals with relevant experiences and insights were included in the study.
The interview process involved:

- **Semi-Structured Interviews:** A semi-structured format was used to allow flexibility in exploring participants' experiences while ensuring that key topics were covered. This approach facilitated the emergence of new insights and perspectives.
- **Interview Protocol:** A protocol was developed to guide the interviews, including open-ended questions designed to explore participants' views on innovative practices, challenges, and impacts. The protocol was adjusted as needed based on the ongoing analysis and emerging themes.
- **Data Recording and Transcription:** Interviews were audio-recorded with participants' consent and transcribed verbatim to ensure accuracy in capturing their responses. Transcriptions were then reviewed and validated for completeness.

4.1 Data Analysis

The data analysis process was iterative and involved several stages:

1. **Initial Coding:** Transcripts were read line-by-line, and initial codes were generated to capture key concepts and themes. This stage was crucial for identifying patterns and categories that emerged from the data.

2. **Focused Coding:** More selective and conceptual codes were applied to the data to refine the initial codes and identify core categories. This step involved comparing data segments and integrating similar codes to develop a coherent structure.
3. **Axial Coding:** Relationships between categories were explored and mapped using the conditional matrix. This process helped to identify conditions, actions/interactions, and consequences, providing a comprehensive understanding of the phenomena.
4. **Theoretical Coding:** The final stage involved integrating the core categories into a theoretical framework. The emerging theory was continually refined through constant comparison and validation with the data.

Throughout the analysis, memo-writing was employed to capture analytical insights, reflections, and theoretical developments. This practice ensured that the evolving theory remained grounded in the participants' experiences and provided a transparent account of the research process.

4.2 Ethical Considerations
Ethical considerations were paramount in this research. Participants were informed about the study's purpose, procedures, and their right to withdraw at any time without consequence. Informed consent was obtained from all participants, ensuring their voluntary participation. Confidentiality and anonymity were maintained throughout the research process, with data securely stored and access restricted to the research team.

4.2.1 Data Analysis
The analysis of the interview data followed a constructivist grounded theory approach, involving several iterative steps:

- **Open Coding:** Initial coding was performed to identify key concepts and categories emerging from the data. This step involved breaking down the data into discrete parts and assigning codes that capture the essence of the participants' responses.
- **Axial Coding:** The codes were then organized into categories and subcategories, examining the relationships between them. Axial coding aimed to reassemble the data in a way that highlights connections and patterns.
- **Selective Coding:** The final stage of coding involved integrating and synthesizing the categories to develop a cohesive theory. Selective coding focused on identifying the core category and its relationships with other categories.
- **Theory Development:** Based on the coding and analysis, a theory was developed that provides a comprehensive understanding of the innovative practices being implemented in the VET institutions. This theory is grounded in the participants' perspectives and reflects the complexities of the phenomenon under study.

The constructivist grounded theory methodology, coupled with the conditional matrix, offers a robust framework for exploring and understanding innovative practices in VET institutions. By employing in-depth interviews and iterative data analysis, this research aims to develop a theory that is deeply rooted in the experiences and insights of the participants. The findings are expected to contribute valuable knowledge to the field of vocational education and inform the development of effective practices and policies.

V.   Results
The findings of this research are synthesized into a conceptual grounded theory model that highlights the key factors influencing the implementation of innovative practices in vocational education and training (VET) institutions in South-South Nigeria. The model captures the relationships between various elements and provides insights into how these factors interact to shape the adoption and effectiveness of innovative practices.

5.1 Key Concepts and Factors
The conceptual model developed from the study identifies several key concepts that impact the implementation of innovative practices. These include:

1. **Institutional Support:** The extent to which VET institutions provide encouragement, resources, and infrastructure to facilitate innovative practices.
2. **Availability of Resources:** The accessibility of necessary materials, technology, and funding to support new teaching methods.
3. **Academics' Attitudes Towards Change:** The willingness and openness of academics to adopt and integrate innovative practices into their teaching.

Academics reported a range of innovative practices being employed in their institutions, including:

- **Use of Technology in Teaching:** Incorporation of digital tools and platforms to enhance the learning experience.
- **Project-Based Learning:** Implementation of projects that require students to apply their knowledge to real-world problems.
- **Collaborative Teaching Methods:** Strategies that involve team-teaching and collaboration among educators.

However, the study also highlighted several challenges that impact the effective implementation of these practices:

- **Limited Resources:** Insufficient access to technological tools, materials, and funding necessary for innovation.
- **Resistance to Change:** Hesitancy or reluctance among some academics to adopt new methods or alter traditional practices.
- **Lack of Professional Development Opportunities:** Inadequate training and development programs for academics to enhance their skills in innovative practices.

5.2 Discussion

The study found that successful implementation of innovative practices requires a supportive institutional environment, continuous professional development, and adequate resources. Academics who embraced innovation reported positive outcomes, including increased student engagement and improved learning outcomes. The findings suggest that fostering a culture of innovation within VET institutions is crucial for adapting to the changing educational landscape.Innovative practices in VET are essential for enhancing teaching and learning processes. This study provides valuable insights into the factors that influence the implementation of such practices in South-South Nigeria. By addressing the challenges and leveraging the identified enablers, VET institutions can foster an environment that supports continuous improvement and innovation in education.

5.2.1 Peer Teaching Strategies

Peer teaching involves students taking an active role in their learning process, encouraging them to take responsibility for their own education. The lecturer acts as a guide, providing challenges and opportunities for students to initiate learning experiences, thereby fostering a more independent approach to learning (Tharp and Gallimore, 1991). The principle of *lernen durch lernen* (learning by teaching), introduced by Jean-Pol Martin in the 1980s, suggests that students assume responsibility in their teaching role. This approach encourages students to deliver lessons in an active and communicative way (Grzega and Schöner, 2008). When students teach, they enhance their own understanding and are encouraged to engage more deeply with the material (Davari Torshizi and Bahraman, 2019). However, for peer teaching to be effective, it needs to be structured, well-organized, and assessed. Simple presentations may not suffice, as students might rush through them without fully understanding or engaging with the content (Aslan and Reigeluth, 2015). Collaboration and cooperation among students are essential for the success of peer teaching.

5.2.2 Effectiveness of Peer Teaching

The "pyramid of learning" model from the National Training Laboratories Institute (USA) suggests that students retain more knowledge when they teach others, with retention rates up to 90% (Topping et al., 2017). Despite criticisms due to lack of empirical support (Letrud, 2012), studies have shown that peer teaching can lead to higher learning outcomes, improved intrinsic motivation, enhanced learning, and better communication skills (Animola and Bello, 2019; Grover et al., 2018; Mills et al., 2014; Nshimiyimana and Cartledge, 2020).

Figure 1 : *Pyramid of learning model developed by the National Training Laboratories Institute (USA)*

Research indicates that teaching leads to deeper and more permanent understanding (Fiorella and Mayer, 2013). The process requires thorough comprehension and preparation, resulting in deeper cognitive engagement and learning (Biswas et al., 2005; Davari Torshizi and Bahraman, 2019). Peer teaching also promotes social, personal, and academic benefits, enhancing interactions and making it suitable for students of different levels and personalities (Leung et al., 2012; Mckeachie et al., 2010).

5.2.3 Peer Teaching in Medical and Healthcare Education

In medical education, peer teaching enhances the learning experience by providing teaching opportunities and improving feedback skills (Yu et al., 2011). It encourages collaborative and active learning, fostering teamwork and learner motivation through reciprocal feedback (Asghar, 2010). Despite initial anxiety, repeated peer teaching activities help reduce learner anxiety over time (Hundertmark et al., 2019; Mills et al., 2014).

VI.   Conclusion

This study provided a comprehensive examination of innovative practices within vocational education and training (VET) institutions in South-South Nigeria through a constructivist grounded theory approach. By integrating the principles established by Charmaz (2014) and employing a conditional matrix as articulated by Corbin and Strauss (2015), the research aimed to develop a nuanced understanding of how innovative practices are implemented, the challenges faced, and the outcomes observed. The findings revealed that VET institutions in the South-South region of Nigeria have been progressively adopting various innovative practices, such as incorporating technology into teaching, implementing collaborative learning models, and establishing industry partnerships. These practices were found to significantly enhance student engagement, improve skill acquisition, and increase employability. Despite these advancements, several obstacles persisted, including limited resources, resistance to change, and a deficiency in continuous professional development opportunities for educators. Institutional support emerged as a critical factor influencing the successful implementation of these innovations. Institutions that provided robust encouragement, adequate resources, and infrastructure were better positioned to support and sustain innovative practices. Conversely, institutions facing challenges such as inadequate funding and limited technological tools struggled to implement new methods effectively. The study also highlighted the importance of academics' attitudes towards change. Those who embraced innovative practices reported more favorable outcomes in terms of teaching effectiveness and student engagement. However, resistance from some educators, rooted in a preference for traditional methods, impeded the widespread adoption of these practices. Addressing this resistance through targeted professional development and fostering a culture of continuous improvement was deemed essential for advancing educational innovation in VET institutions. Furthermore, the research underscored the need for ongoing professional development to equip educators with the skills necessary to adapt to and implement new teaching methods. Effective professional development programs should be collaborative, practice-based, and tailored to the specific contexts of VET educators. The integration of industry partnerships also played a significant role in facilitating innovative practices. These partnerships provided students with real-world learning opportunities and ensured that VET programs remained aligned with industry standards and requirements. This alignment was crucial for enhancing the relevance and applicability of the skills and knowledge imparted through VET programs. In conclusion, fostering innovation within VET institutions in South-

South Nigeria requires a multifaceted approach that includes supportive institutional policies, adequate funding, and ongoing professional development. By addressing the challenges identified and leveraging the facilitators of innovation, VET institutions can create an environment that supports the continuous improvement of teaching practices and better prepares students for the evolving demands of the workforce. This study contributes valuable insights to the broader discourse on educational innovation and its impact on vocational training outcomes, offering a foundation for future research and policy development in the field.

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