Determinants of Entrepreneurial Mindset in Education: Technology and Economic Constraints among 21st Century Teachers

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Abstract

Edupreneurship is transforming the educational landscape with innovative methods to tackle present demands. Implementing these novel approaches effectively rectifies the limitations of conventional teaching methods. This study investigates the factors affecting the development of an entrepreneurial mindset in the context of education, particularly by analyzing the impact of technological advances and economic constraints on methods of teaching in the 21st century. The study employed a qualitative method of inquiry, including semi-structured interviews with educators and edupreneurs from colleges of education, universities, and public secondary schools in Gwagwalada, Federal Capital Territory (FCT) of Nigeria. This offers a comprehensive understanding of how educators incorporate technological tools to tackle economic difficulties and foster entrepreneurial mindsets in their institutions. The specific attention given to Gwagwalada, FCT, provides a distinct viewpoint on the socio-economic and technological aspects that impact edupreneurship in a developing country. By conducting a comprehensive interview, data was collected that revealed key elements that influence the formation of an entrepreneurial mindset in the education domain. These factors include the availability of digital resources, support from educational institutions, and the ability to innovate even in the face of economic limitations. The results indicate that technology plays a significant role in encouraging edupreneurship, it is thus necessary to tackle economic obstacles and fully utilize technological capabilities. This study makes significant contributions to the current reservoir of knowledge on edupreneurship and gives vital insights for educators, policymakers, and entrepreneurs who are interested in leveraging technology to bring about educational transformation.

Keywords: Edupreneurship, Entrepreneurial Mindset, Technology Integration, Economic Constraints, Teacher Development

Introduction

The 21st century's rapid technological advancements have fundamentally transformed economies and education. In an increasingly digital and interconnected world, education must evolve beyond knowledge transmission to cultivate the skills needed for navigating a complex, technology-driven society (SWARGIARY, 2024). Educators need expertise in their fields, proficiency in technology integration, and the ability to foster an entrepreneurial mindset among students.

Edupreneurship, the integration of educational methods with entrepreneurial principles, has become a vital skill for contemporary educators (Serdyukov, 2017). The Entrepreneurial Mindset Theory (EMT) in education refers to the development of skills, attitudes, and behaviors that enable individuals to navigate uncertainty, take calculated risks, and create value in various contexts. This mindset is not limited to business or entrepreneurship but can be applied to all areas of life. By equipping educators with creativity (Hayati, et al., 2024; Ho et al., 2024), innovation, and business acumen, educational systems can better prepare students for the complexities of modern economies (Rafiq et al., 2024).

This study seeks to identify the economic pressures faced by educators, the complex interaction between these technological and economic factors in Gwagwalada FCT, and how they collectively influence the mindset of educators. By doing so, it will provide valuable insights into the conditions under which an edupreneurial mindset can thrive in the FCT and beyond. Furthermore, the study intends to bridge the gap in the existing literature by offering a detailed analysis of how educators can cultivate and sustain an edupreneurial mindset despite the challenges posed by technological and economic factors. This research will also contribute to the development of practical strategies and interventions that can empower educators to navigate these challenges successfully. This research addresses a critical gap in the existing literature by exploring the dual impact of technology and economic constraints on the development of an edupreneurial mindset among educators. Previous studies have often examined these factors in isolation, focusing either on the role of technology in education or on the economic challenges faced by educators. However, few studies have considered how these factors interact to influence educators' entrepreneurial capabilities (Al-Nsour & Ali, 2024).

By providing a comprehensive analysis of these interactions, this study offers a new theoretical framework for understanding the determinants of edupreneurial mindset development. This framework will be valuable for future research in educational entrepreneurship, as it highlights the importance of considering both technological and economic contexts when examining the factors that drive innovation and entrepreneurship in education. Policymakers can use the insights gained from this research to create more supportive environments for edupreneurship by addressing the technological and economic barriers that educators face. (Hayati, et al., 2024).

By understanding the specific technologies and economic conditions that foster an edupreneurial mindset, curriculum designers can create programs that equip educators with the skills and knowledge needed to innovate and lead in their fields. This could include incorporating entrepreneurial principles into teacher training programs, offering courses on the use of technology for innovation in education, and providing opportunities for educators to engage in entrepreneurial activities within their institutions. (Ho et al., 2024). The findings of this study have the potential to drive significant advancements in the field of educational entrepreneurship, ultimately contributing to the creation of a more innovative and resilient educational system.

This study aims to examine the factors that shape the development of an edupreneurial mindset among educators in the 21st century, with a particular focus on the interaction between technological advancements and economic constraints. In the current educational landscape, characterized by rapid technological changes and significant financial challenges, educators are increasingly expected to adopt entrepreneurial approaches to drive innovation and address the evolving needs of their students and institutions.

This study examines how technology and economic limitations influence teachers' entrepreneurial attitudes in Gwagwalada, Abuja. By analyzing teacher characteristics and their capacity to embrace innovative teaching methods and entrepreneurial approaches, this research aims to provide insights for developing tailored teacher training programs and educational strategies.

The study's objectives are to:

1. Analyze the factors influencing the formation of an entrepreneurial attitude among educators in the 21st century, focusing on the interactions between technological progress and financial limitations.

2. Ascertain the economic challenges faced by educators and their impact on their entrepreneurial attitudes.
3. Examine the intricate relationship between technology and economic elements in Gwagwalada FCT.
4. Identify strategies to foster entrepreneurship in education within the context of technological and economic constraints.

This research will contribute to the field of educational entrepreneurship by:

- Offering a novel theoretical framework for understanding the factors influencing the development of an entrepreneurial mindset among educators.
- Providing insights for policymakers to create more conducive conditions for edupreneurship.
- Guiding curriculum designers in developing teacher training programs that promote entrepreneurial skills and knowledge.
- Contributing to the development of a more innovative and robust educational system.

Theoretical Framework

The study's theoretical framework combines ideas from educational entrepreneurship, technological adoption, and economic limitations in the context of teaching in the 21st century. The framework utilizes well-established theories and models to examine the interactions between these aspects and their impact on the formation of an entrepreneurial mentality among educators. The following are the fundamental elements of the theoretical framework:

Entrepreneurial Mindset Theory (EMT)

The entrepreneurial mindset idea is based on the research of experts such as Zahra et al. (2024). It is recommended that individuals with an entrepreneurial mindset are distinguished by their capacity to recognize possibilities, make well-thought-out decisions regarding risks, and introduce new ideas to overcome obstacles. An edupreneurial attitude in education refers to educators' capacity to incorporate entrepreneurial principles into their teaching methods, including qualities like creativity, innovation, and adaptability.

According to the theory, the formation of an entrepreneurial mindset is shaped by personal traits as well as external elements including the presence of resources and the institutional setting

(Krueger & Brazeal, 1994). By incorporating EMT into education, teachers can develop essential skills for success in an ever-changing world.

Technological Pedagogical Content Knowledge (TPACK) Framework

TPACK framework refers to the integration of technological, pedagogical, and content knowledge in education. The TPACK framework, established by Mishra and Koehler (2006), is a widely acknowledged approach for comprehending the integration of technology in education. The emphasis lies on the convergence of three essential domains: technological knowledge (TK), pedagogical knowledge (PK), and content knowledge (CK). The TPACK framework posits that proficient teaching in the digital era necessitates educators to cultivate a profound comprehension of the interconnections and mutual influence among various domains.

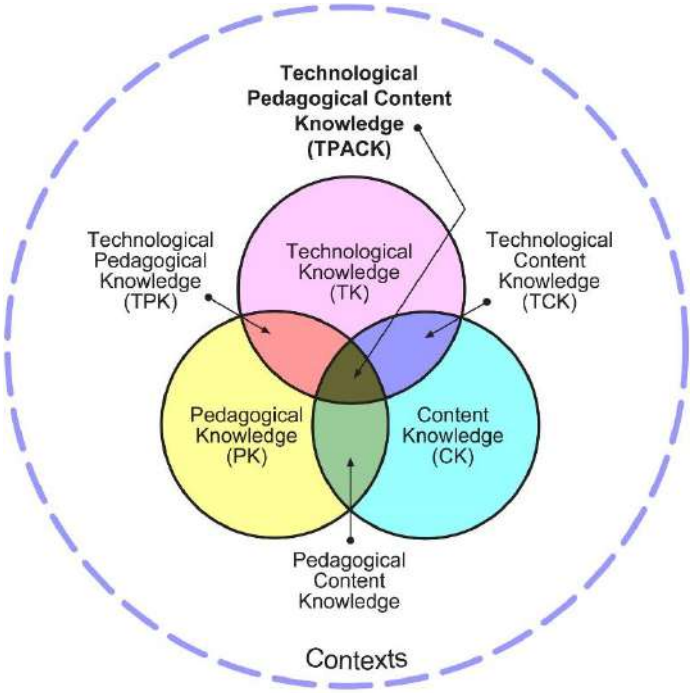

Figure 1: TPACK framework (graphic from http://tpack.org)

Within the scope of this study, the TPACK framework offers a perspective to analyze how educators' technology knowledge interacts with their pedagogical and content knowledge to cultivate an entrepreneurial attitude. The study suggests that educators with a solid TPACK foundation are more capable of utilizing technology for innovative methods of instruction, therefore promoting the cultivation of an entrepreneurial attitude in education. In addition, the

framework emphasizes the significance of continuous professional development and assistance in assisting educators in developing the essential skills for effectively integrating technology into their teaching methods (Chukwuemeka & Iscioglu, 2016; Koehler, Mishra, & Cain, 2013).

Diffusion of Innovations Theory

The theory of Diffusion of Innovations, formulated by Everett Rogers in 1962, elucidates the process by which novel ideas, technology, and behaviors disseminate within a social system. It seeks to explain how, why, and at what rate new ideas and technology spread**.** According to this idea, the acceptance of innovations is impacted by factors such as the perceived advantages of the innovation, how well the invention fits with current beliefs and practices, and individuals' capacity to experiment with and adapt the innovation.

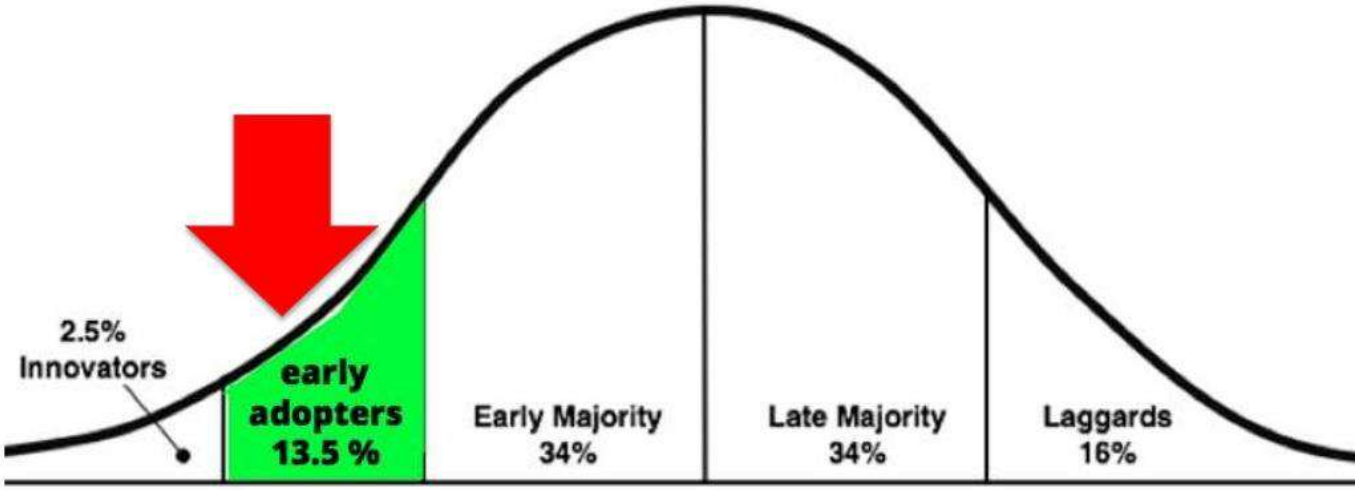

Figure 2: Diffusion of Innovations Theory (Everett Rogers, 1962)

Figure 3 illustrates how different segments of the population adopt new technology over time. The model highlights five groups: Innovators, Early Adopters, Early Majority, Late Majority, and Laggards.

Early Adopters (13.5%): These are teachers who are quick to embrace new technologies in their teaching methods. They recognize the potential benefits and are willing to take risks, often leading

the way for others in the educational field. However, economic constraints may limit the ability of some teachers to adopt new technologies, despite their willingness to innovate.

Economic Constraints: For 21st-century teachers, economic factors can significantly influence where they fall on this adoption curve. Teachers with better access to resources may become early adopters, while those facing economic challenges might lag behind, even if they are eager to integrate technology into their teaching.

Impact: The interaction between technology and economic constraints can create a divide among teachers, with those able to adopt new technologies gaining an advantage in enhancing educational outcomes, while others struggle to keep pace. Addressing these economic constraints is crucial to ensure that more teachers can move into the Early Majority and Late Majority categories, fostering widespread technology adoption across the education sector.

According to the Diffusion of Innovations hypothesis, educators who view technology as beneficial and in line with their teaching objectives are inclined to embrace it and employ it for innovative purposes in their classrooms. In addition, the theory emphasizes the significance of social networks and peer influence in the process of adopting new ideas or practices. It suggests that educators who are part of supportive communities **(**early adopters) are more inclined to cultivate an entrepreneurial mindset in education (Rogers, 2003; Sahin, 2006).

Resource Dependency Theory (RDT)

This theory posits that organizations are not self-sufficient; they depend on external entities for essential resources such as capital, information, or technology. This dependency creates a power dynamic, where the organization providing the resources can exert control over the dependent organization. RDT emphasizes the importance of managing relationships and dependencies to ensure organizational survival and success (Reitz, 1979).

Teachers and educational institutions often rely on external resources, such as government funding, technology providers, and training programs, to integrate new technologies into their classrooms. Economic constraints can limit their access to these resources, making them dependent on external support. This dependency may influence how and when they adopt new technologies, impacting their ability to innovate and stay current with educational trends (Reitz, 1979).

Human Capital Theory

According to Becker (1964), Human Capital Theory suggests that people's abilities, knowledge, and experiences are types of capital that may be utilized to improve productivity and economic worth. Within the realm of education, Human Capital Theory posits that educators can improve their effectiveness and inventiveness in teaching by putting effort into their professional development and acquiring new skills, specifically in technology and entrepreneurship.

This study utilizes Human Capital Theory to investigate the impact of educators' professional growth and continuous learning on the cultivation of an entrepreneurial mentality in the field of education. According to the hypothesis, educators who focus on developing their technology and entrepreneurial skills are more capable of dealing with the difficulties of teaching in the 21st century and are more likely to come up with new ideas for their classrooms (Becker, 1993; Schultz, 1961). Additionally, the study examines the impact of institutional support, such as the availability of training programs and resources, on educators' capacity to cultivate and maintain an entrepreneurial mentality.

Synthesis of Theories

The theoretical framework for this study combines the previously mentioned concepts to offer a full comprehension of the factors that influence the development of an entrepreneurial mentality among teachers in the 21st century. The Entrepreneurial Mindset Theory establishes a fundamental comprehension of the traits that delineate an edupreneurial mindset, while the TPACK framework and Diffusion of Innovations Theory provide insights into the impact of technology on the cultivation of this mindset. Resource Dependency Theory emphasizes the influence of economic limitations on educators' ability to be entrepreneurial, while Human Capital Theory underscores the significance of professional growth in cultivating an entrepreneurial attitude in education.

The study seeks to achieve a comprehensive knowledge of how the interaction among technology and economic restrictions affects the development of an entrepreneurial mindset among educators by integrating these theories. This framework will provide a structured approach for analyzing the data acquired in the study.

Entrepreneurial Mindset for Eduprenuership

Entrepreneurship is times used interchangeably with edupreneurship. It specifically refers to the act of conceptualizing, initiating, and managing a novel concept or venture, typically beginning on a modest scale (McGrath et al., 2000). It entails the process of recognizing potential prospects and creating novel products or services. Entrepreneurship is distinguished by a propensity to undertake risks, a concentration on novelty, and a determination to generate novel or enhance existing items.

The Entrepreneurial Mindset Theory (EMT) in education is that which makes an eduprenueur, and this refers to the development of skills, attitudes, and behaviors that enable individuals to navigate uncertainty, take calculated risks, and create value in various contexts. Key components of EMT include creativity, resilience, self-awareness, opportunity recognition, resourcefulness, collaboration, experimentation, and a growth mindset. This is diagrammatically illustrated below:

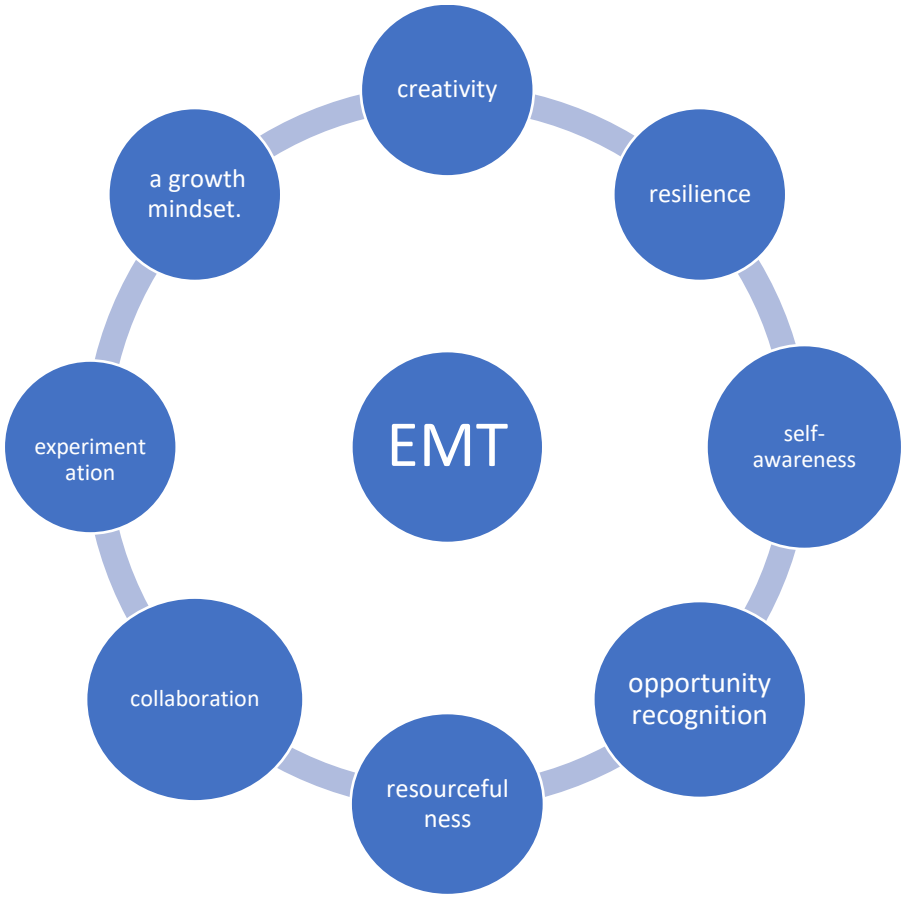

Figure 3: EMT Illustration

Educators, needs such mindset to become a successful edupreneurs which is a type of entrepreneurship in the education sector that applies entrepreneurial principles to invent innovative

products and services or systems for improving educational outcomes. Edupreneurs aims at combating educational problems, improving learning experiences, and promoting educational goals, often through new technologies, digital platforms, or curriculum solutions, we recommend the following six attributes of entrepreneurship as necessary to be an efficient edupreneur;

1. **Thinking well to solve Problems**: The ability to analyze situations, identify problems, and devise innovative solutions is central to both entrepreneurship and education. An edupreneurial mindset encourages educators and students to go beyond traditional methods, questioning the status quo, and seeking out new ways to enhance learning outcomes
2. **Foundational development**: this refers to the core principles, skills, and attitudes cultivated from an early stage that enable individuals to think critically, solve problems creatively, and adapt to changing environments. These are essential components in developing an edupreneurial mindset
3. **Transfer technology ideas to market**: Edupreneurs translate educational ideas to constituents, including students, communities, and society. For instance, Oklahoma's Odyssey Leadership Academy extends learning beyond school walls through innovative experiences in non-traditional community spaces. Johnson, H. B. (2024).
4. **Adaptability and Resilience**: Foundational development emphasizes adaptability—being open to change and resilient in the face of setbacks. In the context of edupreneurship, this translates into the ability to pivot when necessary, embrace new technologies, and continuously improve educational practices and tools.
5. **Creativity and Innovation**: Edupreneurship thrives on creativity—the ability to think outside the box and innovate within the educational space. This creativity is nurtured through foundational development that encourages exploration, experimentation, and the willingness to take calculated risks.
6. **Collaboration and Networking**: A key aspect of foundational development is learning to work collaboratively and build networks. In edupreneurship, this means forging partnerships, leveraging resources, and creating synergies that lead to successful educational ventures. An edupreneurial mindset views collaboration as a means to amplify impact and reach.

Economics for Eduprenuers

Economics for Edupreneurs is a specialized field that intersects educational entrepreneurship and economic principles, (Nieswandt, 2017). It delves into the economic factors influencing the creation, operation, and growth of educational businesses. Edupreneurs must possess a strong understanding of economic concepts such as supply and demand, market analysis, pricing strategies, and financial management. This knowledge enables them to make informed decisions about resource allocation, cost-benefit analysis, and revenue generation. By applying economic principles to their educational ventures, edupreneurs can optimize their classroom creativity identify profitable opportunity, and contribute to the overall economic development of the education sector. A recent study by Jobér (2024) found that edupreneurs who have a solid grasp of economic concepts are more likely to achieve long-term success. Additionally, Hou et al. (2024) emphasized the importance of understanding market dynamics and consumer behavior to develop effective pricing strategies and marketing campaigns.

Technology as the driver for 21st Century Eduprenuers

Technology has become the cornerstone of edupreneurship in the 21st century, profoundly transforming the educational landscape by enabling the creation and dissemination of innovative learning models that challenge traditional pedagogies, (Nambisan, 2019). The rise of digital platforms has allowed edupreneurs to develop and scale educational products and services, reaching diverse and global audiences with unprecedented efficiency. Online learning environments, such as Massive Open Online Courses (MOOCs), personalized learning apps, and interactive digital content, are central to this transformation, providing learners with flexible, accessible, and tailored educational experiences (Chukwuemeka et al., 2021; Bonk & Zhu, 2024). Additionally, the proliferation of artificial intelligence and data analytics in education has empowered edupreneurs to offer adaptive learning solutions that cater to individual learning styles and needs, thus enhancing engagement and outcomes (Zawacki-Richter & Jung, 2023). Social media platforms further amplify the impact of edupreneurs, allowing them to build personal brands, engage directly with learners, and create communities around educational content (Nieswandt, 2017). As a result, technology has not only served as a driver for contemporary innovation in educational products and services but also fosters an entrepreneurial mindset among educators, who increasingly see opportunities to blend pedagogy with business acumen (Thanasi-

Boçe et al., 2023; Marsinah, 2024). This synergy between technology and edupreneurship underscores the potential for ongoing educational reform, expanding access to quality education, and promoting lifelong learning in an increasingly interconnected world.

Methodology

This study employs a qualitative research design, combining both secondary and primary data to explore the relationship between teachers' backgrounds in economics and technology, their adoption of innovative teaching methods, and the fostering of entrepreneurial thinking among students. The qualitative approach is particularly suitable for this study as it allows for an in-depth exploration of complex, context-dependent phenomena.

Secondary Data Collection

The secondary data was gathered through a comprehensive review of literature published in academic journals over recent years. This review focused on identifying past research trends, themes, and gaps related to teacher training, innovative teaching methods, and the integration of economics and technology in education. The literature review aimed to provide a contextual background for the study and identify key concepts and theories relevant to the research questions.

Primary Data Collection

Primary data was collected through semi-structured interviews with 23 experts in the fields of entrepreneurship, economics, education, and educational technology. The experts were selected using purposive sampling to ensure that participants had relevant expertise and experience in the study's focus areas. The interviews were conducted either in person, via video calls, or through written responses, depending on the preference and availability of the interviewees.

Interview Process

The semi-structured interviews were guided by an interview protocol that included open-ended questions designed to elicit detailed responses about the participants' experiences and perspectives on the integration of economics and technology in education. The questions focused on several key areas:

- The participants' background in economics and technology.

- Their experiences with adopting innovative teaching methods.
- Their approach to fostering entrepreneurial thinking among students.
- Perceived gaps in current teacher training programs related to these areas.
- Observations on student engagement and job satisfaction linked to these practices.

Each interview lasted approximately 45 to 60 minutes, with all interviews recorded and transcribed verbatim for analysis. The transcriptions were then reviewed and coded to identify recurring themes and patterns.

Data Analysis

Thematic analysis, as outlined by Braun and Clarke (2024), was employed to analyze the primary data. Thematic analysis is a method for identifying, analyzing, and reporting patterns (themes) within data. It involves several key steps such as familiarization with the data, generating initial codes, searching for themes, reviewing themes, defining and naming themes, and writing up.

Ethical Considerations

Ethical approval was obtained before data collection. All participants were informed of the study's purpose, procedures, and their rights, including the right to withdraw at any time. Informed consent was obtained from all participants. Confidentiality was maintained by anonymizing the data and ensuring that interview transcripts were securely stored.

Limitations

While the qualitative approach provides in-depth insights, it is limited by its subjective nature and the relatively small sample size, which may affect the generalization of the findings. Additionally, the reliance on self-reported data from experts may introduce biases based on personal experiences and perspectives.

Results from the Interviews

Below are the responses from the interview group within the following themes adoption of innovative teaching methods, fostering entrepreneurial thinking, job satisfaction, student engagement, and gaps in teacher training programs;

Adoption of Innovative Teaching Methods

''I find that my background in economics allows me to incorporate real-world scenarios into my lessons, which makes the content more relatable and engaging for students.'' (Lecturer 1)

''Understanding technology has made it easier for me to experiment with different teaching tools. My students respond well to interactive platforms that allow them to explore concepts on their own.''(Teacher 2)

''I regularly integrate case studies related to economics and technology into my classes. This not only helps students understand the material but also encourages them to think critically about the world around them.'' (Teacher3)

"When you understand the economic principles behind entrepreneurship, it's easier to create lessons that inspire students to think like entrepreneur." (Teacher4)

"My ability to use technology has transformed my teaching. I can now deliver content in ways that are much more engaging and interactive for students" (Teacher5)

Fostering Entrepreneurial Thinking

''Students are more interested in entrepreneurial projects when they can see how economic principles apply to real-life business scenarios.'' (Teacher6)

''I encourage students to develop their business ideas, which gives them a sense of ownership and drives their motivation to learn" (Teacher7)

"Having a solid understanding of economics allows me to create projects that challenge students to think like entrepreneurs, and they seem to enjoy this challenge" (Teacher8)

"My lessons on entrepreneurship have become much more effective since I started integrating technology and economic theory. Students are more engaged and seem to retain the information better" (Teacher 9)

"Teaching economics with a focus on entrepreneurship has allowed me to connect with my students in a way that feels both practical and inspiring" (LecturerA)

Job Satisfaction

"I feel more confident and satisfied in my job knowing that I'm equipping students with the skills they need to succeed in the future" (LecturerB)

"Teaching with a strong foundation in economics and technology has given me a new passion for my job. I'm constantly learning and growing, which keeps me motivated.''(LecturerC)

"My job satisfaction has increased since I started focusing on entrepreneurial skills. It's rewarding to see students excited about learning and applying what they know.''(LecturerD)

''I find that the more I integrate these concepts into my teaching, the more I enjoy my work. It's fulfilling to see students thrive and develop new skills.''(Teacher10)

''There's a real sense of accomplishment that comes with knowing you're preparing students for the real world. This has made my job much more satisfying.''(Teacher11)

Student Engagement

''Students are much more engaged when they see the practical applications of what they're learning, especially in economics and technology" (Teacher12)

''Integrating technology into my lessons has been a game-changer for student engagement. They're much more involved in the learning process now" (Lecturer E)

''I've noticed a significant increase in student participation when I focus on entrepreneurial thinking. They love the idea of creating something new and seeing how it could work in the real world" (Lecture F)

''Using real-world examples from economics and entrepreneurship has made my lessons more interesting, and students seem to be more invested in their learning" (Lecturer G)

''When students can relate what they're learning to their own lives and future careers, they're much more engaged and motivated" (Teacher13)

Gaps in Teacher Training Programs

> *''I feel like my teacher training didn't adequately prepare me to integrate technology and economics into my lessons. I've had to learn a lot on my own." "There's a definite gap in training when it comes to teaching entrepreneurship. I wish I had more support in developing these skills" (Teacher 14)*
>
> *"My teacher training didn't cover how to use technology in the classroom effectively. I've had to figure it out as I go, which has been challenging" (Lecturer H).*
>
> *"Teacher training of my days in school was analog, I did not use technology effectively in the classroom. I've to learn a little as need be now and it has been a real struggle" (Teacher I)*
>
> *"If I can go back to change anything in my teacher training days it would be a better effort at learning effective incorporate of technology in the classroom" (Teacher15)*

Findings

Findings indicate that teachers with a strong foundation in economics and technology are more likely to adopt innovative teaching methods and foster entrepreneurial thinking among their students. Moreover, these teachers reported higher levels of job satisfaction and student engagement. However, the study also reveals significant gaps in teacher training programs, with many educators feeling inadequately prepared to integrate these skills into their classrooms (Asfahani et al., 2024).

Discussion of Findings

The intersection of economics, technology, and edupreneurial aptitude represents a critical frontier in modern education. As the findings suggest, teachers who master these areas are better positioned to prepare students for the demands of the 21st-century workforce. However, there is a pressing need for educational institutions and policymakers to enhance teacher training programs, ensuring that educators are equipped with the necessary skills. By doing so, we can cultivate a generation of teachers who are not only knowledgeable but also innovative and adaptable, capable of fostering a dynamic and resilient workforce (Adeoye, 2024).

Conclusion

This study has provided a comprehensive analysis of the factors that determine the development and implementation of an edupreneurial mindset among 21st-century teachers in Gwagwalada, Abuja. The findings showed the complex interrelation that exists between technological advancement and economic constraints in the display of the edupreneurial capabilities of educators in the region. The research revealed that the integration of technology into teaching practices is a crucial component for nurturing an edupreneurial mindset and skills. As the 21st century has ushered in rapid technological changes, educators and teachers must be disposed to imbibe and use rapid technological changes. It has also revealed the significant economic constraints that educators in Gwagwalada FCT encounter, which can hinder them from fully embracing an edupreneurial strategy. They include: Limited funding, scarce resources, and budget cuts. These have placed significant pressure on teachers, forcing them to navigate complex challenges and adapt their teaching strategies accordingly (Abid Haleem et al., 2022). These economic factors can limit access to technological resources, training opportunities, and the necessary support structures for developing an entrepreneurial mindset.

The interplay between technology and economic constraints has emerged as a critical determinant of edupreneurial mindset development. Educators who can successfully navigate this interplay, leveraging technological tools and strategies while also finding creative solutions to economic barriers, are more likely to foster an entrepreneurial spirit within their classrooms (Williams, 2024). Educators must adjust to leveraging digital tools and platforms to drive contemporary innovation, creativity, and problem-solving within the classroom (SWARGIARY, 2024). Technological competencies enable teachers to engage students in more dynamic and engaging learning experiences, which can develop an edupreneurial spirit and prepare them for the needs of the global economy (Satterwhite, 2018).

Recommendations

From the findings of this research work, the study recommends the following:

1. Government and stake holders in education should Invest optimally in technological infrastructure and digital literacy programs, providing educators with needed equipment for technological education skills development and utilization approaches for 21st-century

teaching and learning. This is possible when policymakers take the lead and emphasize to institutions need to prioritize investment in digital infrastructures like computers, high-speed internet, educational software, etc. (Webber et al., 2022).

2. Develop effective teacher training programs, to provide a comprehensively address the peculiarity of institutions' teachers' needs, to excel in innovative pedagogical methods characterized by a 21st-century edupreneur despite economic constraints. (Keyhani, 2020; Keyhani & Kim, 2020).
3. Establish functional funding mechanisms and support structures for funding edupreneurial initiatives, to tackle economic problems faced by educators, stakeholders should deliberately create programs that make funding schemes, grants, and alternative revenue sources accessible for eduprenuerial development. (Mokaya et al., 2020).
4. Foster collaborative networks and knowledge-sharing platforms to encourage the establishment of collaborative networks and knowledge-sharing platforms among educators. This will facilitate the exchange of best practices, innovative strategies, and practical solutions for navigating the intersection of technology and economic constraints (Abid Haleem et al., 2022).
5. Incorporate edupreneurship training into pre-service teacher education to ensure a sustainable pipeline of entrepreneurial-minded educators. Pre-service teacher education programs should also incorporate the principles of edupreneurship mindset into their curricula. This will equip aspiring teachers with the knowledge, skills, and mindset needed to thrive in the 21st-century educational landscape (Satterwhite, 2018).

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