

Perspective of Rural Secondary Teachers on Pedagogical Approaches and Challenges in Technology and Livelihood Education

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Abstract. This narrative qualitative research explored the lived experiences of ten rural secondary Technology and Livelihood Education (TLE) teachers in Davao City Division, as they implemented pedagogical approaches amid various contextual challenges. Using in-depth interviews and thematic analysis, the study uncovered three major themes: resource limitations foster creativity, contextualized pedagogy rooted in community realities, and emotional resilience and teaching identity. Despite the scarcity of materials, inadequate infrastructure, and training gaps, teachers adapted by using indigenous resources, differentiated instruction, and community-based strategies to sustain effective teaching and student engagement. The study further revealed coping mechanisms such as collaboration among peers, reflective teaching practice, and strong intrinsic motivation that helped teachers nurture meaningful learning experiences. Key insights gained highlighted the necessity of flexibility in pedagogy, the effectiveness of differentiated and experiential learning, and the importance of aligning instruction with the socio-economic realities of learners in rural areas. These insights highlight TLE teachers as they continuously adapt and grow through reflective practice. The findings affirm that contextually grounded and resilience teaching can enhance both student learning outcomes and professional fulfillment. The study calls for stronger policy support, and increased resource allocation to further empower rural educators and enrich TLE instruction.

KEY WORDS

1. Rural education 2. technology and livelihood education 3. pedagogical approaches

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1. Introduction

Teaching Technology and Livelihood Education (TLE) in rural areas presents significant challenges that hinder effective instruction and impact educational quality. Rural TLE teachers often struggle with constraints that limit their ability to implement engaging and meaningful pedagogical approaches. These difficulties create barriers to student learning, making it challenging to foster practical skills and

knowledge essential for their future endeavors. In Turkey, research highlights a direct correlation between teachers' proficiency in utilizing teaching-learning materials and the effectiveness of educational resources, particularly in Technology and Livelihood Education (TLE). Both human and non-human resources such as facilities, infrastructure, and instructional materials play a crucial role in enabling educators

to effectively apply their pedagogical content knowledge. However, when these resources are insufficient or not fully utilized, the quality of TLE instruction is significantly compromised, hindering the overall educational process (Mavi and Bahceci, 2019). Likewise in Malaysia, the rapid advancement of technology and evolving educational paradigms have intensified the challenges faced by technological teachers. Many technological educators' express feelings of frustration and demotivation as they struggle to provide quality instruction with deficient experiential learning. This ongoing struggle significantly impacts their ability to deliver effective education (Tumbali, 2019). Also in Indonesia, technological teachers often find it challenging to provide practical courses due to limited pedagogical training that not only limit the variety of hands-on activities but also provide challenges for educators in elucidating concepts, resulting in a less engaging and dynamic learning environment. Teaching and learning in technological subject are greatly impacted by inadequate instructional trainings. Because of the constraints on incomplete skill development to teachers, they frequently have to modify their instructive approaches, which can result in less engaging instruction and learning outcomes for students (Yulastri et al., 2019). In the Philippines, particularly in Cagayan de Oro City, the lack of training and experiences among teachers in TLE subjects in public schools poses a major challenge to educational quality. Many TLE teachers lack formal training in the specific subjects they teach, leading to significant gaps in both their pedagogical skills and content expertise. This shortage negatively impacts students' learning opportunities and overall educational outcomes (Calanog, 2019). In Northern Samar, Philippines, TLE teachers often struggle to keep up with the evolving demands of the technology and vocational industries. Continuous professional development is essential for staying current with trends and best practices, but many

face challenges in accessing necessary training. These difficulties impact their ability to effectively teach TLE subjects, affecting both their confidence and student outcomes (Tan, 2021). While in Batangas, TLE teachers, overwhelmed by the challenges they face, are forced to develop coping mechanisms just to get by. Relying on a mix of teaching methods feels more like a necessity than an effective strategy, as they struggle to engage students and meet individual learning needs. Despite research highlighting the importance of these methods, the complexities of teaching remain difficult for many to handle (Blanca, 2019). A locally conducted study in Davao City revealed that Technology and Livelihood Education (TLE) teachers face significant challenges in delivering quality instruction due to limited resources and inadequate training. While they strive to enhance student engagement through hands-on activities, group projects, and real-world applications, these efforts are often hindered by insufficient support and outdated infrastructure. The lack of access to industry partnerships and modern technology further restricts their ability to implement innovative teaching strategies effectively. These persistent challenges highlight the urgent need for improved teacher training and resource allocation to strengthen TLE education in rural areas (Morales and Reyes, 2022). The issues and challenges faced by teachers in rural TLE settings have far-reaching implications for students and their communities. Students may miss-out on acquiring vital skills that can improve their employability and contribute to local economic development. Moreover, when teachers are unable to provide a quality education due to these constraints, it can perpetuate cycles of poverty and limit the potential for community growth. Addressing these challenges requires a concerted effort from policymakers, educational institutions, and community stakeholders to ensure that rural teachers are equipped with the necessary resources and support to deliver

effective Technology and Livelihood Education. A deeper study on the perspective of rural secondary teachers on pedagogical approaches and challenges in TLE is crucial for understanding the unique educational needs in rural settings. It helps identify specific obstacles faced by teachers in integrating technology and prac-

tical livelihood skills, which can influence curriculum development and teacher training. Furthermore, the study may provide insights that can guide policymakers in modifying support and resources to improve educational outcomes in underserved areas.

1.1. Purpose of the Study—The purpose of my narrative research study is to explore the perspective of rural secondary teachers on pedagogical approaches and challenges in Technology and Livelihood Education. My study aims to discover the perceptions of junior high school teachers in public secondary schools in Cluster 11, Davao City Division. Specifically, delve on how public secondary school teachers in rural areas perceive the pedagogical approaches and challenges in TLE. Moreover, my study aspires to develop understanding and lessons learned from the findings of the information gathered. The insights drawn from my study could be a useful contribution that may provide valuable awareness into the importance of an in-depth exploration of TLE teachers' personal experiences. By focusing on individual stories, the study can capture the nuanced challenges teachers face in rural settings, such as resource limitations or adapting to new 5 technologies. This approach also enables a deeper understanding of how their experiences shape their teaching practices and professional development, offering valuable context for improving TLE education. This study will be beneficial to the Department of Education, school principals, and TLE teachers and the students. The results of this study may be utilized by the De-

partment of Education to enhance both teaching practices and educational outcomes of TLE subject in rural areas and . It may help modify TLE teaching strategies to better fit the unique needs and resource limitations of rural settings, ensuring that the curriculum is both relevant and practical for local communities. By identifying gaps in TLE teacher training and resource availability, the study may inform targeted professional development programs and policy interventions that will empower teachers to effectively deliver TLE. Furthermore, understanding the challenges may promote innovation in low-tech environments and contributes to improving student engagement, identify effective teaching strategies that cater to diverse learning needs, retention, and skill development, ultimately fostering employability and local economic growth. By capturing the personal experiences of TLE teachers, educational leaders may identify effective TLE teaching-learning practices and modify interventions that address the unique challenges within their institutions and their perspectives can illuminate the strengths and weaknesses of current methodologies. Ultimately, the findings may enlighten policy decisions and resource allocation, leading to improved TLE teaching practices in rural areas and better educational involvements for learners.

1.2. Research Questions—This study will be conducted with the purpose to perceive the views of rural secondary school teachers on pedagogical approaches in TLE. The course of this study will be set by the following specific research questions:

- (1) What are the lived experiences of rural secondary teachers in implementing various pedagogical approaches in TLE?
- (2) How do rural secondary teachers cope with the challenges in delivering TLE?

- (3) What are the learning insights do rural teachers gained in implementing various pedagogical approaches in TLE?

1.3. Definition of Terms—To fully understand the terms used in this study, the following are defined terms operationally. TLE Teachers In this study, the TLE teachers refers to the educators who teach TLE curriculum, which is a component of the secondary education curriculum focused on developing practical skills and knowledge related to various livelihood areas.

1.4. Theoretical Lens—This study is anchored on the Communities of Practice Theory by Wenger (1998). The theory emphasizes that learning is a social process that occurs through participation in communities where individuals share practices, tools, and language. It underscores the importance of collaborative learning, where rural teachers often form informal networks to exchange resources, teaching strategies, and solutions to common challenges. This collective participation shapes their pedagogical approaches, allowing them to adapt to the specific needs of their local environments, especially in subjects like Technology and Livelihood Education (TLE). The theory accentuates the concept of situated learning, where knowledge is shaped by the specific socio-cultural and environmental contexts of rural areas. In rural TLE classrooms, teachers collaborate and share experiences, building collective knowledge that supports their professional growth and enables them to navigate the challenges they face in delivering effective instruction. It also highlights identity formation, illustrating how teachers' professional identities evolve through their roles within these collaborative learning communities. Thus, it provides a valuable context for understanding how rural teachers collectively address the practical challenges of teaching TLE, using shared practices to innovate and adapt to local conditions. It is particularly relevant to studying rural secondary teachers' experiences, as it reveals how collaboration and shared learning shape their pedagogical approaches and contribute to their resilience in the face of resource limitations. The study is also grounded on Bandura's Social Cognitive Theory (1986). The theory emphasizes the role of observational learning, imitation, and modeling in the learning process, particularly through the concept of self-efficacy. In the context of rural TLE, teachers can develop new teaching strategies by observing and interacting with their peers, adapting their practices based on local contexts and resources. Bandura's theory also emphasizes the importance of self-regulation, which could be crucial for rural teachers as they manage the challenges of limited resources and professional development. Teachers' beliefs in their ability to succeed self-efficacy play a vital role in overcoming these barriers and implementing effective pedagogical strategies. The conceptual framework of the study is presented in figure 1. Based on the figure, there are two interconnected variables. These variables are the lived experiences of rural secondary teachers in implementing various pedagogical approaches in TLE; Rural secondary teachers cope with the challenges in delivering TLE; and Learning insights do rural teachers gained in implementing various pedagogical approaches in TLE.

2. Methodology

This chapter of the study presented the methodology, research participants, data collection, the role of the researcher, data analysis, trustworthiness of the study, and ethical considerations.

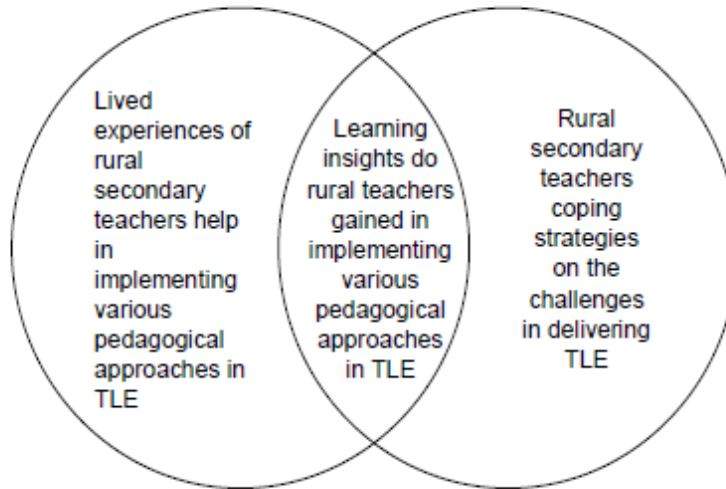


Fig. 1. Theoretical/Conceptual Framework

The exploration of knowledge and meaning in this inquiry required a research design that could capture the depth and richness of lived experiences. The narrative approach used in this study provided a coherent framework for collecting and interpreting participants' stories, enabling me to understand how rural secondary teachers constructed meaning from their pedagogical experiences in teaching Technology and Livelihood Education (TLE). The narrative research design employed two main data collection methods: participant observation and in-depth interviews. Each method served a distinct but complementary purpose in developing an authentic and detailed account of the teachers' professional lives. Participant observation allowed me to witness firsthand the naturally occurring teaching practices and behaviors within the rural school context. In-depth interviews, on the other hand, provided the space for participants to share their personal histories, challenges, and reflections, particularly as they related to adapting instruction within resource-limited environments. As a pragmatist, I used narrative inquiry to delve into the human experience, particularly focusing on how rural secondary teachers made sense of and adapted 22 their pedagogical approaches. The narrative method allowed for the collection of life stories that not only revealed what the participants experienced but also how they interpreted and responded to those experiences. This qualitative approach offered rich, textured insights into the complexities of teaching TLE in rural schools, uncovering the strategies, values, and motivations embedded in each teacher's account. Through thematic analysis of these narratives, I illuminated the subjective realities and professional identities shaped by rural teaching contexts.

2.1. Philosophical Assumptions—The philosophical assumptions of this study provide the foundation for collecting, analyzing, and interpreting data in the context of rural secondary teachers' perspectives on pedagogical approaches in teaching Technology and Livelihood Education (TLE). These assumptions established the guiding principles that influenced the conclusions and decisions made throughout the research process. These principles, which varied in nature, were essential for conducting rigorous research, beginning with the selection of the research topic and aligning with a specific research paradigm. The concept

of a "paradigm" traced to its Greek and Latin roots, where it signified a model or example that shaped actions. Essentially, a paradigm reflected the adoption of a specific perspective or worldview. In support of this, Denzin and Lincoln (2017) described a research paradigm as a "basic set of beliefs that guide action," addressing my core principles or worldview. In the case of a study on rural 23 secondary teachers' pedagogical approaches in TLE, these philosophical assumptions and paradigms guided how the research explored and understood teachers' experiences, emphasizing their teaching practices, adaptation to local conditions, and professional growth within the educational setting. In the context of exploring rural secondary teachers' pedagogical approaches in TLE, these philosophical assumptions were crucial. They shaped my perspective on how teaching methods in rural TLE classrooms were understood, implemented, and evaluated. For instance, a constructivist paradigm might have guided the study by emphasizing the role of teachers' prior experiences and their interactions with educational practices, while a pragmatic paradigm might have focused on practical strategies to enhance teaching effectiveness in real-world rural school settings. Thus, the choice of paradigm directly influenced the methodology and interpretation of findings, ensuring that the study aligned with a coherent worldview about teaching practices, teacher adaptation, and professional development in rural TLE classrooms.

Ontology This part of the research concerned how the issue related to the nature of reality. According to Creswell (2020), reality was subjective and multiple, as seen by the participants in the study. The ontological issue addressed the nature of reality for the qualitative researcher, suggesting that reality was constructed by the individuals involved in the research situation. Therefore, multiple realities existed, 24 such as those of mine, the individuals being investigated, and the readers or audiences interpreting

the study. In this research, the perspectives of rural secondary teachers regarding pedagogical approaches in TLE were discussed by the participants, exploring their challenges, strategies, and potential opportunities to effectively enhance their teaching practices in addressing the developmental needs of students. In this study, I relied on the voices and interpretations of the participants through extensive quotes and themes that reflected their words, providing evidence of diverse perspectives on teaching approaches. The responses of the participants were coded and analyzed to identify both commonalities and distinct differences in their experiences and views. To ensure the reliability of the results, the participants' responses were carefully coded and examined. Throughout the process, I maintained the authenticity of the responses, avoiding personal biases to ensure that the study accurately reflected the participants' perspectives on pedagogical approaches in TLE.

Epistemology This referred to the awareness of how knowledge claims were justified by staying as close to the participants as possible during the study to obtain firsthand information. Creswell and Poth (2018) stated that a narrative type of qualitative study focused on the stories and personal experiences of individuals to understand their perspectives, meanings, and insights. This approach allowed me to explore 25 how people made sense of their lives and experiences through narratives, providing rich, detailed data that could reveal deeper insights into specific phenomena. I identified narrative study with the use of thematic analysis as the best means for this type of study. In this regard, individual researchers "held explicit belief." The intention of this study was to gather information from the participants or teachers in public secondary schools in Cluster 11, Davao City Division as to what were their perceived experiences on their pedagogical approaches and challenges in Technology and Livelihood Education.

Axiology This refers to the philosophical study of value,

is contextualized by examining the nature, origin, and justification of values, particularly in ethics and aesthetics. It explores what things are good and how good they are. This study highlighted the importance of values in research, particularly in understanding the role of values in shaping the research process. According to Creswell (2020), values played a crucial role in guiding the research, and it was essential for me to openly discuss the values that influenced the study's narrative and to incorporate both my interpretations and participants. In the context of studying rural secondary teachers' perspectives on pedagogical approaches in Technology and Livelihood Education (TLE), I ensured that the dignity and value of every piece of information provided by the participants were respected. 26 Recognizing the personal and value-laden nature of the data, I took great care in preserving the integrity of the participants' responses,

carefully interpreting them while remaining true to the participants' own viewpoints and experiences. Rhetoric It centered on reporting reality as experienced by the research participants. This approach was crucial because it ensured the research remained objective, faithfully conveying what was observed and heard from the participants. By employing a personal voice and qualitative terminology, the study limited its definitions to reflect the nuanced experiences of the participants. In the context of this research, I utilized the first-person perspective to effectively express the lived experiences of secondary teachers as they navigated and implemented various pedagogical approaches in teaching Technology and Livelihood Education (TLE) in rural areas. This rhetoric strategy allowed for a more authentic and direct representation of the teachers' perspectives and challenges.

2.2. *Qualitative Assumptions*—Methodology was a creative and responsive approach to understand questions and subject matter while method referred to the exact knowledge and procedure (Schwandt and Gates, 2017). In this study, the pedagogical approaches and challenges in TLE teaching as experienced by the public secondary school teachers in Cluster 12, Davao City Divi-

sion were gathered through their narrations. My effort in knowing the perspective of rural secondary teachers on their pedagogical approaches and challenges in teaching TLE became the basis for doing qualitative research, a means of which Schwandt Gates (2017) considered helpful in looking for meanings and motivations that underlined cultural symbols, personal experiences, and phenomena.

2.3. *Design and Procedure*—This research used the narrative research approach allowing me to explore how people made sense of their lives and experiences through narratives, providing rich, detailed data that revealed deeper insights into specific phenomena allowing for adaptability in data collection and analysis. The purpose of the narrative research approach was to focus on understanding and exploring the stories individuals told about their personal experiences. It emphasized how people made sense

of their lives and identities through narratives, allowing me to analyze the meaning and context behind these stories. This iterative process encourages ongoing reflection and dialogue, ultimately leading to more nuanced insights. Typically involving a small number of participants, this method sought to capture detailed, in-depth accounts that revealed unique perspectives. The goal was to understand how individuals interpreted and constructed their experiences within specific social, cultural, and historical contexts (Creswell and Poth, 2018).

2.4. Research Participants—This narrative research study employed a lesser number of participants. This qualitative study's sample sizes were sufficient to obtain feedback for most or all perceptions. It obtained rich, detailed insights into individuals' lived experiences, allowing me to explore how people made meaning of their lives through storytelling. It helped uncover deep, contextualized understandings of personal and social realities, which might have been overlooked by other methods. This approach also gave voice to participants, highlighting their unique perspectives and fostering a deeper connection between their experiences and broader social or cultural issues (Creswell and Poth, 2018). Purposive sampling was employed in identifying participants for this study. Purposive sampling, a non-probability sample that was selected based on characteristics of a

population and the objective of the study, was utilized. Purposive sampling was also known as selective or subjective sampling. I selected 10 public secondary school teachers for their personal experiences in Cluster 11, Davao City Division as participants. Inclusion criteria used were as follows: currently teaching as a permanent public secondary school TLE teacher in Cluster 11, Davao City Division, and having at least three years of teaching in the public secondary school. The results were used to identify the emerging themes and patterns of responses based on their narrations. I utilized the purposive sampling design since the participants were chosen based on the criteria or purpose of the study (Creswell, 2020). It was also known as judgmental, selective, or subjective sampling. The selection of the participants was purposefully done to ensure that the findings would be authentic (Marshall, 1996).

2.5. Ethical Considerations—This refers to the moral principles and values that guide decision-making and behavior, particularly in situations where actions could potentially impact others. Ethical considerations played a vital role in shaping the design and execution of this research study. I addressed key ethi-

cal issues when engaging with participants in this fieldwork. Ethical standards were essential throughout the research process to ensure the study's credibility and integrity. I promoted the aims of the research, ensuring the authentic portrayal of participants' perspectives, upholding truth, and preventing error.

2.6. Role of the Researcher—My responsibility was to uncover, transfer, and undertake knowledge for the benefit of educational institutions. To do so, I took on the following roles throughout the course of the study: Facilitator and Promoter of Unbiased Research I conducted interviews with the participants and guided them through the process. I interpreted ideas and responses based on existing literature and related studies, rather than my own knowledge, thoughts, and feelings, to avoid the intrusion of bias. Expert in Qualitative Method I implemented the narrative qualitative method

correctly. To ensure this, I took meticulous steps to ensure accuracy and reliability throughout the research process. I thoroughly evaluated my approach by conducting a rigorous self-assessment and actively seeking guidance from my knowledgeable research advisor as well as collaborating with other experienced research professionals. This helped me demonstrate competence in explaining the study without biasing the participants, conducting interviews properly according to the design, making appropriate field observations, selecting suitable artifacts, images, and journal excerpts, and employing

Thematic Content Analysis accurately. 36 Collector and Keeper of Data I ensured the use of different methods to record what was said and done during the interviews, such as taking handwritten notes or audio and/or video recordings. The recordings were transcribed verbatim before data analysis began. Records made by me were properly secured, as they contained sensitive information and were relevant to the research. Additionally, safeguarding the participants and their data was a primary responsibility. Mechanisms for safeguarding were clearly articulated to participants and approved by a relevant research ethics review board before the research commenced. Analyst of Data I ex-

amined the phenomenon or problem from the participants' perspective by interpreting data, transcribing and checking transcripts, reading between the lines, coding, and creating themes. I ensured that the findings remained true to the participants and that their voices were heard. Organizer and Presenter of Data I presented the problem and related literature and studies that supported it. The findings of the study were also presented by research question stating the 37 results for each one using themes to show how the research questions were answered. Moreover, I provided future directions and implications of the study for the improvement of educational policy and practices.

2.7. Data Collection—This refers to the gathering and measuring information on variables of interest, typically for research or analysis. The following are the step-by-step process of gathering the data needed. Securing Endorsement from the Dean of Graduate School I asked for an endorsement from the Dean of the Graduate School of Rizal Memorial Colleges as one of the required documents for submission to the Office of the Schools Division Superintendent when seeking permission to conduct the study. Asking permission from the Schools Division Superintendent I asked permission from the Schools Division Superintendent of Davao City Division to conduct the study in the identified school. A letter addressed to the Schools Division Superintendent was sent along with Chapters 1 and 2 of the manuscript and the research instrument, which explained the objectives of the 38 study and identified the participants. I waited for the response of the SDS before conducting the study. Asking Permission from the School Principal. After securing the approval of the SDS, I sent a letter to the Public Schools District Supervisor of Cluster 11, followed by letters to the school principals of public secondary schools in Cluster 11, explain-

ing the purpose of the study to be conducted in their respective schools. Obtaining Consent from The Participants I asked permission from the participants. They were formally oriented about the study and the process they would go through as participants. Conducting the Interview I conducted the in-depth interview and diligently followed the structured format of the prepared interview questionnaire. I meticulously profiled each participant, capturing their unique perspectives and insights through detailed notes, ensuring accuracy and depth in understanding. The flow of dialogue was preserved with precision as conversations unfolded, recorded utilizing advanced sound recording technology to aid in subsequent transcription efforts. 39 Transcribing the Responses of the Interviewees I transcribed the responses of the interviewees accurately by recalling their answers from the sound recordings. If participants used their vernacular language, I translated their responses into English. Data Coding and Thematic Content Analysis After the transcription, the data were categorized and coded. Themes were then extracted, and data within each participant response were compared and contrasted. Additional information was gathered, if necessary,

thoroughly examined, and integrated into the existing body of data. Subsequently, data were

compared and contrasted across participants to identify patterns and trends.

2.8. Data Analysis—In this study, thematic analysis was utilized to analyze the gathered data. I analyzed the participants' responses from the conducted interviews using Creswell's Model, specifically the identifying of themes approach. According to Creswell (2020), themes in qualitative research referred to similar codes grouped together to form major ideas within the data set. Familiarization with the data was common to all forms of qualitative analysis; thus, I immersed myself in the data by reading and re-reading the responses while noting initial analytic observations. 40 Coding Coding, a common component of qualitative analysis, involved generating concise labels for significant features of the data relevant to the main research question. It was not only a method of organizing data but also an analytical tool capturing both surface-level meaning and deeper conceptual insights. I coded every data item and concluded this phase by collating all codes and

relevant data extracts. Searching for Themes This phase involved identifying coherent and meaningful patterns in the data relevant to the research question. I concluded this step by organizing all coded data according to their respective themes. Reviewing Themes I reflected on whether the themes effectively represented a compelling and accurate narrative of the data. I began defining the nature of each theme and exploring the relationships among them. Thematic Content Analysis was employed in this process. This form of analysis provided a detailed presentation of each theme by identifying its essence and assigning a concise, meaningful, and descriptive name (Andersen, 2013). 41 Writing-up This final stage involved weaving together analytic narrative and participant data extracts to present a coherent and persuasive interpretation of the findings. The discussion was contextualized in relation to existing literature to emphasize the study's relevance and contribution.

2.9. Framework of Analysis—The framework analysis of this research was designed to be flexible, allowing me to either collect all the data before analysis or to conduct data analysis concurrently with data collection. This study employed a qualitative research method. Data were analyzed using the steps outlined by O'Connor and Gibson (2003) for qualitative data analysis. Organizing the Data Data are organized in a way that is easy to look at and that allows me to go through each topic to pick out concepts and themes. Finding and Organizing Ideas and Concepts Find specific words or ideas keep coming up then organize these ideas into codes or categories. When conducting analysis,

it is beneficial to identify recurring words or themes that stand out consistently throughout the data. By recognizing these patterns, I can systematically group them into distinct codes or 42 categories. Categorizing the data in this manner helps to streamline the information, making it easier to identify broader trends and draw meaningful conclusions. This systematic approach not only aids in organizing the data but also in revealing underlying connections and relationships that might not be immediately apparent. Building Over-Arching Themes in the Data Each of the response categories has one or more associated themes that give a deeper meaning to the data. Different categories can be collapsed under one main over-arching theme.

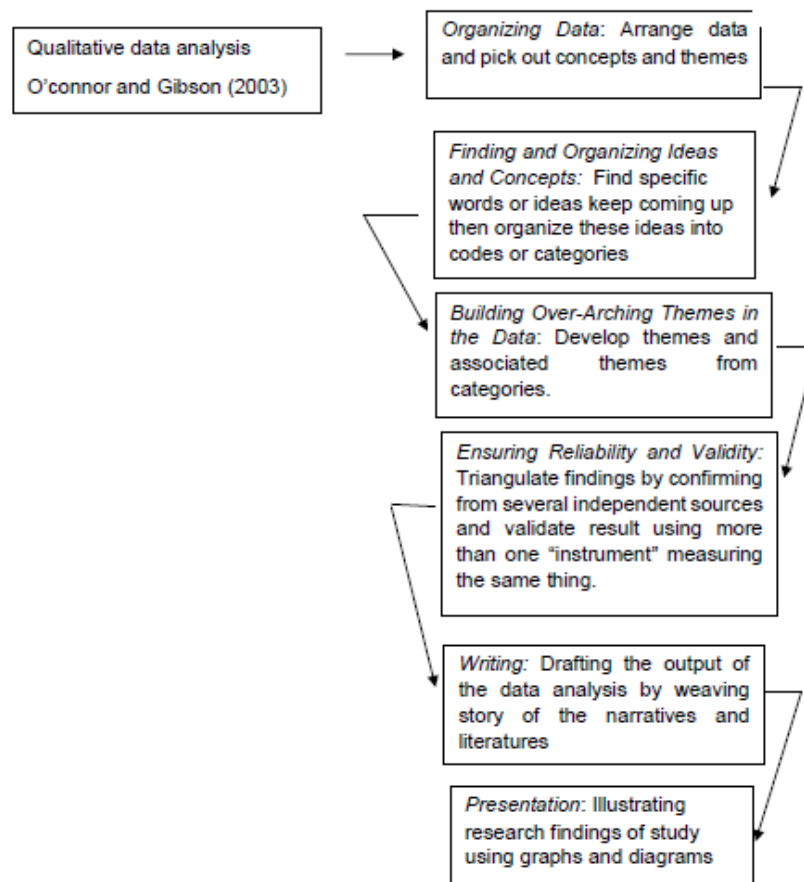


Fig. 2. Analytical Framework of the Study)

2.10. Trustworthiness of the Study—It was of paramount importance to establish trustworthiness throughout the study to guarantee the credibility, transferability, confirmability, and dependability of the research findings. In this particular investigation that delved into the viewpoints of rural secondary educators concerning their teaching methods and the obstacles encountered in delivering Technology and Livelihood Education (TLE) curricula, the emphasis on trustworthiness was indispensable.

This emphasis on trustworthiness was multifaceted, playing a pivotal role in assessing the significance of the study and upholding the reliability of the conclusions drawn from it. The ethical integrity of the research was intricately intertwined with the meticulousness and transparency of the data gathering process. Thus, it became imperative for the research to possess attributes that rendered it trustworthy, 45 shareable, and enlightening to its audience, reinforcing its credibility and relevance.

3. Results and Discussion

This chapter provides a comprehensive analysis of the study's results in alignment with its main objective. It delves deeply into the key themes that surfaced from the qualitative data derived from participants' responses. To ensure confidentiality, each participant is introduced using pseudonyms, preserving their anonymity throughout the discussion. The insights and personal accounts presented here serve as the basis for interpreting common patterns, shared experiences,

and perspectives expressed during the interviews.

3.1. Lived Experiences of Rural Secondary Teachers in Implementing Various Pedagogical Approaches in TLE—Exploring the lived experiences of rural secondary teachers in implementing various pedagogical approaches in TLE is essential to understanding how teaching is shaped by context. These educators often work in environments with limited access to instructional resources, requiring them to be resourceful and adaptive in their methods. Their experiences provide valuable insight into how pedagogical decisions are influenced by both the opportunities and constraints of rural settings. By examining these lived realities, we gain a clearer view of how teaching practices are formed, modified, and sustained in actual classroom conditions. This focus also sheds light on how rural teachers balance curriculum demands with the practical needs of their students, especially in a subject like TLE 49 that integrates both theoretical and hands-on learning. It recognizes the importance of their personal agency, creativity, and resilience in navigating professional challenges. Their stories offer rich, nuanced perspectives that can inform more responsive teacher support, professional development, and policy adjustments. Ultimately, understanding these lived experiences ensures that educational strategies are grounded in the realities of those who implement them.

3.1.1. Resource Limitations Foster Creativity—Rural TLE teachers frequently highlighted the challenge of limited access to equipment, materials, and facilities. However, these constraints appear to cultivate a unique form of professional creativity and adaptability. Teachers use indigenous or recycled materials to deliver practical lessons, and they often incorporate project-based or community-anchored activities to make learning relevant and achievable. This shift from textbook dependency to resourceful teaching is a major hallmark of their

lived experiences. Participant narratives consistently show that scarcity has not led to resignation, but rather to inventive adaptations. The repeated mention of alternative tools, improvised instructional aids, and the use of local environments as learning laboratories supports this. For instance, one teacher shared how they used home-based items to simulate workshop environments. This ability to convert limitations into teaching strategies exemplifies a deeply embedded resourcefulness in rural pedagogy. 50 Oubibi et al. (2022) emphasized that adequate instructional resources are fundamental to promoting quality teaching and learning, especially in practical subjects such as TLE. However, in contexts where materials are insufficient, rural teachers often adapt by improvising, repurposing, or utilizing available tools creatively to meet instructional goals. This aligns with the present study's findings, where teachers demonstrated high levels of resourcefulness in sustaining hands-on learning despite logistical constraints. The persistent scarcity of equipment pushes educators to innovate and integrate indigenous and recycled materials to facilitate meaningful instruction.

3.1.2. Contextualized Pedagogy Rooted in Community Realities—Teachers often design lessons based on the rural community context, ensuring that the curriculum is relatable and meaningful to students' lives. This involves aligning tasks with students' home settings, such as agricultural work or household crafts, allowing learning to naturally blend with every day rural life. The use of contextualized instruction not only enhances student engagement but also builds relevance in their education. This alignment with the students' lived reality reflects a pedagogical philosophy that values culture, locality, and practical skill. Teachers emphasized how connecting classroom content to rural life, like using local tools for agriculture or

focusing on community needs, improved understanding. As one educator noted, "Project-based learning rooted in students' environments builds deeper understanding." Such reflections underscore a deliberate and values-based approach to rural TLE education. Gregorio (2019) described TLE as a subject that is experiential, interdisciplinary, and deeply connected to real-life skills, making it especially suitable for contextualized instruction. The study's findings support this by showing how rural TLE teachers design lessons rooted in their local environment using farming tools, cooking ingredients, and livelihood practices familiar to students. This practice not only enhances engagement but also makes learning more relevant to students' everyday lives and future occupations.

3.1.3. Emotional Resilience and Teaching Identity.—The psychological dimension of teaching in rural settings emerged as a recurring theme. Teachers revealed that they not only face logistical difficulties but also emotional and motivational struggles. Despite this, they take pride in their work and show high levels of emotional resilience and personal commitment. Their 55

strong identity as rural educators are framed by perseverance and a mission to uplift their communities through education. Many teachers expressed feelings of fulfillment and pride despite the challenges, suggesting a deep internal motivation. For example, one participant noted how student achievements in a limited setting gave them immense satisfaction. Others described the importance of "being there" for students, filling not just academic but emotional gaps. This blend of hardship and fulfillment paints a rich emotional picture of rural TLE teaching. Amoah and Asare (2021) stressed the role of personal commitment and emotional investment in maintaining teaching performance in marginalized settings. Teachers in this study expressed their resolve to continue teaching despite exhaustion, emotional strain, and inadequate support demonstrating that professional identity is deeply intertwined with purpose and community service. This underscores how emotional resilience fuels long-term teacher retention and effectiveness in rural schools. Resilience, in this sense, becomes both a personal and pedagogical stance.

3.2. Rural Secondary Teachers Coping with the Challenges in Delivering TLE—Rural secondary teachers often navigate a complex teaching environment marked by limited resources, infrastructure constraints, and diverse learner needs. Their coping mechanisms in delivering Technology and Livelihood Education (TLE) reveal a deep sense of adaptability and commitment to quality instruction despite these challenges. Teachers frequently resort to improvisation, peer collaboration, and community engagement to bridge gaps in equipment, materials, and digital access. These strategies reflect both resilience and innovation, highlighting how context-specific approaches shape the pedagogical landscape in under-served areas. The experiences of these educators offer crucial

insights into how pedagogical practices evolve when faced with systemic limitations. Understanding their perspectives helps uncover the subtle ways in which they align curriculum goals with practical realities, ensuring learners acquire relevant skills. Moreover, it emphasizes the importance of capacity-building and support systems tailored to rural teaching contexts. By examining their narratives, educational leaders and policymakers can identify targeted interventions that promote equity, improve instructional delivery, and sustain teacher motivation.

3.2.1. Resourcefulness—One of the most emphasized coping strategies is resourcefulness. Teachers compensate for the lack of standard equipment and teaching materials by improvising tools, using recycled items, and maximizing

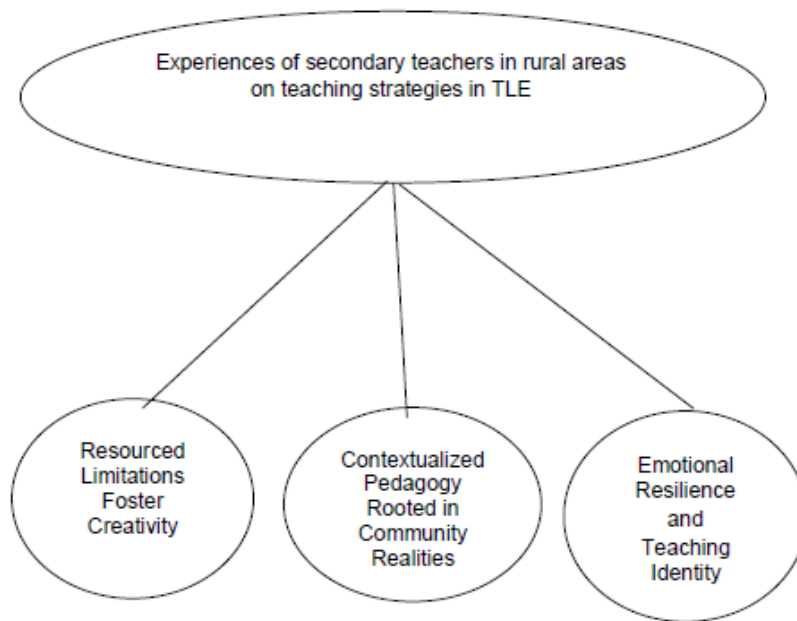


Fig. 3. Lived experiences of rural secondary teachers in implementing various pedagogical approaches in TLE

available resources. They create alternative instructional tools and often align teaching with what students already have access to at home. This pragmatic ingenuity allows them to sustain lesson delivery in sub-optimal conditions. This theme emerges in nearly every participant's response to coping challenges. Teachers reported modifying lesson plans to suit what's accessible, and aligning activities with students' home environments to increase feasibility. For example, lessons on farming would use home tools instead of unavailable school equipment. This practical adaptation represents a fundamental survival skill in rural education. Bandura's (1986) Social Cognitive Theory affirms that self-efficacy allows individuals to innovate under pressure. This theory is reflected in the creative coping responses of rural TLE teachers who devised new instructional tools from locally available items and modified lessons to meet students' realities. Such 60 actions highlight how teacher belief in their capacity directly influences resilience and problem-solving. These adaptive practices illustrate practical agency in

the face of structural inadequacies.

3.2.2. Collaborative Teaching Culture.—

Another key coping strategy is mutual support among colleagues. Teachers reported organizing informal learning communities or sharing best practices to manage challenges collectively. They also consult with peers for advice on instructional design, especially when facing new teaching content or student concerns. Collaboration strengthens their confidence and provides emotional and professional relief. Participants noted that peer networks reduced their isolation and boosted morale. Sharing of materials, mentoring relationships, and team planning are common practices that alleviate individual burdens. As one teacher stated, "We 62 always talk as a team to solve things together." This collegial environment serves as a buffer against burnout and professional stagnation. Alfonso and Perez (2021) explained that in the absence of institutional support, rural teachers tend to create informal learning communities that serve as emotional and professional anchors. This mirrors the findings in the study, where peer collabora-

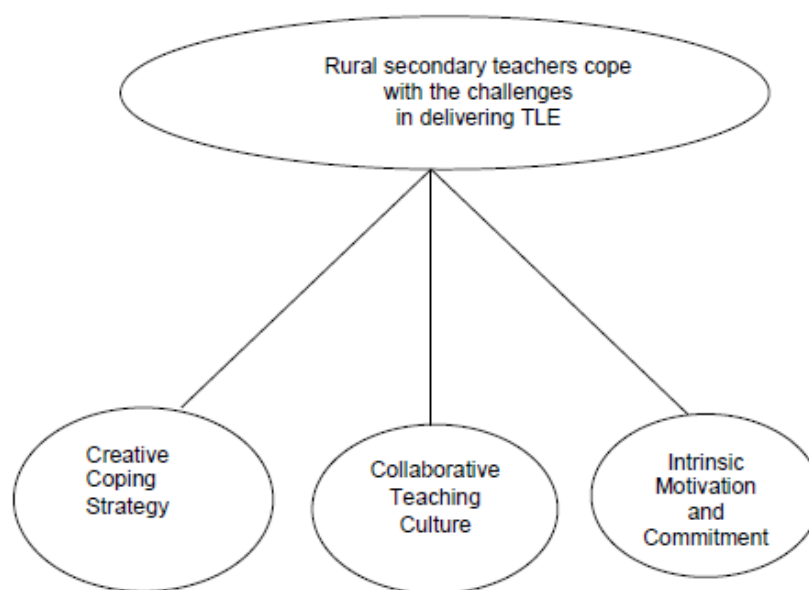


Fig. 4. Rural Secondary Teachers Cope with the Challenges in Delivering TLE

tion through LAC sessions and resource sharing were vital coping tools. These collective approaches alleviate stress, improve instructional quality, and foster a sense of shared purpose. Collaboration thus serves both as pedagogy and as a survival mechanism in rural education.

3.2.3. Intrinsic Motivation and Commitment to Learners.—A strong internal drive to help students emerged as another major coping mechanism. Teachers expressed that their personal dedication and love for teaching push them to overcome difficulties. They feel a sense of mission that transcends the physical limitations of their schools. This self-motivation leads them to prepare extensively and creatively engage students even under constraints. 64 This motivational resilience reflects a deep-seated ethical commitment to education. Teachers often stay late, find ways to motivate students despite limited tools, and demonstrate care beyond academics. One educator mentioned, “I prepare lessons ahead because I believe in my students’

potential.” This internal compass anchors teachers during adversity and sustains their long-term dedication. Kelt, Soriano, and Dimaculangan (2022) emphasized that teachers working in rural and underserved areas often demonstrate intrinsic motivation driven by a deep sense of mission. This internal drive enables them to persist in their role despite challenges in resources, time, and policy gaps. The participants in the study similarly described their commitment to serve learners as both a personal fulfillment and ethical responsibility. By aligning instruction with practical applications, the teacher 66 fosters greater student engagement and enhances the relevance of lessons, which in turn motivates learners and strengthens skill development. The mention of technology use indicates a forward-thinking mindset, leveraging digital tools to expand instructional resources and personalize learning. This reflects an adaptive, innovative pedagogy grounded in enhancing both accessibility and educational impact.

3.3. Learning insights do rural teachers gained in implementing various pedagogical approaches in TLE—Rural secondary teachers gain valuable insights into learner engagement, flexibility, and the importance of contextual relevance when implementing various pedagogical approaches in TLE. Through experience, they recognize that hands-on, learner-centered strategies yield better outcomes, especially when aligned with the community’s socio-economic realities. These insights reinforce the need for adaptable teaching methods that cater to diverse learning styles and resource availability. Teachers also develop a deeper understanding of how localized content and practical applications enhance learner motivation and participation. Additionally, rural educators learn the importance of reflective practice and continuous professional growth to refine their instructional techniques. They become more attuned to the challenges learners face and adjust their teaching accordingly to ensure inclusivity and effectiveness. The process fosters a sense of agency and professional confidence, empowering them to innovate despite constraints. They cultivate a deeper understanding of student dynamics and learning preferences, thereby refining their instructional practices. This continuous evolution is essential for fostering a robust educational framework that equips rural students with essential life skills necessary for future success. They cultivate adaptability and creativity in their teaching styles, leading to improved student outcomes. These insights not only shape their individual teaching philosophies but also contribute to the broader improvement of TLE instruction in similar rural settings.

3.3.1. Flexibility as a Teaching Necessity.—Rural teachers emphasized that flexibility both pedagogical and personal is essential for effective instruction. They adapt lesson plans spontaneously, adjust to student diversity, and often redesign strategies to suit unexpected limitations. This adaptability, gained through real

experience, becomes a key insight and teaching philosophy for many. Teachers learn that rigid methods fail in unpredictable, low-resource environments. Flexibility allows them to be responsive and innovative. One teacher mentioned always having “Plan B and C” to ensure continuity of instruction. This experience fosters a mindset of fluidity that becomes foundational to their identity as educators. Buyong et al. (2020) argued that differentiated and flexible instruction enhances engagement in varied learning contexts, particularly in practical subjects like TLE. Teachers in the study reported designing modular activities and adjusting pacing depending on student needs, particularly where tools or technology were lacking. These practices demonstrate the importance of pedagogical agility in sustaining learning outcomes. Flexibility becomes a non-negotiable skill in rural teaching, enabling teachers to adapt to ever-shifting realities.

3.3.2. Differentiated Instruction Enhances Student Engagement.—Many teachers recognized that understanding and addressing diverse learning styles is critical in rural contexts. Their insight is that student engagement and comprehension improve significantly when teaching is tailored. Using differentiated instruction by adjusting pace, materials, or methods has proven effective in these settings. Several educators shared stories of students thriving under modified or hands-on approaches. For example, visual and tactile methods helped students grasp technical content better than verbal instruction alone. Teachers realized that “one size fits all” does not work, especially in mixed-ability rural classrooms. This shift toward learner-centered strategies marks a major pedagogical evolution. Basal (2022) highlighted the necessity of varied instructional techniques that match student capabilities, particularly in skill-based disciplines. The study supports this, as teachers frequently used scaffolding, storytelling, and visual cues to accommo-

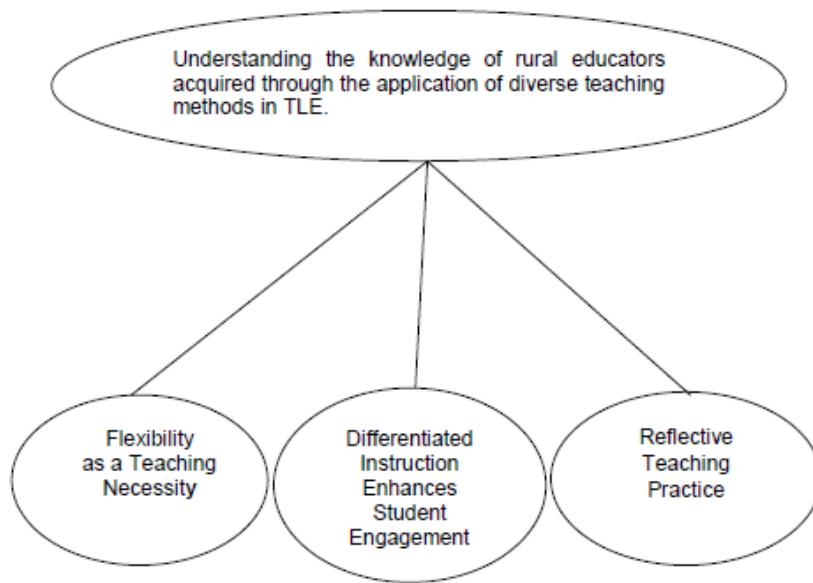


Fig. 5. Learning insights of rural teachers gained in implementing various pedagogical approaches in TLE

date diverse learner needs. These strategies not only improved engagement but also deepened learner understanding in resource-constrained settings. Differentiation, in this context, is not an enhancement it is essential for inclusion and effectiveness.

3.3.3. Reflective Teaching Practice.— Teachers learned that being an educator requires continuous self-improvement. Exposure to multiple challenges made them realize the importance of professional growth, acquiring new strategies, and staying open to feedback. Their experiences underscored that effective teaching is dynamic and rooted in reflective practice. This insight emerges from statements where teachers discussed gaining knowledge from both success and failure. One educator shared how classroom challenges inspired them to attend workshops and improve their planning. The experience of teaching in a rural setup becomes a teacher training process in itself. This lifelong learning mindset has become integral to their professional identity. Wenger's (1998)

Communities of Practice theory suggests that teachers refine practices through reflection and shared discourse within their professional networks. Teachers in the study demonstrated this by continuously adjusting strategies based on experience, training, and feedback from learners and peers. Reflection allowed them to improve classroom management, innovate content delivery, and evaluate outcomes. Witnessing student growth in such contexts becomes a powerful motivator, reinforcing the teacher's sense of purpose and passion. The experience of teaching in a rural area is not only transformative but also personally, shaping the teacher's worldview and life philosophy. Based on the figure presented, three themes emerged from the responses of the participants with regards to learning insights do rural teachers gained in implementing various pedagogical approaches in TLE which were: flexibility as a teaching necessity, differentiated instruction enhances student engagement, and reflective teaching practice.

4. Implications and Future Directions

In this chapter, I presented a comprehensive summary of the study, highlighting the core findings and drawing meaningful implications that reflect the lived realities of TLE teachers in rural contexts. The primary aim of the research was to explore the pedagogical strategies employed by teachers, the challenges they encounter in delivering instruction under resource-limited conditions, and the valuable insights they have gained through these experiences. Guided by a qualitative narrative approach, the study utilized thematic analysis to interpret open-ended interview responses, following Creswell's (2020) framework to ensure authenticity and depth in capturing the voices of participants. This approach allowed teachers to share detailed narratives of their instructional practices and professional journeys, resulting in an enriched understanding of how they navigate their unique teaching environments.

4.1. Findings—The analysis of participant responses revealed key themes: teachers' lived experiences often involved overcoming barriers such as inadequate facilities, limited materials, and diverse learner needs. In response, educators employed contextually driven strategies including the use of local resources, improvisation, differentiated instruction, and collaboration with peers and the community. These coping mechanisms underscored their creativity, resilience, and commitment to delivering meaningful education despite systemic constraints. Furthermore, the insights they gained emphasized the necessity of pedagogical flexibility, the relevance of context-based instruction, and the importance of cultivating supportive relationships with students and stakeholders to enhance engagement and learning outcomes.

4.2. Implications—The findings of this study have significant implications for teacher education, curriculum planning, and educational policy making, particularly in rural areas. It affirms that rural TLE teachers, despite the scarcity of instructional tools, are capable of delivering meaningful instruction through creativity, contextualization, and resourcefulness. These realities highlight the necessity of designing teacher preparation programs that emphasize adaptability, localized pedagogy, and low-resource innovation. Furthermore, curriculum developers must recognize the legitimacy and

effectiveness of culturally grounded teaching methods that arise from teachers' lived experiences in under-resourced environments. Another implication lies in the recognition of rural teachers' emotional resilience and their profound commitment to student learning despite institutional and infrastructural challenges. The study reveals that many teachers experience stress, isolation, and fatigue, yet continue to perform their duties with a sense of mission rooted in service to their community. These realities suggest that policymakers and school administrators should prioritize teacher welfare through psychosocial support, mentoring programs, and public acknowledgment of their work. Equally, professional development must not only address pedagogical skills but also promote teacher well-being and morale. The study also points to the vital role of collaboration and collegiality among teachers in addressing shared difficulties that aligns on the Communities of Practice Theory by Wenger (1998). The theory emphasizes that learning is a social process that occurs through participation in communities where individuals share practices, tools, and language. It underscores the importance of collaborative learning, where rural teachers often form informal networks to exchange resources, teaching strategies, and solutions to common challenges. This suggests the need for institutionalizing such practices by integrat-

ing them into school-based training, learning action cells (LAC), and local professional communities. Supporting these grassroots support systems can enhance instructional delivery, foster innovation, and sustain motivation within rural teaching environments. Finally, the study implies the urgent need to address systemic inequalities in the distribution of resources, infrastructure, and support in TLE education. Rural schools continue to operate under significant disadvantage compared to their urban counterparts, especially in terms of equipment, teaching aids, and access to industry-aligned training. Addressing this requires deliberate efforts from education departments to allocate equitable funding, procure localized learning materials, and ensure infrastructure development. Without these interventions, the burden of adaptation will continue to fall solely on the shoulders of already overextended rural educators.

4.3. Future Directions—Based on the findings of the study, it is important that the findings are properly relayed and used by the significant people whom this research was intended for. For Teachers. Rural TLE teachers must be continuously supported through targeted professional development programs that address their unique contextual challenges and pedagogical needs. Training must emphasize practical strategies such as differentiated instruction, contextualization, improvisation using local materials, and resilience-building techniques. Teachers should be encouraged to engage in reflective practice and collaborative networks that allow them to exchange best practices and emotional support. As frontliners of education in marginalized areas, teachers must be equipped not only with pedagogical tools but also with renewed motivation and recognition of their crucial role in rural transformation. For Learners. Future efforts must focus on developing learner-centered approaches in TLE that are aligned with students' everyday experiences, interests, and socio-economic realities. Learners in ru-

ral areas should be provided opportunities for more contextualized, hands-on, and differentiated learning experiences that foster skill development and self-reliance. Educational programs must integrate livelihood-oriented content that enhances both engagement and employability. Empowering students through meaningful participation and access to relevant tools and resources can transform them into active contributors to their local economies and communities. For School Administrators. School leaders play a critical role in fostering a supportive culture that enables innovation and collaboration among teachers. Future directions should include strengthening instructional leadership through mentoring programs, regular classroom observations, and inclusive school-based training initiatives. Administrators must actively advocate for resource mobilization, community partnerships, and sustainable practices that support TLE delivery. By cultivating a collaborative and enabling environment, school heads can empower their teaching force and improve learning conditions for students. For DepEd Officials. Future interventions must ensure equitable distribution of resources, funding, and professional development programs that prioritize the needs of rural TLE teachers. DepEd officials should develop mechanisms for monitoring instructional gaps and respond with timely and localized interventions, such as mobile tool kits, learning hubs, or modular teacher training programs. Strengthening support systems for mental health and instructional coaching must also be considered. Furthermore, DepEd's commitment must go beyond compliance and move toward transformative support that addresses both instructional quality and teacher well-being in underserved regions. For Policy Makers. Education policy must be reshaped to recognize and respond to the lived realities of rural teachers and learners, especially in skill-based disciplines like TLE. Future policy directions should include the institutionalization of

localized curriculum design, budgetary reforms that support low-resource innovation, and increased investment in rural infrastructure. Policies must also mandate collaborative engagement among national agencies, LGUs, and industry stakeholders to strengthen the alignment between education and livelihood. Creating enabling policies that value contextualized education can lead to more equitable and sustainable development for rural communities. For Future Researchers. Further research may explore the longitudinal effects of teacher-led coping strategies on student performance, classroom dynamics, and teacher retention in 83 rural areas. Narrative inquiries may also be extended to other geographical locations to compare cross-cultural pedagogical responses and challenges. Action research can be conducted to pilot and evaluate interventions that incorporate localized pedagogy, experiential learning, and technology integration in resource-constrained environments. The continuation of this inquiry is crucial for deepening understanding of rural education and driving transformative practices grounded in lived experiences.

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