



Teacher Leadership and Collaboration in Leading Curriculum Innovation: A Case Study on Effective Practices

Jamela Ainin¹, Maria Gloria Tampus², and John Mart Eliseo³

¹JHS Teacher, DepEd-Mabini National High School, Division of Davao de Oro

²Elementary School Head, DepEd- Tagbaw Elementary School, Division of Davao City

³Graduate School Professor, Holy Cross of Davao College, Sta. Ana Avenue, Davao City

Philippines

ABSTRACT

This case study investigates the role of teacher leadership and collaboration in facilitating curriculum innovation within the educational settings of Davao de Oro and Davao City. The research focuses on the effective practices that improve educational outcomes and how teacher collaboration and leadership drive curriculum reform. The study is guided by three key objectives: exploring teachers' lived experiences in implementing curriculum innovations, identifying coping mechanisms to overcome the challenges associated with curriculum changes, and uncovering insights and strategies that support curriculum reform. The study also seeks to address three central research questions regarding the challenges teachers face in implementing new curriculum practices, the strategies they use to cope with these challenges, and the lessons they have learned that can guide future curriculum innovations. Theoretical grounding for this study is provided by Transformational Leadership Theory, which emphasizes the role of leaders in creating an environment that fosters creativity, collaboration, and innovation. The theory underscores the importance of teacher leaders in driving educational change and promoting cooperative practices. This research employed a qualitative-case study approach, utilizing semi-structured interviews to gather data from six public master teachers in the Department of Education, who were selected based on their extensive experience in teaching and leading curriculum initiatives. Thematic analysis was employed to interpret the data, allowing for an in-depth understanding of how teacher leadership and collaboration contribute to successful curriculum innovation. The findings highlight key strategies used by teachers to overcome challenges and provide valuable insights for educators and administrators seeking to foster a culture of curriculum innovation in schools. By documenting the practices of effective teacher leaders, this study contributes to the broader understanding of how teacher collaboration and leadership can drive meaningful curriculum reforms in diverse educational contexts.

Keywords: Collaboration, Curriculum innovation, Educational policy, Teacher leadership.

1. INTRODUCTION

Innovative curriculum is more important than ever because the educational landscape is always changing. The need for educational systems to adapt to the evolving requirements of students, the workforce, and society at large is growing in the global setting. Under the direction of empowered educators, the key to innovation, in turn, is knowledge and its management including promoting a culture of innovation and developing innovative teaching programs where schools provide relevant, high-quality learning that prepares children for future challenges (Mohamad, Ramayah, and Chiun Lo, 2020; Mondal, Al-Kfairy, and Mellor, 2023; Simeoni, Caballero and Lepez, 2024). However, two crucial components for developing and implementing a successful curriculum are strong teacher leadership and collaboration among educators, both of which are critical to the success of such curriculum innovations. Organizations need school and teacher leaders with a wide range of abilities to tackle these problems, including the capacity for communication, collaboration, innovation, and integrity in leadership (Taylor, et al., 2019).

Countries globally are realizing the value of teacher leadership and teamwork, in driving innovation and transformation. A 2019 OECD report highlighted Finland, Singapore and Canada for incorporating teacher leadership

into their education systems resulting in the implementation of flexible and responsive teaching approaches. The success of these nations demonstrates that empowering teachers with leadership roles and involving them in decision making can improve curriculum development, instructional methods and educational achievements. However, According to a research by the Society for Human Resource Management (SHRM), firm that no ideal methods for training leadership educators. Uncertainty about the best ways to teach leadership skills can result in unproductive programs that do not fully prepare leaders for the problems they will encounter (Cuskelly, et al., 2021).

On a countrywide scale, from the research study of Diano,et.al.,(2023), stated that in the Philippines, efforts have been made to enhance the system by introducing changes to the curriculum. The K 12 Program and the Matatag Curriculum served as instances of the governments commitment to updating education in line with norms. Yet, from the study of Kilag, et.al.,(2023), mentioned that the real test lies in how these national strategies are put into action at the level, where teachers participation, in shaping and adjusting the curriculum is essential. Leadership and teamwork, among teachers are crucial for making sure that national changes are not put into practice but also suit the context and are successful, in enhancing student academic achievements (Hara, 2023).

In the Davao Region, specifically in Davao del Oro and Davao City, the problem of curriculum innovation and the need for teacher leadership are particularly pressing. Schools in this region are grappling with diverse student populations, varying resource availability, and the constant pressure to meet national standards while addressing local educational needs. A study by Ramos (2019) revealed that many teachers in Davao City and Davao de Oro and surrounding areas lack sufficient opportunities for leadership roles and collaboration, which can hinder their ability to contribute to curriculum innovation effectively. This is compounded by the challenges posed by geographically dispersed schools, where access to professional development opportunities is limited, and teachers may feel isolated from broader educational reforms.

Additionally, Balinggan (2023), emphasized that the absence of a structure for teachers to collaborate in shaping the curriculum is considered an obstacle, to fostering innovation in community schools. Teachers frequently find themselves managing curriculum adjustments independently inconsistencies, in execution and overlooking chances to establish student centered teaching methods. These challenges include the need for comprehensive teacher training programs, the integration of technology in global education, and the alignment of the curriculum with evolving global trends. Bautista (2020) also found that while there is a growing recognition of the importance of teacher leadership in the Davao region, more focused efforts are needed to cultivate and support teacher leaders who can drive and sustain curriculum innovation.

In light of the ways in which teacher collaboration and leadership support curricular innovation is crucial given the quick changes and changing demands in education. With an emphasis on successful educational practices, teaching strategies and that enhance the curriculum, this case study attempts to investigate how teacher collaboration and leadership support curriculum innovation. By examining the experiences of teachers and school administrators in Davao del Oro and Davao City, this study aims to ascertain how these crucial elements affect the successful execution of curriculum innovations. The results of the study could foster collaboration, enable educators to spearhead creative initiatives, and support educators, stakeholders, and policymakers in creating and executing more effective curriculum development procedures.

2. RESEARCH OBJECTIVES

This study aimed to investigate how teacher collaboration and leadership facilitate curriculum innovation focusing on effective practices that improve educational outcomes. This study is guided by the following specific objectives:

1. To explore the lived experiences of teachers in implementing curriculum innovations;
2. To identify the coping mechanisms of teachers in implementing curriculum innovations; and
3. To uncover insights and strategies of teachers in implementing curriculum innovations.

2.1 RESEARCH QUESTIONS

2. What significant experiences have you encountered as teachers in implementing curriculum innovations?

- 2.1 What is the biggest challenge you have faced in implementing new curriculum practices?
 - 2.2 Can you describe a time when a curriculum innovation was difficult to implement? What factors made it challenging?
2. How do you cope with the challenges as teachers in implementing curriculum innovations?
- 2.1 What strategies have you found most effective in overcoming obstacles to implementing new curriculum changes?
 - 2.2 Can you share an example of a time when you successfully navigated a particularly tough curriculum implementation?
3. What insights and learnings can you share with other educators regarding curriculum innovation?
- 3.1 From your experiences, what are the most important lessons you've learned in implementing curriculum innovations?
 - 3.2 How has your perspective on curriculum innovation changed as a result of these experiences?
 - 3.3 What advice would you give to other teachers and administrators who may face similar challenges in implementing curriculum innovations?

3. THEORETICAL FRAMEWORK

The foundation of this research is the concept of Transformational Leadership Theory, which was established by James MacGregor Burns in 1978 and expanded upon by Bernard M. Bass in the following decade. According to the theory, leaders create a workplace that promotes creativity, innovation, and constructive change in order to inspire and drive their people to go above and beyond expectations. The theory of transformational leadership has been extensively used in the field of education to examine how school administrators or teacher leaders contribute to the implementation and maintenance of educational changes. This idea has been referenced by scholars such as Leithwood and Jantzi (2006) and Northouse (2016), who have highlighted its applicability in the context of curricular innovation, where leadership is crucial in promoting cooperative and revolutionary practices in educational institutions. This hypothesis offers a starting point for investigating how teacher collaboration and leadership might promote a culture of innovation in curriculum development and educational practices.

3.1 Method

This research employed single case research. Single case research or SCR is a study that makes a research design in the form of intervention or treatment of subjects that effectively documents that improvements have occurred (Dan & Odom 2014). This research design is usually a case that occurs in individuals/singles whose subjects can occur in students, teachers, or even parents. This study employed a qualitative-case study research approach. As Nassaji (2020) explains, qualitative research involves a naturalistic exploration of non-numerical data. Instead of focusing on explaining and controlling variables, its goal is to understand and investigate phenomena deeply. It emphasizes the development process or patterns rather than the final product or result of the research, and it is contextualized and interpretive. Through qualitative research, it is possible to gain insight into how a person interprets and subjectively perceives their social reality. The locale of this study was in Davao de Oro and Davao City. For this study, there were six (6) public school master teachers as participants in the Department of Education. Creswell (2007) mentioned that selection of subjects using a purposive technique, where the criteria subject has been determined before, specifically choosing the participants. The purpose of giving participants initials is intended to maintain privacy and protect information about the subject (Creswell, 2007). Black (2010), stated that participants were selected based on the inclusion criteria of having at least five years of experience as a public-school teacher, ensuring they can provide insights into curriculum innovation and its effective practices. The instrument that was used in this study was a semi-structured interview. George (2023) stated that the basis of a semi-structured interview, a method of data collection, is asking questions within a predetermined topic framework. In research, semi-structured interviews are often qualitative. The information obtained from the interview guide was coded, transcribed, examined, and thematically interpreted. Bird (2016) also mentioned that an interview guide consisted of a straightforward compilation of the main topics the researcher intended to address during the interview, along with high-level questions aimed at obtaining specific answers for each case. Certain questions were frequently spontaneously addressed during the conversation with the interviewee, eliminating the need to ask them explicitly. Thematic analysis is a method of

assessing qualitative data, according to Caulfield (2023). Thematic analysis is to identify themes, i.e. patterns in the data that are important or interesting, and use these themes to address the research or say something about an issue. This is much more than simply summarising the data; used to become familiar with the data, generate initial codes, search for themes and review, defining theme, writing -up (Clarke & Braun, 2013).

In this study, the researcher dedicated significant attention and effort to formulating comprehensive, deliberate, and well-thought-out qualitative research questions. In order to comply with ethical guidelines, the researchers obtained permission to conduct the study and the consent of the six (6) Davao de Oro and Davao City public school master teachers who participated.

3. RESULTS

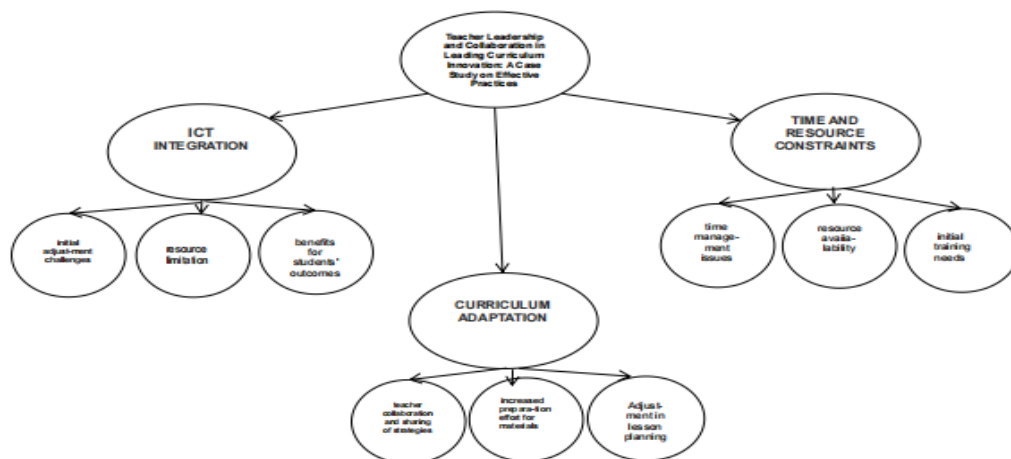


Figure 1. The Lived Experiences of Public School Teachers in Implementing Curriculum Innovations

As shown in Figure 1, from the collected data during the in-depth interview (IDI) of the participants, four (4) major themes have emerged in the experiences of public school master teachers in implementing curriculum innovation, these are: ICT integration, Time and Resource Constraints, Curriculum Adaptation. Also, nine (9) core ideas have emerged; initial adjustment challenges, resource limitation, benefits for students’ outcomes, time management issues, resource availability, initial training needs, teacher collaboration and sharing of strategies, increased preparation effort for materials, adjustment in lesson planning.

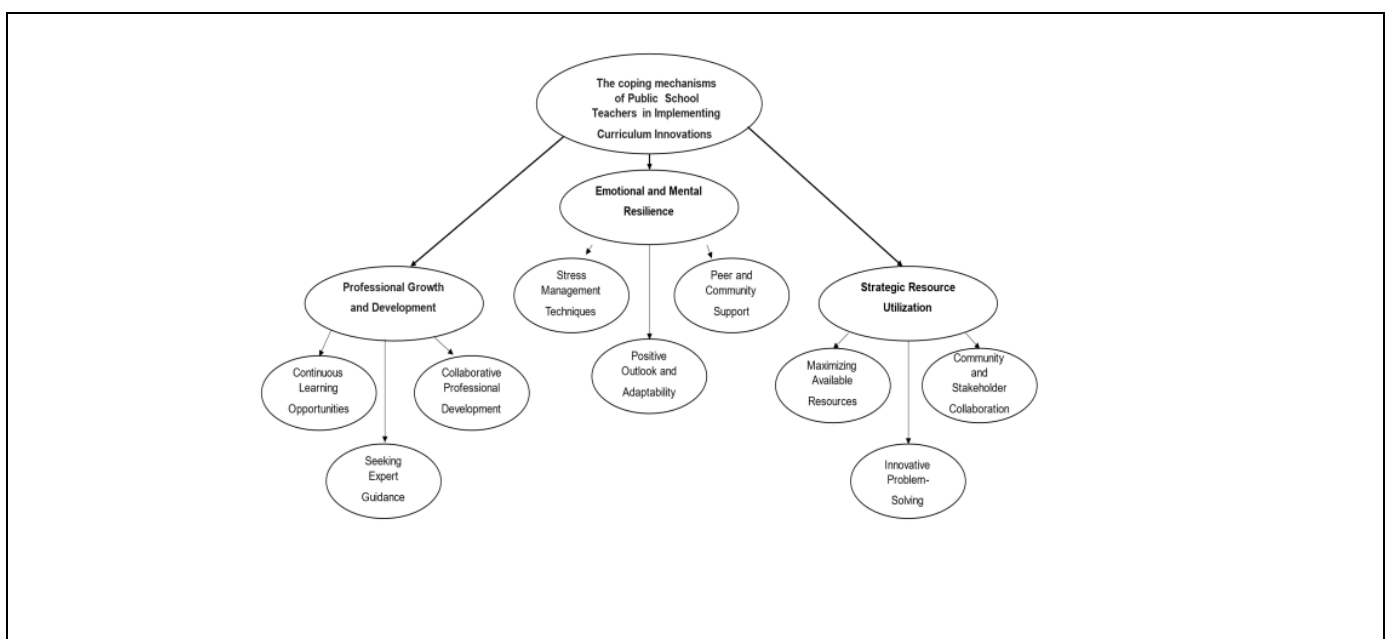


Figure 2. The coping mechanisms of Public School Teachers in Implementing Curriculum Innovations

As shown in Figure 2, from the collected data during the in-depth interview (IDI) of the participants, three (3) major themes have emerged in the experiences of public school teachers in implementing curriculum innovations, these are: professional growth and development, emotional and mental resilience and strategic resource utilization. Also, nine (9) core ideas have emerged; continuous learning opportunities, collaborative professional development, seeking expert guidance, stress management techniques, peer and community support, positive outlook and adaptability, maximizing available resources, community and stakeholder and innovative-problem solving.

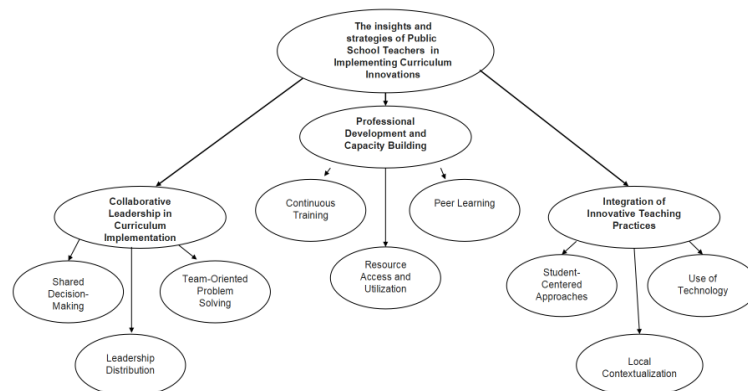


Figure 3. The insights and strategies of Public School Teachers in Implementing Curriculum Innovations

As shown in Figure 3, from the collected data during the in-depth interview (IDI) of the participants, three (3) major themes have emerged in the experiences of public school teachers in implementing curriculum innovations, these are: collaborative leadership in curriculum implementation, professional development and capacity building and integration of innovative teaching practices. Also, nine (9) core ideas have emerged; shared decision-making, team-oriented problem solving, leadership distribution, continuous training, peer learning, resource access and utilization, student-centered approaches, use of technology and local contextualization.

Discussion

This chapter focuses on interpreting and extensively discussing the study's findings and delving into its implications and potential future directions. Within it, 9 fundamental themes have surfaced regarding the experiences of public school teachers in implementing curriculum innovations.

ICT Integration

Modern education now based heavily on ICT integration, which makes classrooms more dynamic and interesting. ICT integration in education has drawbacks despite its benefits, especially when it is first introduced. Teachers must modify their methods of instruction while addressing challenges such as the availability and resource constraints. Research by Gómez-Fernández & Mediavilla (2021) highlighted interactions exist in the relationship between the ICT use and academic success must be taken into consideration in order to comprehend how ICT affects outcomes for learning. Technological competence includes practical, conceptual (Wilson et al., 2020) and technological knowledge necessary to effectively teach a subject, concept or theme. This corresponds to the term of technological pedagogical content knowledge (TPACK). More recently, Backfsch, Lachner, Sturmer, & Scheiter (2021) noted that ICT's transformative potential is maximized when teachers receive adequate training and institutional support.

Initial adjustment challenges

ICT integration requires significant adjustment from teachers to adapt to new methodologies effectively. This transition, while challenging, leads to increased engagement and improved learning environments. This suggests that teachers who embrace these changes can create more dynamic classrooms despite the difficulties.

"Integrating ICT was a big adjustment but very rewarding. It made classes more engaging and interactive." (P1, Line 1)

"ICT integration has been challenging at first due to limited resources. Eventually, it became a helpful tool for enhancing learning." (P2, Line 2)

"The K-12 curriculum pushed me to innovate my teaching. It was an adjustment, but nakita nako nga mas daghan opportunity for active learning." (P6, Line 6)

This highlights the adaptability of teachers in overcoming the initial hurdles of ICT integration. According to Dumford and Miller (2020), educators who persist through these challenges positively impact educational reforms and policy documents, learning environments (Blundell et al., 2020). Ajani and Govender (2019) argued that teachers' entry knowledge and skills are insufficient, necessitating in-service training on ICT in education for professional development.

Resource limitations

There are two (2) participants mentioned that limited resources emerged as a major barrier in ICT implementation, including the availability of devices and training materials. This suggests that addressing resource gaps is crucial for effective ICT integration.

"ICT integration has been challenging at first due to limited resources. Eventually, it became a helpful tool for enhancing learning." (P2, Line 2)

"Resources were a challenge. Daghan kaayo kulang, especially sa materials for ICT and differentiated learning." (P5, Line 13)

Liu, et al., (2021) emphasized that resource limitations often hinder technology adoption in schools. Additionally, the lack of access to digital resources perpetuates disparities in educational outcomes, widening the gap between the advantaged and disadvantaged and that equitable access to resources is critical in closing digital divides (Bulfin, and McGraw, 2015; Ilomäki, et al., 2023).

Benefits for Student Outcomes

Performance-based assessments have been highlighted as instrumental in fostering student creativity and critical thinking. This suggests that these assessments provide students with opportunities to apply their knowledge in meaningful and innovative ways, moving beyond traditional rote learning.

"The shift to performance-based assessments was significant. It allowed students to demonstrate their creativity and critical thinking." (P3, Line 3)

This perspective aligns with Bensley et al., (2021), who emphasized that performance-based assessments improve critical thinking skills that are important for students to have which is one of the higher-order thinking skills. Additionally, Sobral (2021) highlighted the importance of these assessments in accountable for finding solutions to issues with different project work activities in order to enhance students' skills in a rapidly changing world.

Time and Resource Constraints

Time and resource constraints are significant challenges that teachers face when implementing curriculum innovations. These constraints affect their ability to balance teaching responsibilities, innovate lessons, and ensure high-quality education delivery. According to Liesa-Orús, et al. (2020), teachers' ability to successfully implement new curriculum may be hindered by a lack of time and resources, collaboration and professional growth are essential for overcoming obstacles and improving the efficacy of teacher-led curriculum development.

Time Management Issues

Teachers struggle to manage their time effectively due to the demands of lesson preparation and administrative tasks. This suggests that balancing these responsibilities is critical to ensuring the successful implementation of curriculum changes.

"A time management. Daghan tasks unya kulang pa gyud ang training materials." (P2, Line 6)

"Time management is a big issue. Balancing preparation for innovative lessons and administrative tasks is challenging." (P1, Line 5)

These findings reflect the challenges as teachers continue to work in the new normal of education, it is significant to discuss matters on time management, as stated by Haider (2019), time management may assist people in enhancing their performance, improving their learning skills, and achieving professional success, which is tantamount to delivering quality education. NEA (2020), stated that teachers is that it allows them to manage their time effectively, helping them to avoid burnout, maintain a healthy work-life balance, and deliver quality instruction.

Initial Training Needs

The lack of proper training at the outset was identified as a significant barrier, making it difficult for teachers to adapt to new curriculum practices. This suggests that investing in comprehensive training programs is essential for empowering educators.

"Lack of proper training at the beginning was the biggest challenge." (P3, Line 7)

This aligns with research by Kim and Lee (2021), who emphasize that professional development programs, successful implementation often involves a combination of in-service training, professional learning communities, and ongoing support to equip teachers with the skills needed for curriculum innovation (Lucas & Villegas, 2020). Continuous training allows teachers to stay updated on the latest research and best practices in multilingual education. Additionally, it enables them to reflect on their teaching methods and make necessary adjustments to better address gaps in knowledge and practice, multilingual students (Brown, 2023).

Curriculum Adaptation

Adapting to new curriculum standards is a multifaceted process that includes updating lesson plans, changing teaching methods, and making sure they are in line with the most recent educational objectives. Teachers must be creative, cooperative, and use iterative learning to meet this adaptation. In addition, a study by Zhang et al., (2019) found that teachers who had high levels of support from their colleagues reported lower levels of job-related stress and collaborative practices in ensuring successful curriculum implementation. Similarly, to help teachers navigate curriculum changes, students in multilingual classrooms exhibit better academic achievement, increased engagement, and increased cultural awareness when instructors receive proper training and support (Illman & Pietilä, 2017; Hung & Chen, 2023).

Need for Revised Teaching Methods

Teachers emphasized the need to adjust their teaching methods to align with the new curriculum. This suggests that professional growth and flexibility are essential in addressing curriculum demands.

"The new curriculum had a lot of unfamiliar concepts. We had to revise our teaching methods to make sense of it for the students." (P1, Line 27)

"I found that using traditional methods didn't work as well; I had to innovate to teach the new content effectively." (P3, Line 29)

"The K-12 curriculum was initially hard to implement. Ang teachers ug students kinahanglan gyud mag-adjust sa bagong format." (P4, Line 32)

This aligns with the findings of Kilag et al. (2023) who emphasized the importance of innovative teaching strategies, profound comprehension of the subject matter, pedagogical techniques, and the complex web of student needs gives them a unique and priceless perspective and to meet curriculum requirements.

Time Needed for Lesson Plan Adjustments

Several participants noted the significant time required to align lesson plans with the new curriculum format. This suggests that curriculum adaptation is a resource-intensive process requiring sufficient time for effective planning.

"We needed more time to adjust our lesson plans to align with the new curriculum's format." (P2, Line 28)

"There was a lot of trial and error to adapt lesson plans to the new curriculum." (P2, Line 42)

The findings are consistent with Sinnema (2020) noted that teachers often have heavy workloads, leaving limited time for additional curriculum-related tasks. Addressing these challenges and providing teachers with ample time to adapt lesson plans, institutional support to teachers is crucial for the successful implementation of this approach

Need for Innovative Teaching Strategies

Participants underscored the importance of innovation in adapting to curriculum changes. This suggests that teachers must embrace creative approaches to address diverse student needs.

"I found that using traditional methods didn't work as well; I had to innovate to teach the new content effectively."
(P3, Line 29)

"The change in the curriculum meant that I had to spend more time creating materials that aligned with the new standards." (P4, Line 30)

"Teachers collaborated more to share strategies and lesson plans for adapting to the new curriculum." (P5, Line 31)

These insights align with the findings of Kilag, et al. (2023), who advocated often benefit from the collective expertise of educators working together to improve curricular offerings. Within these collaborative spaces, teachers share insights, best practices, and innovative ideas, collectively enriching the educational tapestry and support innovative teaching methods in order to address the demands in modern curricula.

Professional Growth and Development

Professional growth and development are essential for teachers to successfully implement curriculum innovations and overcome associated challenges. Continuous learning opportunities, such as ongoing professional development, allow educators to stay informed about new teaching strategies and curriculum changes. Darling-Hammond, Hyler, and Gardner (2017) emphasize that effective professional development should be long-term and job-embedded, fostering deeper understanding and sustained improvement in teaching practices. This type of development helps teachers navigate curriculum changes more confidently. Additionally, collaborative professional development, where teachers work together to solve problems and share strategies, enhances collective growth and ensures that educators are better equipped to handle challenges. Avalos (2011) highlights the significance of collaboration, showing that teachers who engage in joint professional learning activities tend to implement innovative practices more successfully. One participant may reflect, "Collaborating with my colleagues during professional development sessions has been vital in finding solutions to the challenges we face with the new curriculum. We support each other by sharing strategies and resources," while another may say, "When I struggled with a new teaching method, seeking guidance from an expert in the field helped me gain clarity and apply the curriculum changes more effectively."

Continuous Learning Opportunities

Continuous learning opportunities are critical for teachers to stay informed about emerging educational trends, methodologies, and curriculum innovations. These opportunities allow educators to continuously improve their pedagogical practices and adapt to new teaching requirements. Desimone (2009) highlights that professional development should be sustained and tailored to teachers' real-world classroom needs in order to be most effective. When teachers engage in continuous learning, they gain the skills and knowledge necessary to implement new curriculum changes confidently and effectively. Such opportunities can also address gaps in knowledge, allowing teachers to expand their repertoire of teaching strategies and adapt them to different student needs. This was supported by the statement of one participant:

“The ongoing professional development programs have been essential in helping me integrate new curriculum components into my teaching. These sessions equip me with new ideas and approaches that I can immediately apply in my classroom.” (P6-L9)

Moreover, continuous learning opportunities also foster a culture of improvement within schools. When teachers participate in professional development, they not only grow individually but also contribute to the collective growth of the educational community. Guskey (2000) stresses that professional development programs should be evaluated based on their impact on both teachers and students, ensuring that the learning experiences translate into improved teaching practices and better student outcomes. Teachers who participate in these opportunities are better equipped to meet the challenges of implementing new curriculum changes.

Collaborative Professional Development

Collaborative professional development is an essential strategy for teachers as they navigate curriculum innovations. It involves teachers working together in professional learning communities (PLCs) to share experiences, resources, and strategies to solve common challenges. Borko (2004) emphasizes that collaboration fosters a reflective practice where teachers can learn from one another and refine their teaching methods. Through collaboration, teachers can address specific issues they face in the classroom, exchange ideas on how to implement curriculum changes, and develop a shared understanding of best practices. By working together, educators can support each other in overcoming obstacles, making the process of curriculum implementation more effective. This view was supported by one participant:

"Collaborating with colleagues during our PLC meetings and LAC sessions has been incredibly beneficial. We share successful strategies and discuss the challenges we face, which helps us find solutions together." (P1-L4)

The collaborative approach also strengthens the sense of community and collective responsibility among teachers, ultimately improving overall school performance. When teachers engage in collaborative professional development, they are more likely to feel supported and empowered to implement curriculum changes. Collaborative learning also fosters deeper engagement with the curriculum, as teachers learn to adapt and refine the content to better suit the needs of their students.

Seeking Expert Guidance

Seeking expert guidance is another important strategy for teachers to successfully navigate the challenges of curriculum implementation. When faced with new teaching methods or unfamiliar curriculum content, teachers often benefit from consulting with experienced educators, mentors, or external experts who can provide valuable insights and support. Vescio, Ross, and Adams (2008) argue that expert guidance is essential for teachers, particularly when implementing complex changes in curriculum or pedagogy. Expert advice helps clarify uncertainties and provides teachers with proven strategies for overcoming specific challenges. This view was supported by the following participants:

"When I was struggling with the new assessment strategies, I reached out to a curriculum specialist who gave me specific guidance on how to integrate them into my lessons." (P5-L12)

"I was able to successfully implement a new curriculum model after working closely with an expert who helped me understand how to approach the changes step-by-step." (P2-L15)

Expert guidance not only helps teachers overcome immediate challenges but also encourages long-term professional growth. Showers and Joyce (1996) suggest that expert mentorship or coaching can significantly impact teacher effectiveness by providing personalized support tailored to individual needs. Seeking guidance from experts also promotes reflective practice, where teachers are encouraged to critically assess their methods and make adjustments as necessary.

2.2 Emotional and Mental Resilience

Emotional and mental resilience is essential for teachers to navigate the complexities of curriculum implementation, as they often face significant challenges that can lead to stress and burnout. Building resilience involves developing stress management techniques, cultivating strong peer and community support, and maintaining a

positive outlook while adapting to changes. According to Kyriacou (2001), teachers must be equipped with emotional and mental coping strategies to thrive in a high-pressure environment, especially during times of curriculum innovation. Teachers who exhibit resilience are better able to manage the emotional demands of their profession, collaborate effectively with colleagues, and maintain a constructive perspective amidst challenges. This resilience not only helps in adapting to changes but also enhances teachers' long-term job satisfaction and overall well-being. When teachers develop these coping strategies, they are more likely to sustain their passion for teaching and overcome obstacles to curriculum implementation.

Stress Management Techniques

Stress management techniques are crucial for teachers to maintain their emotional and mental resilience while implementing curriculum changes. Teachers frequently face high levels of stress due to increased demands, student needs, and administrative expectations, making effective stress management strategies essential. According to Kyriacou (2001), stress management techniques such as mindfulness, relaxation exercises, time management, and cognitive restructuring can significantly reduce the negative impacts of stress on teachers' well-being and performance. These techniques help teachers cope with the demands of curriculum innovation by providing mental clarity, reducing anxiety, and improving focus. For example, practicing mindfulness allows teachers to stay grounded in the present moment, which can reduce feelings of overwhelm. These ideas were supported by two (2) participants, as they shared:

"I find that taking a few minutes to practice deep breathing or mindfulness helps me clear my mind and manage the stress I feel during intense curriculum changes." (P3-L10)

"When I manage my stress better, I feel more focused in meetings and in the classroom, and I can think more creatively about how to implement the new curriculum." (P4-L12)

Moreover, stress management also plays a role in teachers' ability to remain effective in their roles. Effective coping strategies not only help teachers deal with stress but also improve their decision-making and ability to collaborate with others. According to Skaalvik and Skaalvik (2010), teachers who utilize stress management techniques are better equipped to manage classroom challenges and remain motivated in their professional growth. When teachers feel less stressed, they can focus on their teaching tasks and engage more positively with students and colleagues, leading to more successful curriculum implementation.

Peer and Community Support

Peer and community support are fundamental aspects of emotional and mental resilience for teachers, particularly when faced with challenges related to curriculum implementation. Building strong relationships with colleagues provides a supportive network that allows teachers to share experiences, offer advice, and collaborate in problem-solving. According to Flook et al. (2013), social support from peers and the broader school community has been shown to buffer the negative effects of stress and improve teachers' emotional well-being. When teachers feel supported by their colleagues, they are more likely to maintain their motivation and engagement, even during times of high pressure. Peer support allows teachers to discuss challenges, brainstorm solutions, and share strategies for implementing new curriculum components effectively. This was supported by one participant:

"I always feel better when I talk to my colleagues about the struggles I face with the new curriculum. We help each other come up with solutions and share resources." (P1-L13)

Furthermore, a supportive school community provides the foundation for teachers to thrive emotionally and professionally. Skaalvik and Skaalvik (2011) suggest that strong social networks within schools foster a sense of belonging and reduce feelings of isolation, particularly in times of change. Teachers who feel supported by their peers are more likely to have increased job satisfaction and lower levels of burnout. Collaborative activities and team-based approaches can further strengthen these support networks.

Positive Outlook and Adaptability

Maintaining a positive outlook and adaptability are critical for teachers to overcome the challenges associated with curriculum innovation. Teachers with a positive mindset are better able to handle changes and stay motivated even when faced with difficulties. According to Dweck (2006), individuals with a growth mindset—believing that

abilities and intelligence can be developed—are more resilient in the face of challenges. For teachers, this positive outlook enables them to embrace new curriculum changes with enthusiasm rather than fear, viewing challenges as opportunities for growth rather than obstacles. A positive mindset also helps teachers be more adaptable in their teaching, allowing them to modify their approach when necessary and find innovative solutions to implementation issues. These ideas were supported by the following participants:

"Being adaptable is key to my success when implementing a new curriculum. It allows me to make adjustments as needed and maintain a sense of control, even when things don't go as planned." (P5-L5)

"I try to focus on the opportunities that come with the new curriculum rather than the challenges. Having a positive outlook helps me stay open to trying new methods and improving my teaching." (P6-L8)

Additionally, adaptability is closely linked to emotional resilience, as it allows teachers to adjust their teaching practices and strategies to meet the needs of their students and the demands of the curriculum. Teachers who are adaptable can implement changes more effectively and cope with the unpredictability that often accompanies curriculum shifts. According to Tschannen-Moran and Hoy (2007), teachers who perceive themselves as adaptable are more likely to exhibit higher levels of efficacy and demonstrate resilience during times of change.

Strategic Resource Utilization

Strategic resource utilization plays a pivotal role in the effective implementation of curriculum innovations, as it enables teachers to leverage available resources, collaborate with the broader community and stakeholders, and engage in innovative problem-solving. According to Epstein (2001), the successful implementation of curriculum changes often depends on how well educators utilize the resources at their disposal, including time, funding, technology, and human capital. Maximizing these resources, along with building strong partnerships with the community and stakeholders, helps educators overcome challenges and create a more effective learning environment. Furthermore, innovative problem-solving ensures that teachers can address specific needs and challenges in creative ways, contributing to the overall success of curriculum innovation efforts. Effective resource utilization, therefore, is not just about using what is available, but also about finding new, effective ways to apply these resources in support of curriculum implementation.

Maximizing Available Resources

Maximizing available resources is essential for teachers to implement curriculum innovations effectively, particularly when facing budgetary or time constraints. Teachers can make the most of available materials, technologies, and human resources by being strategic and creative in their approach. As Garet et al. (2001) suggest, maximizing resources involves not only using physical materials and technology but also optimizing human resources such as expert mentors, peer networks, and collaborative teams. Teachers who utilize their resources effectively can increase their chances of successfully implementing new curriculum components without requiring significant additional investments. This idea was supported by the statements of the following participants:

"I've learned to stretch my resources by using open educational resources and collaborating with colleagues to pool our materials" (P2-L14)

"We don't always have the newest technologies or textbooks, but by using what we have more efficiently, like repurposing existing lesson plans and sharing digital tools, we can still deliver the new curriculum effectively." (P3-L13)

Moreover, effective resource utilization also includes organizing resources in a way that aligns with curriculum goals. Aligning available resources with specific curriculum objectives ensures that the resources are used efficiently and are directly supportive of teaching goals. Teachers who are strategic in their use of resources are better equipped to address students' diverse needs and enhance their learning experiences.

Community and Stakeholder Collaboration

Community and stakeholder collaboration is a key strategy for ensuring the successful implementation of curriculum innovations. By collaborating with parents, local organizations, and other stakeholders, teachers can enhance the resources available to support curriculum changes. According to Epstein (2001), involving the broader

community in education strengthens the support network for teachers, which in turn helps students achieve greater success. Teachers who engage with community members can draw on local expertise, seek additional funding, and create learning opportunities outside the traditional classroom setting. This was supported by one participant:

"Our school's partnership with local businesses has provided us with resources and real-world experiences that enhance our curriculum. Engaging the community has made a huge difference." (P5-L15)

Stakeholder collaboration is also essential for aligning the educational goals of the school with broader community expectations. Hargreaves and Fullan (2015) emphasize that when schools work together with stakeholders to implement curriculum innovations, the initiative is more likely to succeed because it benefits from diverse perspectives and expertise. Collaborative efforts help schools gain support for curriculum reforms, address challenges collectively, and ensure that the curriculum is relevant to the needs of students and the community.

Innovative Problem-Solving

Innovative problem-solving is a crucial strategy for overcoming the challenges that arise during curriculum implementation. Teachers often encounter unforeseen obstacles, such as limited resources, time constraints, or resistance to change, and must be able to think creatively to address these issues. According to Thornton & Samson (2012), fostering an environment where teachers feel empowered to innovate and experiment with new solutions is essential for addressing curriculum implementation challenges. Teachers who engage in innovative problem-solving are able to find unique ways to integrate new curriculum components and adapt them to suit their classrooms.

"When faced with a lack of resources, we worked together to come up with low-cost solutions, like creating our own teaching aids or using free online tools." (P1-L11)

"By thinking outside the box and working collaboratively, we were able to solve problems quickly and make the new curriculum work even when we faced unexpected challenges." (P6-L22)

Innovative problem-solving also helps teachers respond flexibly to student needs, ensuring that the curriculum remains engaging and effective. According to Craft (2005), creativity and innovation in teaching practices lead to more dynamic and inclusive learning environments. Teachers who are skilled at problem-solving can adjust their approaches and materials to accommodate different learning styles, ensuring that all students benefit from the curriculum changes. "By thinking outside the box and working collaboratively, we were able to solve problems quickly and make the new curriculum work even when we faced unexpected challenges."

2. Collaborative Leadership in Curriculum Implementation

Collaborative leadership in curriculum implementation emphasizes the shared responsibilities of educators in fostering innovation and improvement. This approach involves active participation from all stakeholders, particularly teachers, in decision-making processes. It ensures that curriculum changes are not merely directives from administrators but are shaped by those directly implementing them. The value of collaborative leadership in education is supported by Hallinger and Heck (2010), who asserts that collaborative leadership in curriculum implementation is crucial for creating an adaptive and inclusive educational environment. It not only empowers teachers to take on active roles but also ensures that curriculum innovations are practical, relevant, and beneficial for learners.

Shared Decision-Making

Four (4) participants emphasized that shared decision-making is essential to collaborative leadership in curriculum implementation. This view was supported by the following participants:

"Involving both teachers and administrators ensures the curriculum meets our students' real needs." (P2,L1)

"Collaboration makes us feel empowered to adapt the curriculum to our students' challenges." (P3,L1)

"When teachers have a say in the curriculum, it increases our commitment to its success." (P4,L1)

"Working with school leaders helps align teaching strategies with both goals and student needs." (P5,L1)

Shared decision-making in curriculum implementation is a collaborative process where both teachers and administrators work together to align curriculum strategies with school goals and local needs. This collaborative process enables teachers, as primary agents in curriculum delivery, to offer valuable classroom insights, ensuring that national curriculum guidelines are not only aligned with overarching educational goals but are also adaptable and relevant to the specific needs of their students and local contexts. By actively engaging in the decision-making process, teachers can contextualize and modify curriculum content to address diverse learner needs, ensuring that the curriculum is both practical and impactful. This collaboration fosters a sense of ownership among teachers, which can enhance their commitment to successful curriculum implementation. Furthermore, it allows for continuous feedback and adjustment, creating a dynamic approach to curriculum design that is responsive to evolving educational challenges (Hallinger & Heck, 2010).

Team-Oriented Problem Solving

Team-oriented problem solving is a central aspect of collaborative leadership in curriculum implementation. It emphasizes the collective effort of teachers and administrators in identifying, addressing, and resolving challenges related to curriculum changes. In this approach, educators work together to find practical solutions to issues, utilizing the diverse skills and perspectives of all team members. This process not only strengthens the implementation of new curriculum strategies but also enhances the problem-solving capacity of the school community. By pooling their expertise, teachers and administrators can adapt curriculum initiatives to local contexts, ensuring that they are both feasible and effective in meeting the needs of students. This was supported by the following participants:

"When we work together as a team, we can share ideas and strategies that help overcome the challenges we face in curriculum implementation." (P5,L3)

"Collaborating with other teachers allows us to find creative ways to tackle curriculum challenges that we may not have thought of on our own". (P3,L4)

By collaborating, educators are able to leverage the diverse experiences, knowledge, and strategies of their colleagues, making it easier to develop practical, context-specific solutions that are more aligned with the unique needs of their students and school communities. This process fosters a sense of collective responsibility, where teachers and administrators work as a team to navigate the complexities of curriculum implementation. When educators collaborate, they not only bring their individual expertise but also engage in shared problem-solving, which leads to more innovative and holistic solutions. Such collaboration often results in more sustainable changes because the solutions are built on the strengths and realities of the entire school community, rather than on isolated decisions made by individual stakeholders. Teachers, as the primary implementers of the curriculum, can provide critical feedback and insights on what works in the classroom, while administrators can offer guidance on aligning the strategies with broader school goals and resources. By pooling their expertise, educators ensure that curriculum initiatives are designed with both feasibility and effectiveness in mind. Studies show that when school leaders and teachers engage in collaborative decision-making, it enhances the school's overall capacity to address challenges and foster positive changes in the curriculum (Leithwood & Jantzi, 2008).

Leadership Distribution

Leadership distribution refers to the intentional delegation of leadership roles and responsibilities across various stakeholders within the school community. This approach emphasizes the shared nature of leadership and allows public school teachers to take active roles in curriculum implementation. Rather than relying solely on hierarchical structures, leadership is spread among individuals and teams, fostering inclusivity and collaboration (Harris, 2008).

In the context of curriculum implementation, leadership distribution empowers teachers to contribute their expertise, creativity, and insights. Teachers are no longer merely implementers of policies but are actively engaged in decision-making and problem-solving processes. This shared responsibility ensures that curriculum innovations are more responsive to the diverse needs of learners (Spillane, Halverson, & Diamond, 2004). For instance, teacher-leaders may take charge of specific areas, such as integrating technology into lessons or mentoring colleagues on new teaching strategies. Such practices highlight the dynamic and participatory role of teachers in driving educational change. This was supported by the statement of one participant:

"I am grateful for the opportunity to share my expertise in Science and Technology with fellow teachers. It has been a rewarding experience, as we not only exchange knowledge but also learn and grow together." (P4,L7)

Additionally, leadership distribution enhances transparency and collective accountability among school stakeholders. Teachers who are empowered through distributed leadership feel a stronger sense of ownership and commitment to achieving curriculum goals (Leithwood, Mascal, & Strauss, 2009). This sense of agency motivates them to adopt innovative practices and collaborate effectively with peers. It also helps create sustainable systems where leadership is not confined to a single individual but is embedded within the school culture.

Moreover, distributed leadership has been found to support teacher professional growth, as it fosters opportunities for peer learning and the exchange of ideas (Harris, 2004). When teachers are entrusted with leadership roles, they develop critical skills that benefit both their personal growth and the broader school community.

Professional Development and Capacity Building

Professional development and capacity building are essential for enhancing teachers' skills and knowledge to implement curriculum innovations effectively. These processes empower educators through continuous learning, collaboration, and access to critical resources, enabling them to adapt to educational reforms and address diverse learner needs. According to Darling-Hammond et al. (2017), high-quality professional development equips teachers with research-based strategies and practical tools, ensuring that teaching practices remain relevant and effective.

Investing in teachers' professional growth is vital for the sustainability of educational reforms. Schools that prioritize capacity building foster a culture of continuous improvement, where educators are better prepared to meet the challenges of the 21st century. Desimone (2009) highlights that professional development aligned with classroom practices and delivered through collaborative platforms enhances teacher efficacy and student learning outcomes. Moreover, access to ongoing training opportunities and peer learning initiatives allows teachers to innovate and refine their approaches, ensuring that reforms are implemented successfully.

By empowering teachers through professional development and capacity building, schools contribute to the alignment of educational practices with the evolving demands of modern education. These efforts support not only individual teacher growth but also the broader goal of achieving equitable and quality education for all students (Darling-Hammond et al., 2017; Vescio, Ross, & Adams, 2008).

Continuous Training

Continuous training refers to sustained efforts to develop teachers' pedagogical and content knowledge through organized programs such as workshops, seminars, and training sessions. These initiatives are essential for keeping teachers updated on emerging educational trends and innovative teaching methods. According to Desimone (2009), professional development programs that are intensive, content-focused, and aligned with classroom practices are most effective in fostering meaningful teacher learning. This was supported by the statement of one participant:

"I am grateful that the Department of Education is providing free trainings/seminars for teachers that will enhance our teaching skills and strategies like implementing inclusive education" (P5,L10)

In the context of curriculum implementation, continuous training allows teachers to better understand and integrate new instructional strategies into their teaching. For example, DepEd's Learning Action Cell (LAC) initiative in the Philippines serves as a platform for teachers to engage in collaborative problem-solving and reflective discussions about curriculum challenges (DepEd Order No. 35, s. 2016). Through such programs, teachers gain confidence and develop a shared commitment to implementing reforms, ultimately enhancing student learning outcomes.

Peer Learning

Peer learning is a collaborative process where teachers learn from and with each other by sharing experiences, strategies, and solutions. This approach fosters a sense of community among educators and encourages mutual support. Studies have shown that peer learning enhances teaching practices by promoting reflection, knowledge exchange, and joint problem-solving (Vescio, Ross, & Adams, 2008). This was supported by the statement of one participant:

“Benchmarking with my co-teachers really helped me become a better teacher. I’ve learned new skills and strategies that I can apply in my own classes” (P2,L11)

In practice, peer learning can take various forms, such as team teaching, mentoring programs, or professional learning communities. For instance, teachers may collaborate on designing lesson plans, observing each other’s classes, or providing constructive feedback. Such practices not only improve individual teacher performance but also strengthen school-wide instructional quality. Peer learning is particularly effective in cultivating a collaborative culture that supports the continuous improvement of curriculum implementation.

Resource Access and Utilization

Resource access and utilization are crucial to professional development and capacity building, as they enable individuals and organizations to enhance their skills, knowledge, and performance. Access to various resources—such as digital learning platforms, industry tools, and financial support—facilitates continuous learning and professional growth. For instance, digital platforms and research databases provide easy access to educational content, while access to specialized tools can improve efficiency and foster innovation in fields like healthcare, education, and business (Masdoki & Din, 2023). Financial and institutional support, such as funding for training programs or certifications, also plays a vital role in ensuring that individuals have the necessary resources to advance in their careers and contribute to organizational success.

However, while access to resources is essential, challenges often arise in their effective utilization. Barriers such as digital illiteracy, time constraints, and organizational resistance can limit the potential of available resources. For example, even when digital learning tools are accessible, individuals may struggle to use them effectively due to a lack of digital skills (Abazie, 2021). This was supported by the statement of one participant:

“We have digital facilities in school but sometimes I struggle on how to use them, I ask Help from my co-teachers” (P1,L6)

To maximize the impact of resource access, institutions must implement policies and strategies that encourage the strategic use of available resources, such as providing adequate training, fostering peer collaboration, and creating supportive learning environments. In this way, resource access and utilization become key factors in promoting both individual growth and organizational development.

Integration of Innovative Teaching Practices

The integration of innovative teaching practices is essential for improving education quality and addressing the diverse needs of students. Key components such as student-centered approaches, the use of technology, and local contextualization work together to create engaging and relevant learning experiences. Student-centered approaches foster active participation and personalized learning, while technology enhances access to resources and supports individualized learning paths. Local contextualization ensures that teaching is culturally and contextually relevant, making it more meaningful to students. Research by Cheung and Slavin (2013) highlights that when technology is effectively integrated into the classroom, it can significantly enhance student engagement and achievement, especially when tailored to individual learning needs.

Student-Centered Approaches

Student-centered learning is a transformative approach that shifts the focus of education from the teacher as the primary source of knowledge to the learner, allowing students to take an active role in their educational journey. This approach emphasizes meeting students’ individual needs, interests, and abilities, encouraging them to engage deeply with the material through activities like problem-solving, collaboration, and self-directed learning. Research has shown that when students are actively involved in their learning process, it leads to improved critical thinking and deeper understanding (Prince, 2004). Methods such as inquiry-based learning, project-based learning, and personalized learning empower students to take ownership of their education, which not only increases engagement but also enhances long-term retention of knowledge. The flexibility of student-centered learning ensures that educators can adapt their teaching strategies to accommodate diverse learning styles, fostering an inclusive environment where every student has the opportunity to succeed.

Two (2) participants have echoed the positive impacts of student-centered approaches on their learning. These were supported by the following statements:

"By involving students more in the decision-making process and letting them explore topics that interest them, I've seen a significant increase in their enthusiasm and overall participation" (P3, L15)

"The shift to student-centered learning has helped me understand my own learning style better, and I feel more confident in approaching new challenges independently" (P4, L22)

These statements demonstrate how student-centered methods can enhance both student engagement and self-efficacy, creating a more dynamic and effective learning experience.

Use of Technology

The integration of technology in education has significantly transformed teaching practices by providing both teachers and students with powerful tools that enhance the learning experience. Technology facilitates access to an expansive array of learning resources, enabling students to engage with content in new and interactive ways. Tools such as Learning Management Systems (LMS), virtual classrooms, and educational apps allow for personalized learning, enabling students to progress at their own pace and access resources that cater to their individual learning needs. Moreover, technology supports collaboration by enabling real-time communication and group work through digital platforms, fostering an environment where students can share ideas and learn from each other. Research has shown that the incorporation of technology into teaching practices enhances student engagement, motivation, and performance by creating more dynamic and interactive learning environments (Cheung & Slavin, 2013). However, effective use of technology requires more than just access to digital tools; it necessitates that teachers are adequately trained and can integrate technology meaningfully into their instructional methods rather than relying on it as an additional or supplementary tool (Bebell & O'Dwyer, 2010). These were supported by the statements of two participants:

"Incorporating technology into my lessons has made learning more interactive and engaging, and my students now have more opportunities to learn at their own pace through educational apps and online resources" (P5, L19).

"The use of technology has not only helped me teach more effectively but has also allowed my students to collaborate and discuss ideas more freely, even outside of class hours" (P6, L23).

These statements reflect how the strategic use of technology not only improves the classroom experience but also supports collaboration and personalized learning, making it a powerful tool for enhancing educational outcomes.

Local Contextualization

Local contextualization in education refers to adapting teaching methods and content to the cultural, social, and economic realities of students. By incorporating local contexts, educators make learning more relevant and meaningful, which in turn enhances student engagement and understanding. This approach is particularly valuable in diverse or multicultural classrooms where students come from varied backgrounds and have different life experiences. When curricula reflect local contexts, they help students connect academic concepts to real-world applications, fostering deeper engagement with the material. Studies have shown that when students see the relevance of their studies in the context of their own communities, they are more motivated and actively participate in their learning (Gay, 2010). Local contextualization ensures that education is not only academically rigorous but also practically applicable, helping students develop skills and knowledge that are directly relevant to their everyday lives and future careers.

Furthermore, local contextualization plays a crucial role in bridging the gap between theoretical knowledge and practical application. For example, when students learn concepts that are tied to the issues or challenges they face in their communities, they are better equipped to use their learning in real-world situations. One participant shared:

"By incorporating local issues into my lessons, students are able to see how what they're learning connects directly to their own lives, which makes the material feel more relevant and engaging" (P2, L17).

This approach empowers students to not only understand theoretical concepts but also apply them to solve local challenges, thereby enhancing their critical thinking skills and preparing them for the workforce or community engagement.

Implications

The study's findings emphasize the vital role that teacher leadership and cooperation play in fostering successful curricular innovation. Working together, educators can develop a common goal and combine their varied skill sets, which makes overcoming obstacles related to curriculum modifications simpler. Encouraging teachers to take on leadership roles guarantees the longevity of reforms while also encouraging accountability and ownership. However, ongoing resource limitations—like restricted access to materials and technology—highlight the necessity of fair distribution in order to foster innovation. Peer learning and ongoing professional development are crucial tactics that provide teachers the flexibility they need to adjust to changing student needs. By bringing the curriculum into line with regional demands and expectations, community and stakeholder involvement enhances its relevance even further. Furthermore, speaking with teachers

Future Directions

Proposed Program: **TEACH (Teacher Empowerment and Collaboration Hub)**

1. **T: Training and Professional Development** – Develop regular workshops, seminars, and learning sessions focusing on ICT integration, innovative teaching strategies, and cultural contextualization.
2. **E: Equity in Resources** – Ensuring all schools have access to essential technology, materials, and infrastructure through targeted funding and partnerships.
3. **A: Adaptability and Resilience Training** – create stress management programs and workshops to build emotional resilience and adaptability in educators.
4. **C: Collaborative Leadership Development** – Create frameworks for shared decision-making, leadership distribution, and team-oriented problem-solving.
5. **H: Holistic Stakeholder Engagement** – Actively involving parents, local businesses, and community leaders to align curriculum reforms with local needs.

REFERENCES

- J. W. Creswell, *Qualitative Inquiry & Research Design, Choosing Among Five Approaches*, Vol. 2nd Ed. 2007. Hanif Cahyo Adi Kistoro (Improved the ability) *Journal of Islamic Education and Innovation* Vol. 2, No. 1, January - June 2021, pp. 59 - 69 p-ISSN 27946-9999 | e-ISSN 2775-5665 69 [41]
- Bautista, R. (2020). Enhancing Teacher Leadership for Curriculum Innovation in Davao Region. *Philippine Journal of Education Research*, 8(4), 102-115.
- OECD (2019). *Teaching in Focus: Teacher Leadership for Systemic Reform*. OECD Publishing, Paris.
- Ramos, E. (2019). Teacher Collaboration and Leadership: The Key to Successful Curriculum Innovation in Davao City. *Journal of Philippine Education*, 12(3), 45-58.
- Abazie, G. A. (2021). Digital Literacy and Utilization of ICT Resources for Teaching and Learning amongst Secondary School Teachers in Anambra State, Nigeria: Implications amidst Covid-19 Pandemic.
- Ajani, O. A., & Govender, S. (2019). Teachers' perspectives on in-service professional development in South African and Nigerian high schools. *Gender and Behaviour*, 17(2), 13146-13160.
- Avalos, B. (2011). *Teacher professional development in teaching and teacher education over ten years*. *Teaching and Teacher Education*, 27(1), 10-20.
- Bensley, D. A., Masciocchi, C. M., & Rowan, K. A. (2021). A comprehensive assessment of explicit critical thinking instruction on recognition of thinking errors and psychological misconceptions. *Scholarship of Teaching and Learning in Psychology*, 7(2), 107–122. <https://doi.org/10.1037/stl000018>
- Brown, A. (2023). Professional Development for Teachers in Multilingual Education. *Journal of Teacher Education*, 18(4), 76-89

- Bulfin, S., & McGraw, K. (2015). Digital literacy in theory, policy and practice: old concerns, new opportunities. *Teaching and digital technologies: Big issues and critical questions*, 266-281
- Cheung, A. C. K., & Slavin, R. E. (2013). *The effectiveness of educational technology applications for enhancing reading achievement in K-12 classrooms: A meta-analysis*. *Educational Research Review*, 9, 88-113.
- Clarke, V. & Braun, V. (2013) Teaching thematic analysis: Overcoming challenges and developing strategies for effective learning. *The Psychologist*, 26(2), 120-123.
- Craft, A. (2005). *Creativity in schools: Tensions and dilemmas*. Routledge.
- Daniëls, E., Hondeghem, A., & Dochy, F. (2019). A Review on Leadership and Leadership Development in Educational Settings. *Educational Research Review*, 27(June), 110–125. <https://doi.org/10.1016/j.edurev.2019.02.003>
- Fuchong, L. (2022). Singular or Plural? Administrative Burden and Doing Business in China. *Journal of Chinese Governance*, 7(4), 616–632. <https://doi.org/10.1080/23812346.2020.1859793>
- Darling-Hammond, L., Hyler, M. E., & Gardner, M. (2017). *Effective teacher professional development*. Palo Alto, CA: Learning Policy Institute.
- Department of Education (DepEd). (2016). DepEd Order No. 35, s. 2016: The Learning Action Cell as a K to 12 basic education program school-based continuing professional development strategy for the improvement of teaching and learning.
- Desimone, L. M. (2009). *Improving impact studies of teachers' professional development: Toward better conceptualizations and measures*. *Educational researcher*, 38(3), 181-199.
- Diano, F. M., Jr., Kilag, O. K. T., Malbas, M. H., Catacutan, A. B., Tiongzon, B. D., & Abendan, C. F. K. (2023). Towards global competence: Innovations in the Philippine curriculum for addressing international challenges. *Excellencia: International Multidisciplinary Journal of Education*, 1(4). <http://multijournals.org/index.php/excellencia-imje/index>
- Dweck, C. S. (2006). *Mindset: The new psychology of success*. Random House.
- Epstein, J. L. (2001). *School, family, and community partnerships: Preparing educators and improving schools*. Westview Press.
- Flook, L., Goldberg, S. B., Pinger, L., & Davidson, R. J. (2013). *Mindfulness and teachers: A pilot study to assess effects on stress, burnout, and teaching effectiveness*. *Mind, Brain, and Education*, 7(3), 182-195.
- Garet, M. S., Porter, A. C., Desimone, L., Birman, B. F., & Yoon, K. S. (2001). *What makes professional development effective? Results from a national sample of teachers*. *American Educational Research Journal*, 38(4), 915-945.
- Gay, G. (2010). *Culturally Responsive Teaching: Theory, Research, and Practice*. Teachers College Press.
- Gilahi nako ni..ikaw nalang Butang sa atong References..
- Gómez-Fernández, N., & Mediavilla, M. (2021). Exploring the relationship between information and communication technologies (ICT) and academic performance: A multilevel analysis for Spain. *Socio-Economic Planning Sciences*, 77, 101009. <https://doi.org/10.1016/j.seps.2021.101009>
- Backfsch, I., Lachner, A., Stürmer, K., & Scheiter, K. (2021). Variability of teachers' technology integration in the classroom: A matter of utility! *Computers & Education*, 16(6), 1–21
- Guskey, T. R. (2000). *Evaluating professional development*. Corwin Press.
- Haider, S.A. (2019). Impact of customer knowledge management capability on project performance with mediating role of agility and moderating role of team skills.
- Hallinger, P., & Heck, R. H. (2010). Collaborative leadership and school improvement: Understanding the impact on school capacity and student learning. *School leadership and management*, 30(2), 95-110.
- Hargreaves, A., & Fullan, M. (2015). *Professional capital: Transforming teaching in every school*. Teachers College Press.
- Harris, A. (2004). Distributed leadership and school improvement: Leading or misleading? *Educational Management Administration & Leadership*, 32(1), 11-24.
- Harris, A. (2008). Distributed leadership: According to the evidence. *Journal of Educational Administration*, 46(2), 172-188. <https://doi.org/10.18178/ijiet.2021.11.7.153>
- Illman, V., & Pietilä, P. (2018). Multilingualism as a resource in the foreign language classroom. *ELT Journal*, 72(3), 237–248. <https://doi.org/10.1093/elt/ccx073>

- Ilomäki, L., Lakkala, M., Kallunki, V., Mundy, D., Romero, M., Romeu, T., & Gouseti, A. (2023). Critical digital literacies at school level: A systematic review. *Review of Education*, 11(3), e3425
- Kilag, O. K. T., del Socorro, A. S., Largo, J. L., Peras, C. C., Book, J. F. P., & Abendan, C. F. K. (2023). Perspectives and experiences in online teaching and learning. *Science and Education*, 4(6), 561-571.
- Kilag, O. K. T., Uy, F. T., Abendan, C. F. K., & Malbas, M. H. (2023). *Teaching leadership: An examination of best practices for leadership educators*.
- Kyriacou, C. (2001). *Teacher stress: Directions for future research*. *Educational Review*, 53(1), 27-35.
- Leithwood, K., & Jantzi, D. (2008). Linking leadership to student learning: The contributions of leader efficacy. *Educational administration quarterly*, 44(4), 496-528.
- Leithwood, K., Mascall, B., & Strauss, T. (2009). Distributed leadership according to the evidence. *Routledge*.
- Liesa-Orús, M., Latorre-Coscolluela, C., Vázquez-Toledo, S., & Sierra-Sánchez, V. (2020). The technological challenge facing higher education professors: Perceptions of ICT tools for developing 21st century skills. *Sustainability*, 12(13), 5339
- Lucas, T., & Villegas, A. M. (2020). Preparing Linguistically Responsive Teachers. *Journal of Teacher Education*, 71(4), 453-467.
- Masdoki, M., & Din, R. (2023). Education Revolution: Conceptualizing the Teaching 4.0 Competencies Model. *Journal of Personalized Learning*, 5(1), 1-9.
- Mohamad, A.A., Ramayah, T. and Chiun Lo M. (2020) „Sustainable Knowledge Management and Firm Innovativeness: The Contingent Role of Innovative Culture", *Sustainability*, 12(17): 6910.
- Mondal, C., Al-Kfairy, M. and Mellor, R.B. (2023) „Developing young science and technology parks: recent findings from industrial nations using the data-driven approach”, *Sustainability*, 15(7): 6226.
- Organizational Culture, and Support for Innovation. In: Mickahail, B.K., de Aquino, C.T.E. (eds) *Effective and Creative Leadership in Diverse Workforces*. Palgrave Macmillan, Cham. https://doi.org/10.1007/978-3-030-02348-5_2
- Prince, M. (2004). *Does active learning work? A review of the research*. *Journal of Engineering Education*, 93(3), 223-231. R. H. Horner Dan, S. L. Odom, “Designs: Logic And Options,” Hal. 27–51, 2014.
- Simeoni, I.A., Caballero, R. and Lepez, C.O. (2024) „Curricular innovation in the knowledge society”, *Seminars in Medical Writing and Education*, Vol. 3, pp. 58-58.
- Sinnema, C., Nieveen, N., & Priestley, M. (2020). Successful futures, successful curriculum: What can Wales learn from international curriculum reforms?. *The Curriculum Journal*, 31(2), 181-201.
- Skaalvik, E. M., & Skaalvik, S. (2010). *Job demands and job resources as predictors of teachers' motivation and well-being*. *Social Psychology of Education*, 13(2), 201-218.
- Sobral, S. R. (2021). Project Based Learning with PeerAssessment in an Introductory Programming Course. *International Journal of Information and Education Technology*, 11(7), 337–341.
- Spillane, J. P., Halverson, R., & Diamond, J. B. (2004). Towards a theory of leadership practice: A distributed perspective. *Journal of Curriculum Studies*, 36(1), 3-34.
- Taylor, A., Santiago, F., Hynes, R. (2019). Relationships Among Leadership, Thornton, A., & Samson, J. (2012). Innovative problem solving in wild meerkats. *Animal Behaviour*, 83(6), 1459-1468.
- Tschannen-Moran, M., & Hoy, A. W. (2007). *The differential antecedents of teachers' efficacy*. *The Elementary School Journal*, 108(4), 297-316.
- Vescio, V., Ross, D., & Adams, A. (2008). A review of research on the impact of professional learning communities on teaching practice and student learning. *Teaching and Teacher Education*, 24(1), 80-91.