BEYOND THE NUMBERS: EXPLORING THE LIVED EXPERIENCES OF OUT-OF-FIELD ALS MATHEMATICS TEACHERS

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ABSTRACT

The study titled "Beyond the Numbers: Exploring the Lived Experiences of Out-of-Field Alternative Learning Systems Mathematics Teachers" aims to delve into the unique challenges and experiences faced by educators who teach mathematics outside their primary field within the Alternative Learning System (ALS) framework. This qualitative research adopts a phenomenological approach, focusing on teachers in the 1st Congressional Districts of Davao de Oro. Through in-depth interviews, the research uncovers the strategies these teachers employ to overcome challenges and their impact on student learning outcomes. The findings highlight the resilience, creativity, and dedication of these educators, emphasizing the need for systemic support and professional development to enhance the effectiveness of mathematics instruction in ALS settings.

Keyword: *Out-of-Field Teachers, Alternative Learning Systems, Mathematics Education, Phenomenological Approach, Teacher Challenges, Professional Development, Davao de Oro*

1. INTRODUCTION

Mathematics holds significant importance in education, fostering critical thinking, problem-solving, and logical reasoning. In Alternative Learning Systems (ALS), however, mathematics education often involves teachers working outside their primary expertise. This situation arises due to the mismatch between the number of ALS learners and the available qualified teachers, leading educators to teach subjects they are less familiar with. This can affect their confidence and teaching quality, contributing to stress and burnout (Hobbs, 2013).

The issue of out-of-field teaching is not unique to the Philippines but also prevalent in countries like Australia. Reports such as the Staff in Australian Schools 2013 highlight the persistent challenge of accurately reporting and monitoring out-of-field teaching incidents, especially in STEM disciplines, including mathematics. These findings stress the need for continuous monitoring and targeted interventions to address subject-specific disparities (Weldon's, 2016).

In the Schools Division of Davao de Oro, ALS teachers face various challenges, from reviewing topics before teaching to selecting appropriate teaching strategies and overcoming language barriers. Despite these hurdles, out-of-field teaching offers opportunities for educators to expand their knowledge across different subjects. However, there remains a critical need for specialized teachers and targeted training, particularly in mathematics, to ensure high-quality education for learners.

Data of DepEd Davao de Oro Division shows that from 2020 to 2023, the number of enrolled ALS learners in Davao de Oro ranged from 7,000 to 9,000 annually. With the recent addition of new teaching positions, the ratio of ALS teachers to learners stands at 1:106, highlighting the ongoing need for more specialized educators.

Addressing these challenges requires a holistic approach, innovative pedagogical methods, and continuous professional development to support out-of-field teachers and enhance their effectiveness in the classroom.

1.1 Purpose of the Study

This qualitative research explored the experiences and coping strategies of out-of-field mathematics teachers in the Alternative Learning System (ALS) within the 1st Congressional Districts of Davao de Oro, covering several municipalities. Through in-depth interviews, the study aimed to uncover the challenges these educators face, their innovative teaching methods, and their successes. It sought to understand how these factors influence mathematics instruction in ALS and impact student learning outcomes. The research aimed to enhance support, training, and professional development for out-of-field mathematics educators in non-traditional educational settings.

1.2 Research Questions

1. What are the experiences of the participants in teaching mathematics in ALS program?
2. What challenges did the participants experienced in teaching mathematics in ALS?
3. How do the participants cope with the challenges faced in teaching mathematics in community learning centers within the ALS program?
4. What insights did the participants gained from their experiences in teaching mathematics in ALS?
5. What is the perception of the participants as ALS mathematics teachers regarding the effectiveness of current professional development initiatives in preparing for teaching mathematics outside their designated field?

2. METHODS

2.1 Research Design

The study utilized qualitative phenomenological research design. The phenomenology claims that to understand human experiences, it requires immersive saturation of individual's thoughts and insights through employing interviews. Since these are the actual lives of the participants who have all experienced the phenomenon of handling multigrade classes, it facilitates a culmination of interpretation of their experiences (Creswell, 2009). For instance, it involves the actual establishment of meanings from the views of their lenses, and it provided the researcher an avenue to picture out the situation of the participants from the phenomenon they lived through based on their actual shared experiences (Giorgi, 2012).

2.2 Research Participants

There were eight participants in this study, which would be enough to saturate information gathered from the studied group. The researcher selected one ALS Teacher participant per School District in the 1st Congressional District. Purposive sampling method was used to select participants for this qualitative study. The sampling used in this study was also characterized by the incorporation of inclusion criteria met by the participants.

Furthermore, the inclusion criteria for the selection of participants were the following:(a) the participants must be ALS Teacher; (b) with a position from Teacher I-Master Teacher IV; (c) from the Schools Districts of Compostela, Maragusan, Montevista, Monkayo, and New Bataan; and (d) must have at least two years teaching experience in Alternative Learning System.

2.2 Data Gathering Procedures

To facilitate the study, the researcher first secured clearance from the research ethics committee of Assumption College of Nabunturan – Graduate School. After the proposal defense, an endorsement letter was obtained from the Graduate School. The researcher then uploaded the endorsement letter, manuscript, and research question to the Division of Davao de Oro's provided link. While awaiting feedback from the division office, the interview guide was sent to the Graduate School for validation. After receiving the feedback, the researcher obtained signed informed assent from participants, ensuring their voluntary participation. Before data collection, all necessary

documents, including signed assent forms, clearance from the research committee, and endorsement letters, were secured, with confidentiality of the data maintained.

2.3 Data Analysis

After gathering the interview data, the researcher transcribed and translated the audio recordings into text. Thematic analysis was then conducted on the participants' narratives. This process helped organize and interpret the data, bringing clarity and meaning to the findings (Padilla-Díaz, 2015).

3. RESULTS AND DISCUSSIONS

The structured themes and the emerging therein were made as bases in broadening the discussion of the findings in this study. As each theme was linked to related literature and studies, substantial discussion was made to find their alignment with the theme.

Memorable Moments or Interactions While Teaching Mathematics in the ALS Program. The emerging themes in this section highlight some of the most memorable moments or interactions experienced by ALS mathematics teachers. These themes include teaching by giving real-life examples, students developing their own mathematical formulas, instances of finding no answers to students' questions, and encouraging learners to share their learning in class. ALS teachers found that adult learners understand mathematical concepts more easily when taught through real-life examples that relate to their work or daily routines. This practical approach not only makes abstract ideas more tangible but also enhances engagement and retention. Research supports this strategy, indicating that contextual learning improves comprehension and application of mathematical concepts (Boaler, 2016).

Another notable experience reported by teachers is that learners often develop their own methods and formulas to solve mathematical problems. This creative problem-solving indicates a deep engagement with the material and a personal connection to the learning process. Allowing students to explore and validate their methods can foster a deeper understanding and ownership of their learning (Smith, 2017). Teachers also shared moments of vulnerability when they were unable to provide answers to students' questions. These instances, while challenging, offer opportunities for teachers to model lifelong learning and problem-solving skills. Research highlights that such experiences can be pivotal, encouraging both teachers and students to explore and learn together (Meyer & Land, 2005).

Informants revealed that they frequently encourage learners to share their knowledge and understanding with peers during class. This practice not only helps reinforce the material for the sharer but also benefits other students by providing diverse perspectives and explanations. Studies have shown that peer teaching and collaborative learning significantly enhance student engagement and understanding (Johnson, Johnson, & Smith, 2007).

Ways in which Teaching Mathematics Influenced the Participants Professional Growth Development. The emerging themes in this section highlight the influence of teaching mathematics to the participants professional growth and development. These themes incudes challenged to study, being helped to understand and to have patience, made to understand complex topics, help build good relationship with others, able to learn what have been taught, and help one become innovative and resourceful.

Teaching mathematics in the ALS program has had a significant impact on the professional growth and development of the participants, as evidenced by several emerging themes. One major theme is the challenge it posed to participants to study and deepen their understanding of mathematics. This challenge has driven teachers to enhance their content knowledge and stay abreast of new educational strategies, thereby fostering continuous professional development (Desimone, 2009). Additionally, teaching mathematics has helped participants develop greater patience and understanding. Engaging with diverse learners who have varied educational backgrounds requires teachers to be patient and adaptable, which are essential qualities in effective teaching (Hattie & Timperley, 2007).

Moreover, teaching complex mathematical topics has not only improved the participants' subject matter expertise but also enhanced their problem-solving skills and ability to convey difficult concepts in an accessible manner. This experience contributes to their overall pedagogical competence and confidence (Charalambous & Philippou, 2010). Another theme is the improvement in building good relationships with others. Teaching in the ALS program has necessitated collaboration with colleagues, students, and the community, thus enhancing the teachers' interpersonal skills and fostering a supportive learning environment (Vangrieken et al., 2017).

Participants also reported that teaching mathematics has enabled them to internalize and learn the material they teach. The act of teaching reinforces their own understanding and retention of mathematical concepts, making them more effective educators (Ambrose, Bridges, DiPietro, Lovett, & Norman, 2010). Furthermore, the need to engage and motivate students in the ALS program has spurred teachers to become more innovative and resourceful. They have developed creative teaching methods and utilized a variety of instructional resources to meet their students' needs, which has, in turn, enhanced their professional versatility and resilience (Sawyer, 2006).

Specific Obstacles or Difficulties Participants Encountered While Teaching Mathematics in ALS Program. Participants in the study encountered several specific obstacles while teaching mathematics, as highlighted by the themes of teaching complex topics, algebraic expressions, integers, and fractions. Teaching complex topics posed significant challenges due to the diverse educational backgrounds and varying levels of readiness among adult learners. These difficulties often stem from learners' previous negative experiences with mathematics, which can lead to math anxiety and hinder their ability to grasp advanced concepts (Ashcraft & Krause, 2007). Effective teaching strategies, such as breaking down complex topics into manageable segments and using concrete examples, are crucial for overcoming these challenges (Boaler, 2016).

Teaching algebraic expressions is another area where participants faced substantial hurdles. Many adult learners struggle with the abstract nature of algebra, finding it difficult to understand variables and symbolic representations. Research suggests that using visual aids and manipulatives can significantly improve understanding by providing a tangible way to grasp abstract concepts (Swan, 2005). Moreover, integrating real-life applications of algebra can help learners see the relevance of these concepts, thereby increasing their engagement and motivation (Nathan & Koedinger, 2000).

When it comes to teaching integers, participants often encountered difficulties related to students' foundational gaps in number sense and arithmetic operations. Misconceptions about negative numbers and their operations are common and require targeted instructional strategies to address. Studies indicate that number lines and visual representations can be effective tools in helping learners develop a solid understanding of integers and their properties (Siegler & Ramani, 2009).

Teaching fractions also presented significant obstacles, as many adult learners find fractions to be one of the most challenging aspects of mathematics. The difficulty often lies in the conceptual understanding of fractions as numbers and their operations. Educational research highlights the importance of using multiple representations, such as visual models, area models, and real-world contexts, to help learners build a robust understanding of fractions (Lamon, 2012). Additionally, emphasizing the relationships between fractions, decimals, and percentages can aid in developing a more comprehensive mathematical framework (McNeil et al., 2009).

Primary Challenges that ALS Mathematics Teachers Faced When Delivering Mathematics Instruction to Students. ALS mathematics teachers face several primary challenges when delivering instruction, as revealed by the emerging themes of varied educational backgrounds of learners, level of readiness, learners' learning pace, lack of motivation, absenteeism, and preparedness. One of the most significant challenges is the diverse educational backgrounds of learners. Adult learners in the ALS program often have varied prior experiences and knowledge levels, making it difficult to design lessons that meet everyone's needs (Tomlinson, 2017). This diversity necessitates differentiated instruction and tailored approaches to ensure all learners can grasp the material (Tomlinson, 2001).

The level of readiness among learners also varies widely, posing a challenge for ALS teachers. Some students may have strong foundational skills, while others struggle with basic concepts. This disparity requires teachers to continuously assess and adapt their teaching strategies to cater to the different levels of understanding within a single classroom (Darling-Hammond, 2006). Additionally, the varying learning pace of students complicates instruction. Teachers must balance the need to move the class forward with the necessity of ensuring that slower learners are not left behind, which can be particularly challenging in a heterogeneous learning environment (Fuchs & Fuchs, 2006).

A lack of motivation is another critical issue that ALS mathematics teachers encounter. Many adult learners may have had negative experiences with education in the past, leading to low self-confidence and motivation in learning mathematics (Wlodkowski, 2008). This lack of engagement can hinder their ability to absorb and retain new information. To combat this, teachers often need to employ motivational strategies and create a supportive and encouraging classroom atmosphere (Ryan & Deci, 2000).

Learner absenteeism poses a significant obstacle to consistent and effective instruction. Irregular attendance disrupts the learning process and makes it difficult for students to keep up with the curriculum. This issue is often exacerbated by external factors such as work commitments, family responsibilities, and health issues, which are

prevalent among adult learners (Comings, 2007). Lastly, learner preparedness is a common challenge. Many students may not have the necessary study skills or academic habits needed for success in the ALS program, requiring teachers to spend additional time on skill-building and preparatory activities (Boud & Falchikov, 2006).

Strategies or Approaches Used to Overcome Challenges Encountered While Teaching Mathematics in Community Learning Centers within ALS Program. The themes derived from the responses of the research informants are be resourceful, be creative in discussing lessons, incorporate interactive games, have more patience, contextualization of topics, provide real-life examples, and differentiated instructions. In addressing the myriad challenges encountered while teaching mathematics in Community Learning Centers within the ALS program, teachers have adopted several effective strategies and approaches. A common theme among these strategies is the need to be resourceful. Given the diverse backgrounds and varying levels of preparedness of ALS learners, teachers often find themselves innovating with limited resources to create effective learning environments. This includes utilizing online resources, creating makeshift teaching aids, and adapting existing materials to meet the unique needs of their students (Warschauer, 2003).

Creativity in lesson delivery is another crucial approach. To engage learners and simplify complex mathematical concepts, teachers often employ creative methods such as storytelling, visual aids, and hands-on activities. These methods help to make abstract concepts more tangible and accessible (Boaler, 2016). Incorporating interactive games into the curriculum also proves to be a highly effective strategy. Games not only make learning fun but also promote active participation and reinforce mathematical concepts through practice and repetition (Bragg, 2012).

Having more patience is essential when dealing with adult learners who may have long-standing gaps in their education or who may be balancing learning with other significant life responsibilities. Patience helps in building a supportive learning environment where students feel comfortable taking risks and making mistakes, which is crucial for learning and growth (Wlodkowski, 2008). Contextualization of topics, by relating mathematical concepts to real-life scenarios relevant to the learners' experiences, helps in making the content more relatable and easier to understand. This approach not only enhances comprehension but also demonstrates the practical utility of mathematics in everyday life (Zevenbergen & Lerman 2008).

Providing real-life examples is closely linked to contextualization and is another powerful tool in the ALS mathematics teacher's arsenal. Real-life examples help demystify abstract concepts by linking them to familiar contexts, thereby improving students' understanding and retention (National Council of Teachers of Mathematics, 2014). Lastly, differentiated instruction is imperative given the heterogeneous nature of ALS classrooms. Tailoring instruction to meet the varied learning needs, styles, and paces of students ensures that each learner receives the appropriate level of challenge and support, promoting a more inclusive and effective learning environment (Tomlinson, 2001).

Most Useful Coping Mechanism Employed to Navigate the Unique Challenges of Teaching Mathematics in Community Learning Centers. There is only one theme in this section which is through team teaching. The most useful coping mechanism identified by ALS mathematics teachers to navigate the unique challenges of teaching in Community Learning Centers is team teaching. Team teaching, where two or more educators collaboratively plan, instruct, and assess a group of students, offers numerous benefits that address the multifaceted difficulties encountered in these settings. This approach leverages the strengths and expertise of multiple teachers, allowing for a more comprehensive and supportive learning environment. For instance, one teacher might specialize in content knowledge while another excels in classroom management or providing emotional support, thus creating a balanced and effective teaching dynamic (Friend & Cook, 2010).

Team teaching also fosters a collaborative learning culture among teachers, enhancing professional development through shared experiences and mutual feedback. This collaboration helps teachers to continuously improve their instructional strategies and adapt more effectively to the diverse needs of their students (Graziano & Navarrete, 2012). Moreover, the presence of multiple educators in the classroom enables more personalized attention for students, as teachers can address individual learning difficulties more efficiently and provide targeted interventions (Villa, Thousand, & Nevin, 2013).

In the context of ALS programs, where learners often come from varied educational backgrounds and have different levels of preparedness, team teaching allows for more differentiated instruction. Teachers can split the class into smaller groups based on their learning needs or a specialized teacher is assigned to teach the specific content of the lesson, ensuring that each student receives the appropriate level of challenge and knowledge. This method not only improves academic outcomes but also helps in maintaining student engagement and motivation by providing a more responsive and dynamic learning environment (Scruggs, Mastropieri, & McDuffie, 2007).

Insights Gained on Effective Teaching Practices. The experiences of ALS mathematics teachers have provided valuable insights into effective teaching practices, as highlighted by several key themes: the use of real-life examples, applying a differentiated approach, contextualization of topics, being unbiased in teaching, recognizing learners' abilities, and providing guidance and support. One of the most significant insights is the importance of using real-life examples to make abstract mathematical concepts more relatable and understandable for adult learners. By connecting lessons to practical, everyday situations, teachers can enhance student engagement and comprehension, a technique supported by experiential learning theories (Knowles et al., 2015).

Applying a differentiated approach is another crucial practice identified. Given the diverse backgrounds and varying levels of preparedness among ALS students, tailored instruction that addresses individual learning needs is essential for effective teaching (Knowles et al., 2015). Differentiated instruction helps in providing the right level of challenge for each learner, thereby promoting better academic outcomes and fostering an inclusive learning environment (Heacox, 2012).

Contextualizing topics further supports effective teaching by making learning more relevant to students' lives and experiences. Contextualization not only aids in understanding but also in retaining information, as learners are more likely to remember concepts that are directly applicable to their daily routines and challenges (Darling-Hammond et al., 2020). This approach aligns with situated learning theory, which emphasizes the importance of context in the learning process.

Maintaining an unbiased stance in teaching is another vital insight gained. Treating all students fairly and equitably ensures that each learner feels valued and respected, which is crucial for building a positive and supportive classroom atmosphere (Gay, 2010). Recognizing learners' abilities involves identifying and nurturing each student's strengths, which can boost their confidence and motivation to learn (Dweck, 2006). This practice aligns with the growth mindset theory, which posits that students who believe their abilities can be developed through effort and perseverance are more likely to achieve academic success.

Finally, providing guidance and support is essential for helping students navigate the challenges of learning mathematics. Effective teaching involves not only delivering content but also offering the necessary support to help students overcome obstacles and build their self-efficacy (Boaler, 2015). Teachers who provide consistent guidance and encouragement can significantly impact their students' learning trajectories and overall academic success.

Ways Experiences in Teaching Mathematics in ALS Contributed to Understanding of Diverse Learning Needs and Backgrounds of ALS Students. The experiences of teaching mathematics in the Alternative Learning System (ALS) have profoundly contributed to teachers' understanding of the diverse learning needs and backgrounds of ALS students. One significant theme is that these experiences have helped teachers appreciate the diverse backgrounds of their learners. Many ALS students come from various socio-economic, cultural, and educational backgrounds, requiring teachers to adapt their instructional methods to meet these varied needs effectively. This aligns with the principles of culturally responsive teaching, which emphasizes the importance of recognizing and valuing students' cultural contexts to enhance learning (Gay, 2010).

Another critical insight is the necessity of having a "plan B" when teaching ALS students. Given the unpredictable and often challenging circumstances these learners face, teachers must be flexible and prepared to adjust their teaching strategies. This adaptability is crucial for addressing unforeseen challenges and ensuring that learning continues despite any disruptions (Tomlinson, 2001).

Understanding learners' needs is also a central theme. Teachers in the ALS program gain a deeper insight into the specific educational requirements of their students, including the need for differentiated instruction and individualized support. This understanding helps educators to tailor their lessons more effectively, thus promoting better learning outcomes (Heacox, 2012).

The difficulty learners face when learning through the English language is another important theme. Many ALS students may not be proficient in English, making it harder for them to grasp mathematical concepts presented in this language. This challenge underscores the need for teachers to employ bilingual or multilingual teaching methods and to simplify language use without compromising the integrity of the mathematical content (Cummins, 2000).

Giving learners importance and recognizing their efforts and achievements is crucial in the ALS setting. By acknowledging and valuing their students' progress, teachers can boost learners' confidence and motivation, which are essential for sustained engagement and academic success (Dweck, 2006). This approach is supported by the concept of a growth mindset, which emphasizes the importance of encouraging students to view challenges as opportunities for growth.

Finally, the contextualization of lessons is a key theme. By relating mathematical concepts to real-life situations relevant to the students' experiences, teachers can make learning more meaningful and accessible. This method not only aids comprehension but also demonstrates the practical application of mathematics in everyday life, enhancing the overall learning experience (Hiebert & Grouws, 2007).

Feeling About the Professional Development Opportunities Provided to ALS Mathematics Teachers in Preparing Them to Teach Outside Designated Field. The professional development opportunities provided to ALS mathematics teachers in preparation for teaching outside their designated field elicited varied responses, highlighting several key themes. Firstly, there is a clear need for more in-depth training. Teachers expressed that current training programs are insufficient in equipping them with the comprehensive knowledge required to effectively teach mathematics, underscoring the necessity for extensive and continuous professional development (Darling-Hammond et al., 2017). This aligns with research suggesting that sustained and intensive professional development is crucial for significant improvements in teaching practice and student outcomes (Desimone & Garet, 2015). Secondly, there is a strong call for professional development programs to integrate pedagogical training specifically tailored to mathematics instruction. Teachers indicated that understanding mathematical content is not enough; they also need effective pedagogical strategies to teach these concepts to diverse learners (Ball et al., 2008). This approach ensures that teachers are not only knowledgeable in mathematics but are also skilled in delivering the content in an engaging and comprehensible manner.

Access to a variety of teaching materials is another critical theme. Teachers noted that having a diverse range of resources enables them to address different learning styles and needs, making mathematics more accessible and interesting to students (Hiebert & Grouws, 2007). Providing teachers with a broad array of instructional materials can facilitate more innovative and effective teaching practices, ultimately enhancing student learning experiences. Participants of the study also suggest the creation of textbooks for Learning Strand 3- Mathematical and Problem Solving Skill. Lastly, offering specific training focused on the unique challenges of teaching mathematics in the ALS context is essential. Teachers highlighted the importance of targeted professional development that addresses the specific difficulties they face, such as teaching foundational math skills to adult learners or using technology in the classroom (Garet et al., 2001). Tailored training programs can better prepare teachers for the unique demands of their roles, fostering a more effective and supportive learning environment for ALS students.

Improvements or Changes to Suggest for Professional Development Initiatives Aimed at Enhancing ALS Mathematics Teachers' Preparation for Teaching Mathematics Outside Their Designated Field. To enhance the preparation of ALS mathematics teachers for teaching outside their designated fields, several key improvements or changes to professional development initiatives have been suggested. Firstly, offering specific training focused on mathematics content is crucial. Teachers highlighted the need for specialized training sessions that delve deeply into mathematical concepts and pedagogical/ andragogical strategies tailored to adult learners. This aligns with research indicating that content-specific professional development is more effective in improving teaching practices and student learning outcomes (Garet et al., 2001). Such targeted training ensures that teachers are well-equipped with the necessary knowledge and skills to teach complex mathematical concepts confidently and effectively (Desimone, 2009).

Secondly, it is recommended that mathematics teachers be assigned to teach ALS Junior High School learners. This approach leverages the expertise of teachers who are already proficient in mathematics, thereby providing students with a higher quality of instruction. Studies have shown that subject-specific teaching can lead to better student performance, as teachers with a strong background in a particular subject are more likely to deliver accurate and engaging lessons (Hill, Rowan, & Ball, 2005).

Including non-math teachers in these professional development trainings is another important suggestion. Many ALS teachers come from diverse educational backgrounds and may not have a strong foundation in mathematics. By involving non-math teachers in these training sessions, they can gain a better understanding of mathematical concepts and effective teaching strategies, which can help them support their students more effectively (Loucks-Horsley et al., 2010). This inclusive approach ensures that all teachers, regardless of their primary subject area, are better prepared to contribute to the mathematics education of their students.

Lastly, implementing refresher courses for non-math teachers who are teaching mathematics is essential. These courses can help reinforce their knowledge and update them on the latest teaching methodologies and curriculum changes. Refresher courses have been shown to be beneficial in maintaining and enhancing teachers' instructional skills, thereby improving their confidence and effectiveness in the classroom (Guskey, 2002).

Continuous professional development through refresher courses can ensure that teachers remain current with educational best practices and can provide high-quality instruction to their students.

3.1 Implications for Practice

On Memorable Moments or Interactions While Teaching Mathematics in the ALS Program. Memorable moments and interactions in the ALS mathematics program underscore the importance of integrating real-life examples into lessons to contextualize abstract concepts, making them more relatable and understandable for learners. Teachers should encourage creativity by allowing students to develop and share their own mathematical formulas and problem-solving methods. Creating an open classroom environment where questions are welcomed, and teachers model lifelong learning by admitting when they do not have all the answers fosters a collaborative and supportive learning atmosphere.

On Ways in which Teaching Mathematics Influenced the Participants' Professional Growth Development. Teaching mathematics in the ALS program has significantly influenced participants' professional growth and development. Encouraging teachers to reflect on their teaching practices and adapt to the diverse needs of ALS learners promotes continuous professional growth. Division ALS personnel should establish professional learning communities where teachers can share experiences and strategies fosters a supportive network that contributes to ongoing professional development, helping teachers to enhance their skills and effectiveness in the classroom.

On Specific Obstacles or Difficulties Participants Encountered While Teaching Mathematics in ALS Program. Participants encountered specific obstacles in teaching complex topics which includes Algebra, Integers, and Fractions. The researcher suggests implementing training or refresher courses for out-of-field teachers. This is also a call to the Department of Education to allocate additional mathematics teachers on ALS program.

On Primary Challenges that ALS Mathematics Teachers Faced When Delivering Mathematics Instruction to Students. Primary challenges in delivering mathematics instruction include the need for effective differentiation and continuous assessment to understand and address the diverse levels of understanding among learners. Providing training on differentiation, using varied assessment methods, and developing support systems for learners are essential to help them build necessary study skills and academic habits. These measures are vital to overcome the challenges faced by ALS mathematics teachers.

On Strategies or Approaches Used to Overcome Challenges Encountered While Teaching Mathematics in Community Learning Centers within ALS Program. Teachers have employed resourceful and creative strategies to overcome challenges in community learning centers. Encouraging the use of interactive and engaging methods such as games and practical examples helps maintain learner interest and facilitate understanding. Emphasizing patience and persistence in teaching is also important, as learners may progress at different rates. These strategies should be supported and encouraged to help teachers effectively navigate the challenges they face.

On Most Useful Coping Mechanism Employed to Navigate the Unique Challenges of Teaching Mathematics in Community Learning Centers. The most useful coping mechanisms for navigating the unique challenges of teaching mathematics include establishing mentorship programs and providing stress management training. Researcher suggests strengthening team teaching to create a supportive work environment and fostering a collaborative culture where teachers can share coping strategies and support each other are crucial. These measures help teachers manage the stresses and challenges of their roles, enhancing their well-being and effectiveness.

On Insights Gained on Effective Teaching Practices. Teachers gained valuable insights on effective teaching practices through their experiences, emphasizing the importance of continuous reflection and improvement based on feedback and classroom experiences. Promoting the use of evidence-based practices and investing in ongoing professional development are essential to keep teachers updated on the latest teaching strategies and methodologies. These practices help ensure that teaching remains effective and responsive to student needs.

On Ways Experiences in Teaching Mathematics in ALS Contributed to Understanding of Diverse Learning Needs and Backgrounds of ALS Students. Experiences in teaching mathematics in ALS programs have deepened teachers' understanding of diverse learning needs and backgrounds. Providing training on cultural

sensitivity and developing individualized learning plans are crucial to addressing the unique needs of each student. Fostering an inclusive educational environment where all learners feel valued and supported is essential for effective teaching and learning in diverse classrooms.

On Feelings About the Professional Development Opportunities Provided to ALS Mathematics Teachers in Preparing Them to Teach Outside Designated Field. Teachers' feelings about professional development opportunities highlight the need for targeted training that addresses the specific needs of out-of-field teachers. Establishing feedback mechanisms to ensure professional development programs meet teachers' needs and expectations, and providing easy access to resources and support, are important to prepare teachers for success in their roles. These measures help enhance the quality and relevance of professional development.

On Improvements or Changes to Suggest for Professional Development Initiatives Aimed at Enhancing ALS Mathematics Teachers' Preparation for Teaching Mathematics Outside Their Designated Field. To improve professional development initiatives, developing comprehensive training programs that cover both mathematical content, pedagogical and andragogical strategies is essential. Offering regular refresher courses and considering the employment of specialized instructors for the ALS program can provide high-quality education and support. These improvements help ensure that teachers are well-prepared and confident in teaching mathematics outside their designated field, ultimately benefiting their students' learning outcomes.

4. CONCLUSIONS

This study illuminates the multifaceted experiences, challenges, perceptions, and strategies of ALS mathematics teachers in delivering effective instruction to adult learners. Through thematic analysis and literature review, key insights have emerged with significant implications for practice and future research in alternative education. Memorable teaching moments emphasize using real-life examples, fostering peer learning, and embracing creativity, which enhance understanding and engagement. Challenges such as teaching complex topics and addressing diverse learning needs highlight the need for continuous professional development and tailored instructional approaches.

Coping mechanisms, particularly team teaching, offer valuable lessons on collaboration and support among educators, creating inclusive and effective learning environments. The study's implications for future research point to the need for longitudinal studies, comparative analyses across diverse contexts, and investigations into innovative teaching practices and technologies. Addressing language barriers, enhancing learner motivation, and examining the impact of external factors on learning are critical areas for further exploration. Overall, this study underscores the resilience, dedication, and creativity of ALS mathematics teachers and the potential for continued growth and innovation in supporting adult learners.

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