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Exploring the Education Mismatch: A Phenomenological Study of Technology and Livelihood Education (TLE) Teachers Assigned Outside Specialization

John Paul C. Demapendan
College of Education, Tarlac Agricultural University, Camiling, Tarlac, Philippines

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ABSTRACT

Purpose of the study: This study investigates the experiences, challenges, job performance, financial and professional impact, coping strategies, and perceptions of Technology and Livelihood Education (TLE) teachers who are assigned outside their area of specialization.

Methodology: This study utilized a phenomenological approach. Twelve public school TLE (Technology and Livelihood Education) teachers were purposively selected based on their years of teaching outside their specialization and their willingness to participate. The data collection technique included the profiling of participants and the use of open-ended questions designed to elicit detailed descriptions of the participants' experiences, challenges, and coping strategies. The data gathered from the interview sessions and written responses were transcribed and thematically analyzed to identify emerging themes.

Main Findings: The findings indicate that TLE teachers are often assigned to subjects like Filipino, MAPEH (Music, Arts, Physical Education, and Health), Values Education, Social Studies, English, and Science, mainly covering MAPEH and Filipino. This leads to challenges such as anxiety and questions about pursuing further education, hindering their professional growth. While the financial impact is negligible due to the provided materials, the mismatch affects teaching performance and student trust. Teachers often collaborate, use multimedia, and engage in self-directed learning to cope.

Novelty/Originality of this study: This study presents a comprehensive analysis of how TLE teachers teaching outside of specialization impact the quality of education provided to students. It recommends implementing free retooling programs, offering scholarship grants, and providing teacher training. The study emphasizes the need for teachers to teach within their specialization and for strengthening community partnerships to address the shortage of specialized educators.

Corresponding Author:
John Paul C. Demapendan
College of Education, Tarlac Agricultural University, Camiling, Tarlac, 2306, Philippines
Email: jcdemapendan@tau.edu.ph

1. INTRODUCTION

One of the most pressing and contemporary issues associated with the current education crisis is the phenomenon of educational mismatch. This situation arises when educators are assigned to handle subjects that extend beyond their areas of expertise, primarily due to systemic deficiencies within the educational infrastructure.

The misalignment between a teacher's qualifications and the subject matter they are required to teach can adversely affect the quality of education delivered, as well as diminish teachers' professional satisfaction [1].

Technology and Livelihood Education (TLE) is a discipline within the K-12 Basic Education Curriculum of the Philippines, comprising four key areas: Industrial Arts, Agri-fishery Arts, Information and Communication Technology, and Home Economics. The primary objective of TLE is to assist and guide students in acquiring and developing the knowledge, skills, and values that are pertinent to industry demands. The nature of the TLE curriculum necessitates that educators specializing in this subject are adequately trained to teach within its various components. However, a significant issue emerges when TLE educators are assigned to handle subjects outside their area of expertise and for which they have not received formal training. This concern is particularly observed in TLE, as it encompasses specific technical skills and knowledge that are not readily transferable to other subject areas.

Currently, there exists a notable gap in research about the lived experiences of TLE educators who are assigned to teach outside their specialization. Furthermore, there is insufficient exploration of the perceived impact of such assignments on their job performance, student perceptions, and coping strategies. This presents the necessity of conducting comprehensive research aimed at understanding the experiences of TLE teachers in these circumstances. To provide foundational insights into this issue, a phenomenological study will be undertaken to gather the necessary data, which can subsequently inform further exploration and validation through more extensive academic inquiry.

To comprehensively understand the nature of education mismatches, it is essential to clearly define and examine the various types of educational mismatches. One notable type is the Subject-Specialization Mismatch. This occurs when educators are assigned to teach subjects that do not correspond with their areas of academic or professional expertise. For instance, a Technology and Livelihood Education (TLE) teacher who specializes in industrial arts may be tasked with teaching mathematics or science, disciplines that fall outside their primary specialization. Such a situation can result in insufficient depth of subject matter coverage [2], as the educator may lack the requisite content knowledge and pedagogical skills necessary for effective instruction in the unfamiliar subject area. Another type is Level-of-Education Mismatch, which occurs when teachers are assigned to teach at a different educational level than what they are trained for. For example, a teacher trained to teach high school students may be assigned to teach elementary school subjects. This can result in inappropriate instructional methods and content delivery, as the teacher may not be familiar with students' developmental needs and learning styles at a different educational level [3]. Skills mismatch refers to a situation where the teacher's practical or technical skills do not match the demands of the subject they are teaching. TLE might involve a teacher skilled in agriculture being reassigned to teach information and communication technology (ICT), which requires different technical skills. This mismatch can impact the teacher's ability to effectively deliver hands-on, practical lessons essential in TLE subjects [4] . Geographical mismatch occurs when teachers are deployed to regions or schools that do not align with their specialized training or experience. This is common in rural or underserved areas with a shortage of qualified teachers. For instance, a TLE teacher trained in urban agriculture might be assigned to a remote area focusing on traditional farming practices. The geographical context may demand different pedagogical approaches and content, leading to expectations and outcomes mismatches [5]. The last type of education mismatch in this study is the Cultural mismatch, which arises when teachers are placed in environments where the students' cultural context does not align with the teacher’s background or training. This is particularly relevant in areas with diverse ethnic or socio-economic populations. A teacher unfamiliar with the local cultural practices may struggle to connect with students, impacting both the teacher's effectiveness and the student's engagement.

An examination of the implications of education mismatch for both educators and learners reveals significant concerns. When teachers are assigned to instruct subjects outside their areas of expertise, it often results in job dissatisfaction, heightened stress levels, and a feeling of professional inadequacy. Such circumstances can adversely affect teaching performance, as educators may encounter difficulties in delivering content effectively in domains where they lack proficiency. For students, an educational mismatch can lead to a diminished learning experience. The teacher's insufficient specialization may result in inadequate coverage of essential topics, thereby hindering students' mastery of critical skills and knowledge. In disciplines such as Technology and Livelihood Education (TLE), where practical and technical skills are paramount, this mismatch can have long-lasting effects on students’ preparedness for the workforce [6].

Another profound contributor to education mismatch is the shortage of qualified teachers in particular subject areas. Schools, particularly in rural or underserved areas, may not have enough teachers to cover all required subjects, leading to the reassignment of teachers to fill these gaps. This situation is often exacerbated by budget constraints and the lack of resources for hiring additional staff [7], [8]. Also, this leaves school administrators no choice but to assign teachers to subjects with an immediate need, regardless of the teachers’ specialization, to ensure that all subjects are taught [9].

Despite this problem regarding education mismatch, there is still also a notable gap in professional development opportunities for teachers reassigned to teach subjects outside their expertise. Many teachers may not receive adequate training or support when required to handle new subjects, affecting their teaching efficacy

and students' learning outcomes [10]. This experience increased stress and job dissatisfaction among teachers due to the challenges of teaching unfamiliar subjects [11]. This can lead to a decline in teaching quality, as educators may struggle to deliver content they are not fully versed in effectively. For students, this mismatch can result in a suboptimal learning experience, potentially leading to gaps in knowledge and skills development, particularly in specialized subjects that require a high level of expertise [12].

The identification of the issue of educational mismatch has been articulated and presented; consequently, the next step involves employing a framework to further investigate this issue. In examining the phenomenon of educational mismatch among Technology and Livelihood Education (TLE) teachers, a phenomenological approach was utilized. Phenomenology is a qualitative research methodology that emphasizes the exploration and comprehension of individuals' lived experiences and the meanings they ascribe to those experiences. Grounded in the philosophical work of Edmund Husserl, phenomenology aims to uncover the essence of a phenomenon by scrutinizing how it is perceived and experienced by those directly engaged. This approach proves particularly beneficial for investigating complex and subjective experiences, as it prioritizes the perspectives of the participants, enabling researchers to gain profound insights into their thoughts, emotions, and interpretations [13].

The assumption of this study is Technology and Livelihood Education (TLE) teachers assigned to teach subjects outside their specialization, face unique challenges and experiences that can significantly impact their professional identity, job satisfaction, and teaching efficacy [14]. These experiences can be deeply personal and subjective, making a phenomenological lens an ideal investigative approach.

A phenomenological approach is well-suited to capture the lived experiences of TLE teachers teaching outside their specialization because it focuses on the teachers' narratives and interpretations. Through in-depth interviews and open-ended questions, researchers can gain insight into how teachers perceive being reassigned, how they handle the challenges of teaching unfamiliar subjects, and how these experiences influence their professional lives. This study uncovers the emotional and psychological effects of teaching outside one's expertise, including feelings of inadequacy, frustration, or even empowerment, depending on how individual teachers respond to the situation. This level of depth is essential for comprehending the impact of the education mismatch phenomenon from the teachers' perspectives [15]. Phenomenology aims to uncover a phenomenon's essence or core meaning by distilling the commonalities among participants' experiences. A phenomenological study would identify the shared experiences and challenges of TLE teachers teaching outside their specialization. This might include common themes such as the struggle to adapt to new curricular demands, the need for additional professional development, or the strategies teachers use to cope with their assignments [16].

One of the strengths of phenomenology is its emphasis on subjectivity and the personal meaning individuals attach to their experiences. For TLE teachers, the meaning they ascribe to teaching outside their specialization can vary widely depending on their background, personal resilience, and career goals [17], [18]. Some may view it as a temporary inconvenience, while others may see it as a significant professional challenge or an opportunity for growth. This may contribute to a deeper comprehension of how teachers are impacted by education mismatch and may direct the creation of specialized interventions to assist them.

This study investigated the education mismatch among Technology and Livelihood Education (TLE) teachers teaching subjects outside their areas of expertise using a phenomenological approach. This research gathered comprehensive insights into how this mismatch affects various aspects of their professional lives, including job performance, opportunities for career advancement, and income. Additionally, the study sought to explore the coping strategies these teachers employ to deal with the challenges associated with teaching outside their specialization. This research aimed to contribute to a rich understanding of the broader implications of education mismatch on individual educators and the overall quality of education they provide.

2. RESEARCH METHOD

2.1 Research Design

This study employed a phenomenological approach to explore the lived experiences of Technology and Livelihood Education (TLE) teachers who teach subjects outside their areas of expertise. Phenomenology was selected as the research design because it allows for an in-depth understanding of the essence of experiences from the perspectives of the individuals experiencing the phenomenon [19]. Phenomenology is particularly suited to uncovering the meanings and interpretations that participants assign to their experiences, thereby offering rich insights into the impact of education mismatch on TLE teachers.

2.2 Participants of the Study

The study engaged 12 TLE teachers from various secondary schools in the four western towns of Tarlac, Philippines. These teachers are currently assigned to teach subjects outside their area of specialization. Participants were selected through purposive sampling to ensure they met specific criteria relevant to the study. The inclusion criteria are as follows:

1. Current assignment to a non-TLE subject.
2. A minimum of two years of experience in teaching non-TLE subjects.

3. Willingness to share personal experiences related to their professional challenges and coping mechanisms.

2.3 Data Collection Techniques

The data collected in this study was derived from detailed interview sessions and written responses. The data collection process was designed to be flexible, allowing participants to share their insights at times that best suited their schedules. Additionally, written response options were provided to accommodate those who preferred to express themselves in writing, ensuring that every participant could engage in a manner that was comfortable and convenient for them. This approach aimed to capture rich, qualitative data while respecting the individual preferences and availability of each participant.

The data-gathering instrument consists of open-ended questions designed to elicit detailed descriptions of the participants' experiences, challenges, and coping strategies. Example questions include:

- Can you describe your experience teaching a subject outside your expertise?
- How has teaching outside your specialization affected your job performance and career progression?
- What strategies have you employed to cope with the challenges associated with this mismatch?

2.4 Data Analysis

The data collected from the interviews was transcribed verbatim and analyzed using thematic analysis. The analysis involved:

1. Reading and re-reading the transcripts to fully immerse in the data.
2. Identifying significant statements that provide insight into the participants' experiences.
3. Formulating meanings from these significant statements.
4. Clustering the formulated meanings into themes that capture the essence of the participants' experiences.
5. Synthesizing the themes to understand the phenomenon under study comprehensively.

2.5 Research Procedures

Informed consent was systematically obtained from all participants before they engaged in the study, ensuring they understood the nature and purpose of the research. Each participant received a comprehensive explanation of the study procedures, their role, and the expected outcomes. To reinforce their trust, participants were assured of the strict confidentiality of their responses. All data gathered during the study were anonymized, effectively safeguarding participants' identities and personal information from any potential breach of privacy. Furthermore, participants were explicitly informed of their right to withdraw from the study at any time without facing any negative consequences or penalties, thus promoting an ethical approach to research and respect for individual autonomy.

Throughout the research process, data were meticulously collected, processed, and analyzed in a manner that sought to eliminate any bias from the researcher. This rigorous methodology was crucial in allowing themes to naturally emerge from the diverse range of responses provided by participants. The analysis aimed to provide a clearer understanding of the phenomena under investigation by focusing on the commonalities and patterns within the collected data. The final themes derived from this analytical process depicted the significant impact of education mismatch on Technology and Livelihood Education (TLE) teachers. Additionally, the study highlights the various coping strategies employed by these educators as they share the challenges posed by this mismatch, thereby offering insights into their experiences and resilience.

3. RESULTS AND DISCUSSION

This section provides an overview of the data analysis, interpretation, and presentation. It includes profiles of the respondents relevant to the study context and the emerging themes related to their experiences and perceptions of educational mismatch. Furthermore, it examines the coping strategies employed by the respondents when teaching outside their areas of specialization. This section also discusses the regional and global implications of the findings.

3.1. Profiling the Participants of the Study

Table 1. Sex Distribution of the Participants

Participants	Count
Male	5
Female	7
Total	12

As shown in Table 1, the study includes a total of 12 participants, comprising 5 males and 7 females. These participants were purposively selected based on their teaching assignments, which are outside their areas

of specialization. This distribution is significant as it ensures a balanced representation of both genders, which is crucial for capturing a wide range of perspectives and insights.

Table 2. Age Distribution of the Participants

Age bracket (Years old)	Number of Participants
20-29	1
30-39	7
40-49	4

Table 2 delineates the age distribution of the study participants. The predominant age group consists of seven individuals aged 30 to 39 years, followed by four participants in the 40 to 49 age range. Additionally, there is one participant aged 20 to 29. This distribution suggests a primarily middle-aged cohort, which may have implications for the study's findings, given the distinct experiences and perspectives associated with this age group. It is noteworthy that more experienced educators typically exhibit superior emotion regulation strategies, employing these methods more effectively when their emotional states necessitate intervention, in contrast to younger participants [20].

Table 3. Years of Teaching Experience Distribution of the Participants

Years	Number of Participants
2-3	3
4-7	6
8-12	3

Table 3 presents the distribution of teaching experience among the study participants. The largest group, comprising six respondents, had 4-7 years of teaching experience. Additionally, three participants had 8-12 years of experience, and another three had 2-3 years of experience. This diverse range of teaching tenures provides a comprehensive view of the varying levels of experience among the participants, which is important for understanding the different perspectives and challenges teachers face at different stages of their careers.

Table 4. Subject Assignments of the Participants

Subjects	Frequency	Percentage (%)
English	1	8.3
Science	1	8.3
TLE	10	83.3
Filipino	4	33.3
Social Studies	2	16.7
MAPEH	7	58.3
Values Education	3	25

Table 4 shows the teaching assignments of the participants. Most of these teacher participants, 10 out of 12 (83.3%), continue teaching within the TLE specialization. However, this table reveals they are also assigned to other subjects: four teachers (33.3%) teach Filipino, seven teachers (58.3%) teach MAPEH (Music, Arts, Physical Education, and Health), three teachers (25%) teach Values Education, two teachers (16.7%) teach Social Studies, and one teacher each (8.3%) teach English and Science.

Table 5. Preferred Teaching Specializations of the Participants within the TLE Subject

Subjects	Frequency	Percentage (%)
Industrial Arts	4	33.3
Agri-fishery Arts	6	50
Home Economics	9	75
Information Communication Technology	2	16.7

Table 5 presents the preferred teaching specializations of the teacher participants. This shows that most of these participants feel most confident in teaching Home Economics, with 9 out of 12 respondents (75%) indicating this preference. This is followed by Agri-Fishery Arts, preferred by six teachers (50%), and Industrial Arts, selected by four teachers (33.3%). Information Communication Technology (ICT) is the least preferred, with only two teachers (16.7%) feeling confident.

This distribution highlights the areas where TLE teachers feel they have the most competence and confidence, which is significant for identifying their professional development needs. The strong preference for Home Economics suggests that many teachers may have more training or experience in this area or find it more

aligned with their skills and interests. Conversely, the lower preference for ICT indicates a potential gap in training or confidence that could be addressed through targeted professional development programs. Understanding these preferences can help educational administrators and policymakers design support systems and training programs that align with teachers' strengths and address their areas of need, ultimately enhancing the quality of education delivered to students.

Table 6. Specific Areas Within TLE Managed by the Participants

Subjects	Frequency	Percentage (%)
Industrial Arts	3	25
Agri-fishery Arts	2	16
Home Economics	9	75
Information Communication Technology	3	25
Cookery, Beauty care	1	8.3
None	1	8.3

Table 6 shows the specific areas within Technology and Livelihood Education (TLE) that the teacher participants teaching typically manage or teach. The data shows that most of these teachers, 9 out of 12 (75%), teach Home Economics. This is followed by Industrial Arts and Information Communication Technology (ICT), managed by three teachers (25%). Agri-fishery arts are handled by two teachers (16.7%), while Cookery and Beauty Care and those who do not manage any specific area in TLE are each represented by one teacher (8.3%).

This distribution presents the areas where TLE teachers are frequently assigned despite being outside their primary specialization. The predominance of Home Economics suggests that many teachers may have more training or experience in this area, or it may be perceived as more accessible than other specializations. The lower representation in areas like Cookery and Beauty Care and the presence of teachers not managing any specific area indicate potential gaps in training or confidence that could be addressed through targeted professional development programs.

Comparing this with the previously presented Table 5, which depicted the favored teaching specializations of TLE teachers, reveals a consistent pattern. Both figures demonstrate a pronounced inclination and proficiency in Home Economics, indicating that this field is a favored and frequently managed specialization among TLE teachers. This coherence emphasizes the significance of directing professional development initiatives toward enhancing expertise and resources in Home Economics while also addressing the requirements in less favored and managed areas such as ICT and Agri-Fishery Arts.

Table 7. Number of Years Teaching Outside Field of Specialization

Years	Number of Participants
2-3	5
4-7	6
8-12	1

Table 7 shows the distribution of participants based on the duration of teaching outside their field of specialization. The majority, comprising six participants indicates that half of the respondents have taught outside their specialization for 4-7 years. Among those individuals, 5 participants have 2-3 years of experience teaching outside their specialization, while one participant has 8-12 years of experience teaching outside their specialization.

This distribution presents the adaptability and flexibility required of TLE teachers when assigned to subjects beyond their specialization. It emphasizes the potential challenges they encounter in delivering effective instruction in areas where they may lack formal training. Determining these assignments is vital for developing targeted professional development programs to support these teachers in enhancing their expertise in subject matter and pedagogical skills in non-specialized areas.

3.2. Themes Identified from the Analysis of Participant Responses

In analyzing the teachers' responses, several themes emerged related to the challenges, emotions, and coping strategies of teachers assigned to teach subjects outside their expertise. These themes reflect their adjustment processes, emotional responses, teaching approach shifts, and personal and professional growth perceptions. Below are the identified themes, along with a discussion:

Theme 1. Emotional Responses and Role Adaptation

Numerous teachers in the TLE program encounter significant initial feelings of anxiety and nervousness, particularly when faced with role ambiguity. This is especially true when they are assigned to teach subjects that fall outside their areas of expertise or comfort. This theme confirms the claims of the Role Ambiguity Theory. New responsibilities' uncertainty can create a challenging adjustment period [21]. However, many of the

participants claim that they gradually move past this discomfort and begin to accept and embrace their new roles within the educational framework.

As time progresses, a considerable number of these teacher participants find ways to adapt effectively to their new assignments. This adaptation often involves a thoughtful recalibration of their expectations regarding teaching methods, content delivery, and student engagement. This finding confirms that teachers, even when assigned outside their specialization, can develop new strategies that demonstrate significant flexibility and resilience in response to these challenges [22]. Through this process, the teacher participants demonstrate their ability to grow and thrive in evolving educational environments, ultimately enhancing their professional development and contributing positively to their school communities.

Theme 2. Motivation for Growth and Instructional Shift

Although it may present initial challenges, teaching subjects outside one's area of specialization can significantly contribute to personal and professional growth. the teacher participants find themselves engaging with new areas of study, undertaking comprehensive research and preparation to effectively communicate the subject matter. They develop strategies to adapt and deliver lessons that extend beyond their primary areas of expertise. This adaptability demonstrates a level of resilience that is consistent with the principles of Transformative Learning Theory [23].

Moreover, the necessity of learning unfamiliar subject matter often prompts the teacher participants to rethink and modify their instructional methods. Participants reported transitioning from traditional teaching strategies to structured, performance-based tasks to address new content demands. This transition becomes particularly prevalent when the teachers feel they lack the deep content knowledge required to facilitate independent learning among students. The teacher participants not only enhance their pedagogical repertoire but also foster an environment that encourages both student engagement and professional development by embracing such instructional adjustments [24].

Theme 3. Complexities of Teaching Effectiveness and Varing Student Perceptions

The perceptions of teaching effectiveness can significantly differ among the participants. Some teacher participants experienced feelings of inadequacy regarding their effectiveness due to a lack of comprehensive content knowledge. Such limitations often lead to a scenario where they find themselves learning alongside their students. This leads to the creation of a dynamic learning environment but also induces uncertainty regarding their authority on the subject matter. This theme emphasizes that a teacher's understanding of a subject significantly influences their approach to delivering it to students. Consequently, a teacher lacking sufficient knowledge of the subject is prone to select an inappropriate pedagogical method [25].

Conversely, other participants view their teaching effectiveness in a more favorable light, particularly when they embrace an interdisciplinary approach. They believe that exposing students to connections between various fields of study can enhance the overall learning experience. Teachers have reported that their efforts to connect diverse topics across disciplines are met with enthusiasm and appreciation from students. This brings up another important point: other studies suggest that cross-disciplinary teaching can promote a more meaningful learning experience for students [26]. This theme indicates that teachers, even without formal qualifications in a specific specialization, can develop effective pedagogical approaches to deliver educational content.

Student perceptions play a significant role in assessing teaching effectiveness. Some participants noted that students might question their teacher's credibility, often due to perceived gaps in the teacher's content knowledge. However, others genuinely appreciate the effort and engagement that teachers bring to the classroom. This underscores the importance of recognizing and valuing teaching strategies that prioritize student interaction and involvement in the learning process [27]. This reveals that teaching effectiveness is a complex interplay of teacher self-perception, pedagogical approaches, and student responses, all of which contribute to the difficulty of teaching as a profession.

Theme 4. Challenges to Career Advancement

One of the most significant obstacles to career advancement for the participants of the study is the challenge posed by time constraints. These TLE teachers often dedicate an extensive amount of their time and energy to mastering new content areas, which can severely limit their opportunities to engage in research activities or pursue specialized professional development opportunities [28]. This intensive focus on content mastery can leave little room for further academic exploration or growth. Teachers' income is significantly affected by their career advancement. Those who do not pursue continuing professional education often struggle to receive promotions and salary increases. However, the participants reported that this mismatch does not affect them financially because their schools provide the necessary materials and equipment for their teaching responsibilities.

Moreover, teachers may find themselves facing a mismatch between their teaching assignments and their areas of expertise, prompting some to reconsider their academic trajectories. This disjunction can hinder their ability to further specialize and may cause delays in advancing their careers. Even when faced with difficulties and

complications, professional teachers find ways to maintain their role in teaching despite uncertainties about their professional path [29].

On the flip side, for some participants, teaching subjects outside their specialization can yield unexpected opportunities for professional development. Engaging with different content areas may foster new skill sets and foster adaptability. Additionally, these cross-disciplinary experiences can encourage participation in seminars and workshops that span various fields, allowing them to broaden their knowledge base and enhance their instructional practices. Thus, while time constraints and mismatched assignments present challenges, they may also offer pathways for professional growth for some individuals in the teaching profession.

Theme 5. Resourcefulness and Collaboration as a Coping Strategy

The teacher participants employ a diverse array of strategies to effectively tackle the challenges they face in the classroom. A significant number of teachers turn to multimedia resources, which include videos, interactive software, and online platforms, to enrich their lesson plans and engage students more effectively. According to the participants, this approach helps to fill content gaps and makes learning more dynamic and accessible.

In addition to leveraging technology, many of the participants prioritize self-directed learning opportunities for their students, encouraging them to take initiative in their educational journeys. This fosters a sense of ownership and responsibility among students, allowing them to explore topics at their own pace.

It was also determined that the participants attend professional development workshops and seminars to enhance their skills and stay updated on the latest teaching strategies and curricular changes about the subjects they teach handle. These workshops often provide practical tools and frameworks that empower teachers to adapt their instruction to better meet the needs of their students.

This theme also highlights the importance of supporting teachers through collegial collaboration as a means to enhance their professional learning. Collaboration among colleagues has proven to be a vital support system within the educational landscape [30]. Participants reported that their collaborative activities include sharing educational resources, lesson plans, and teaching methods, which helps create an environment of mutual growth and support. This collective expertise not only bridges knowledge gaps but also fosters a sense of community among the participants, establishing a supportive network that enhances teaching practices.

Theme 6. Impact on Job Satisfaction and Preferences

The teacher participants reported the experience of a complex interplay of factors that influence their job satisfaction, resulting in an ambiguous landscape of professional fulfillment. For some participants, encountering the challenges associated with teaching subjects that are outside their expertise can catalyze professional development. This process not only enhances their skill set but also fosters a deeper sense of job satisfaction.

On the other hand, there are those participants who find that the emotional demands and content-related difficulties inherent in unfamiliar subjects contribute to a decrease in their overall job satisfaction. The stress of facing these challenges can overshadow the potential benefits of professional growth.

Furthermore, even though many of the participants recognize the value and importance of stepping outside their specific fields of study, a significant number ultimately prefer to return to their areas of specialization. This preference is often motivated by a desire for greater confidence in their teaching abilities and a belief that they can be more effective when working within their original discipline. Their return to specialization typically aligns more closely with their educational philosophy and their expectations of mastery, which are critical components of their professional identity and teaching practice.

Implications of the Study

Ideally, Higher Educational Institutions should develop a curriculum that aligns with the demands and needs of the target labor market and professional sectors. Addressing the issue of educational mismatch is attainable and preventable through effective collaboration between industry partners and higher education institutions [31]. The situation wherein TLE teachers handle subjects such as MAPEH (Music, Arts, Physical Education, Health), Social Science, and Language (Filipino) implies a potential shortage of graduates specialized in these disciplines. This shortage may be due to the limited college programs offered by nearby state universities in Tarlac Province, Philippines, or issues related to the recruitment policies and protocols of the public school system.

A report on School Infrastructure in the Philippines indicates a class size ranging from 29 to 54 students [32]. This situation suggests that teachers covering subjects outside their area of expertise may adversely impact the academic performance and learning experience of a substantial number of students each school year. Moreover, this figure could underrepresent the true extent of students who are taught by teachers lacking the appropriate credentials and training. The findings of this study may indicate that the education crisis in the Philippines can be attributed to education mismatch among teachers. Although this study focuses on 12 TLE teachers from four western towns in Tarlac, the observations could provide a basis for a more extensive investigation into whether

the mismatch between teachers' specialization and their teaching assignments impacts overall student academic performance and attitudes toward education.

In the global educational landscape, the findings of this study serve as a pertinent illustration of the necessity for training college students to equip them for the uncertainties inherent in their future professional careers. Furthermore, this underscores the significance of lifelong learning as a strategy to sustain professional relevance throughout their respective careers [33].

Recommendations of the Study

To address education mismatch, it is recommended that education authorities and administrators offer free retooling programs, scholarship grants, and training for teachers who are assigned outside of their specialization. However, a more effective approach would be to ensure that all teachers are assigned to teach within their field of specialization. This strategy would uplift teachers' morale and enhance students' perceptions of their teachers' capabilities. Higher education institutions should strengthen their linkage with the community to design and develop college programs that meet the community's needs and demands. This approach addresses the evident shortage of MAPEH and Filipino teachers in the study participants' schools. The researcher recommends conducting an extensive study to capture a broader picture of the education mismatch and its impact on the quality of education provided to students. This expanded research would offer a deeper understanding of the issue and inform more effective solutions.

4. CONCLUSION

This study revealed that TLE teachers teaching outside their specialization are often assigned to teach subjects such as Filipino, MAPEH (Music, Arts, Physical Education, and Health), Edukasyon sa Pagpapakatao (Values Education), Araling Panlipunan (Social Studies), English, and Science. The majority of participants reported that they are primarily handling MAPEH and Filipino. This finding suggests a significant shortage of teachers specialized in these fields. Teaching subjects outside of their specialization poses emotional and psychological challenges for Technology and Livelihood Education teachers, leading to feelings of anxiety and nervousness. These teachers still preferred to teach within their field of specialization. However, the teachers remain committed to fulfilling their educator duty despite these challenges. They confront the physical and mental strains associated with teaching beyond their expertise, demonstrating remarkable resilience and adaptability in their efforts to deliver high-quality education to their students. Teaching outside their specialization often causes teachers to question whether to pursue advanced education related to their specialization. This uncertainty can lead to stagnation in their professional growth and development. To address this issue, many teachers seek retooling courses and acquire micro-credentials to attain specific competencies. These efforts help bridge the gap between their field of specialization and the subjects they are required to teach. Teachers who teach subjects outside their specialization generally perceive this experience as having a negligible effect on their financial status. Most participants revealed that their respective schools provide the necessary materials and equipment for teaching these subjects, addressing any potential financial burden.

The education mismatch affects the perceived performance of TLE teacher participants teaching outside their specialization. Participants reported that their teaching performance and students' perceptions of their capabilities are affected. Students tend to distrust teachers' abilities once they learn that these teachers are not specialists in the subjects they handle. Consequently, teachers face challenges in preparing content and employing effective pedagogical approaches to deliver the subject matter. As coping strategies for the challenges and difficulties that come with teaching outside their area of expertise, Technology and Livelihood Education (TLE) teachers work together with their colleagues to gain support and ensure access to sufficient resources. They also use multimedia materials and engage in self-directed learning while dedicating time and effort to acquiring additional resources and training.

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REFERENCES

[1] H. A. Mohamad, D. Raffy, and R. S. Sinsuat, "Mismatch Of Teachers' Qualifications And Subjects Taught: Effects On Students' National Achievement Test Psychology And Education: A Multidisciplinary Journal Mismatch of", doi: 10.5281/zenodo.7494892.

[2] C. V. Cervantes and R. Cooper, "Labor market implications of education mismatch," *Eur Econ Rev*, vol. 148, p. 104179, Sep. 2022, doi: 10.1016/J.EUROECOREV.2022.104179.

[3] M. Piracha and F. Vadean, "Migrant educational mismatch and the labor market," in *International Handbook on the Economics of Migration*, Edward Elgar Publishing Ltd., pp. 176–192, 2013, doi: 10.4337/9781782546078.00017.
[4] S. McGuinness, K. Pouliakas, and P. Redmond, "Skills Mismatch: Concepts, Measurement And Policy Approaches," *J Econ Surv*, vol. 32, no. 4, pp. 985–1015, Sep. 2018, doi: 10.1111/joes.12254.
[5] I. Marinescu and R. Rathelot, "Mismatch Unemployment and the Geography of Job Search," *American Economic Journal: Macroeconomics*, vol. 10, no. 3, pp. 42–70, Jul. 2018, doi: 10.1257/mac.20160312.
[6] S.-J. Kim and S. O. Choi, "The Effects of Job Mismatch on Pay, Job Satisfaction, and Performance," *Journal of Open Innovation: Technology, Market, and Complexity*, vol. 4, no. 4, p. 49, Dec. 2018, doi: 10.3390/joitmc4040049.
[7] D. Carothers, H. Aydin, and M. Houdyshell, "Teacher shortages and cultural mismatch: District and university collaboration for recruiting." www.jsser.org
[8] H. Battu and K. A. Bender, "Educational mismatch in developing countries: A review of the existing evidence," in *The Economics of Education*, Elsevier, 2020, pp. 269–289. doi: 10.1016/B978-0-12-815391-8.00020-3.
[9] A. M. H. Chen, S. Brown, K. Mark, and S. McBane, "An overview of Instructional approaches and decision-making strategies to curtail curricular overload," *Am J Pharm Educ*, vol. 87, no. 8, p. 100013, Aug. 2023, doi: 10.1016/j.ajpe.2022.12.001.
[10] A. Popova, D. K. Evans, M. E. Breeding, and V. Arancibia, "Teacher Professional Development around the World: The Gap between Evidence and Practice," *World Bank Res Obs*, vol. 37, no. 1, pp. 107–136, Jan. 2022, doi: 10.1093/wbro/lkab006.
[11] M. Toprak, "Mismatch between teachers' need for change and change in practice: what if what they see is not what they want?," *International Journal of Leadership in Education*, vol. 21, no. 6, pp. 669–689, Nov. 2018, doi: 10.1080/13603124.2016.1272720.
[12] B. Serikbayeva and K. Abdulla, "Education-Job Mismatch: Implications for Individual Earnings and Aggregate Output," *Soc Indic Res*, vol. 163, no. 2, pp. 723–752, Sep. 2022, doi: 10.1007/s11205-022-02912-x.
[13] D. W. Smith, "'Phenomenology', The Stanford Encyclopedia of Philosophy (Summer 2018 Edition)."
[14] R. Q. Salvador, C. M. T. Borromeo, M. R. Limon, M. A. G. Parinas, L. L. De la Cruz, and J. M. B. Dalere, "Exploring Technical-Vocational Education Teachers' Challenges and Adaptation Strategies in Teaching Courses Outside their Specializations," *Journal of Technical Education and Training*, vol. 14, no. 2, Sep. 2022, doi: 10.30880/jtet.2022.14.02.004.
[15] D. Zahavi, *Phenomenology The Basics*. Routledge, 2018. doi: 10.4324/9781315441603.
[16] M.-T. Tang, "S. Käufer, A. Chemero, Phenomenology - An Introduction," *Phenomenological Reviews*, vol. 1, p. 3, Jun. 2015, doi: 10.19079/pr.2015.11.tan.
[17] S. Campbell, L. Macmillan, G. Wyness, A. Bryson, L. Stokes, and D. Wilkinson, "Mismatch in higher education: prevalence, drivers and outcomes," 2019, www.nuffieldfoundation.org
[18] V. Brouskeli, V. Kaltsi, and M. Loumakou, "Resilience and occupational well-being of secondary education teachers in Greece," 2018.
[19] B. E. Neubauer, C. T. Witkop, and L. Varpio, "How phenomenology can help us learn from the experiences of others," *Perspect Med Educ*, vol. 8, no. 2, pp. 90–97, Apr. 2019, doi: 10.1007/S40037-019-0509-2.
[20] A. Puente-Martínez, Z. Prizmic-Larsen, R. J. Larsen, S. Ubillos-Landa, and D. Páez-Rovira, "Age differences in emotion regulation during ongoing affective life: A naturalistic experience sampling study.," *Dev Psychol*, vol. 57, no. 1, pp. 126–138, Jan. 2021, doi: 10.1037/dev0001138.
[21] C. Maden-Eyiusta, "Role conflict, role ambiguity, and proactive behaviors: does flexible role orientation moderate the mediating impact of engagement?," *The International Journal of Human Resource Management*, vol. 32, no. 13, pp. 2829–2855, Jul. 2021, doi: 10.1080/09585192.2019.1616590.
[22] A. G. E. Co, C. R. G. Abella, and F. S. De Jesus, "Teaching Outside Specialization from the Perspective of Science Teachers," *OAlib*, vol. 08, no. 08, pp. 1–13, 2021, doi: 10.4236/oalib.1107725.
[23] F. M. Schnepfleitner and M. P. Ferreira, "Transformative Learning Theory – Is It Tıme to Add A Fourth Core Element?," *Journal of Educational Studies and Multidisciplinary Approaches*, vol. 1, no. 1, pp. 40–49, Mar. 2021, doi: 10.51383/jesma.2021.9.
[24] F. Jacob, S. John, and D. M. Gwany, "Teachers' Pedagogical Content Knowledge And Students' Academic Achievement: A Theoretical Overview".
[25] D. Irving-Bell, "Influence of teachers' perceptions of subject knowledge on pedagogical approaches," in *Debates in Design and Technology Education*, London: Routledge, 2022, pp. 165–177. doi: 10.4324/9781003166689-15.
[26] I. A. Neville, L. A. Petrass, and F. Ben, "Cross disciplinary teaching: A pedagogical model to support teachers in the development and implementation of outdoor learning opportunities," *Journal of Outdoor and Environmental Education*, vol. 26, no. 1, pp. 1–21, Apr. 2023, doi: 10.1007/s42322-022-00109-x.
[27] K. Aldrup, B. Carstensen, and U. Klusmann, "Is Empathy the Key to Effective Teaching? A Systematic Review of Its Association with Teacher-Student Interactions and Student Outcomes," *Educ Psychol Rev*, vol. 34, no. 3, pp. 1177–1216, Sep. 2022, doi: 10.1007/s10648-021-09649-y.
[28] N. Dvir and O. Schatz-Oppenheimer, "Novice teachers in a changing reality," *European Journal of Teacher Education*, vol. 43, no. 4, pp. 639–656, Aug. 2020, doi: 10.1080/02619768.2020.1821360.
[29] J. Alvehus, N. Avnoon, and A. L. Oliver, "'It's complicated': Professional opacity, duality, and ambiguity—A response to Noordegraaf (2020)," *Journal of Professions and Organization*, vol. 8, no. 2, pp. 200–213, Aug. 2021, doi: 10.1093/jpo/joab006.
[30] L. de Jong, J. Meirink, and W. Admiraal, "School-based teacher collaboration: Different learning opportunities across various contexts," *Teach Teach Educ*, vol. 86, p. 102925, Nov. 2019, doi: 10.1016/j.tate.2019.102925.

[31] H. Daka *et al.*, "Bridging the Gap: Addressing the Disparity between Higher Education Knowledge and Industry Needs," *International Journal of Social Science and Education Research Studies*, vol. 03, no. 08, Aug. 2023, doi: 10.55677/ijssers/V03I8Y2023-12.

[32] A. M. Navarro, "School Infrastructure in the Philippines: Where Are We Now and Where Should We Be Heading?," 2022, https://www.pids.gov.ph

[33] P. A. Heslin, L. A. Keating, and S. J. Ashford, "How being in learning mode may enable a sustainable career across the lifespan," *J Vocat Behav*, vol. 117, p. 103324, Mar. 2020, doi: 10.1016/j.jvb.2019.103324.