



Jacks of All Trades: The Lived Experiences of Out-of-Field Non-Government Basic Education Teachers

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Article Info

Article history:

Received Oct 08, 2024

Revised Jan 07, 2025

Accepted Jan 21, 2025

OnlineFirst Jan 24, 2025

Keywords:

Challenges

Basic education

Junior high school

Out-of-field teaching

Quality education

ABSTRACT

Purpose of the study: Out-of-field teaching is a concern that results in teaching ineffectiveness, compromising quality education. However, there is still limited extant literature available, particularly on the experiences of non-government junior high school teachers. This study specifically explored the lived experiences of the out-of-field teachers in the provinces of Pampanga and Tarlac in the Philippines.

Methodology: Ten basic education teachers particularly junior high school teachers were tapped in order to achieve the purpose of the study. Also, maximum variation was utilized, incorporating convenience and snowball techniques to ensure diverse perspectives. The Colaizzi method in analyzing the data was used through a positivist view. Member checking was equally observed to meticulously capture the core experiences of the informants and to ensure the trustworthiness of the data.

Main Findings: The findings unveiled both positive and negative experiences that were eventually clustered into five categories: (1) challenges of out-of-field teaching, (2) strategies to overcome challenges, (3) opportunities for growth, (4) impact on students, and (5) areas for improvement. Consistent with the recent works of literature, this study highlights the contrasting aspects of out-of-field teaching—its challenges and potential opportunities

Novelty/Originality of this study: As a contrast to the usual assumption that out-of-field teaching only creates negative experiences, not only among teachers but also among learners, the challenges and opportunities of this phenomenon offer valuable insights that can serve as a cornerstone for policymakers and school administrators in helping and supporting out-of-field teachers. Contextualized assistance and targeted preparations can guarantee quality education

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1. INTRODUCTION

Teachers have important roles in molding the academic journey of each student by having a big impact on building the foundation of students' knowledge, skills, and understanding. They help students develop their innate talents and cultivate their knowledge in different subject areas that they could use in their next educational levels and potentially in their lives. Aside from being facilitators of learning, teachers likewise serve as second

parents. They extend their arms to guide and be an inspiration to their students. Thus, teachers serve as the key to the success of the learning process [1].

To be specific, several existing pieces of literature have already documented the role teachers play in students' academic achievement. Themes from existing literature can be grouped as to (1) the importance of professional development, (2) strategies used, and (3) teacher characteristics. All of these have been found to impact students' academic achievement.

Focusing on the importance of teachers' continuous professional development, a significant correlation to the professional development of teachers and their students' academic performance was found [2]. Findings from another research highlight the importance of ongoing teacher professional development, curriculum reform initiatives, and supportive school environments in fostering academic success [3]. Thus, it can be said that professional development is one of the key ingredients to ensure quality learning.

As to strategies used, teacher feedback plays a significant role in enhancing the skills and abilities of students. Specifically, constant negative feedback affects the motivation of students [4]. In contrast, positive feedback enhances students motivation and engagement [5]. There is also a need for teachers to pay close attention to the needs and preferences so as to motivate them and support the achievement of their full potential [6]. Additionally, teachers' increased frequency of ICT use during instruction improves current and long-term academic performance of students, particularly those who lack access to computers at home. Positive effects can be attributed to increased use of interactive teaching methods, which eventually heighten the motivation of students to learn [7]. This only proves that strategies used inside the classroom contribute a lot to the learning process.

With emphasis on teacher characteristics, emotional regulation difficulties impact professional performance, which affects the performance of students [8], while teachers' intrinsic motivation for teaching is significantly related to students' intrinsic motivation for learning [9]. It can be said that characteristics are also contributory to the teaching-learning process.

1.1 The teacher and quality education

The Sustainable Development Goal 4 (SDG 4) emphasizes the critical role of teachers in achieving inclusive, equitable, and quality education, which is essential for lifelong learning opportunities for all. And teachers play a pivotal role in implementing the SDG 4 agenda, as their effectiveness directly influences educational quality and student well-being [10]. Specifically, teachers' pedagogy plays an important role in advancing SDG 4. Thus, compromising the enhancement and sustainability of pedagogical skills could also compromise the progress on attaining quality education, which potentially impacts other related SDGs such as economic growth and poverty [11].

To be specific, the Secondary Education (SE) plays a pivotal role in attaining the SDG 4. In the Asian region, SE is identified as a sufficient condition for SDG 4, alongside Early Education (EE) and Literacy (Lit), underscoring its importance in the region's educational landscape. Globally, Lit was identified as the most necessary requirement to achieve the SDG 4, followed by SE [12].

1.2 Junior high school in the Philippines

Junior High School (JHS) refers to Grades 7 to 10, which is also referred to as lower secondary education in the Philippines. These are the formative years of education that ensure the efficient transition of students from primary to secondary education. It is a phase in-between the exciting year of entering high school and the difficult process of selecting the track and strand to enroll in Senior High School [13]. During this time, students are introduced to a specialized curriculum. Core subjects include English, Mathematics, Science, Filipino, and Social Studies [14]. Additionally, subjects like Personnel Training (Edukasyon Sa Pagpapakatao), Music, Arts, Physical Education, Health, Home and Life Education (Edukasyong Pantahanan at Pangkabuhayan), and Technology and Livelihood Education are taken [15].

To date, there are different types of junior high schools being offered in the country. These include the General Secondary School (GSS), the Vocational Secondary School (VSS), and the Science Secondary School (SSS). GSS has four levels and is mainly based on the American curriculum. VSS focuses on the technical and vocational education program, while SSS are research-oriented and specialized public high schools intended for students with proven competence in mathematics and sciences [16].

1.3 Out-of-field-teaching

Different subjects require different pedagogy. Through specialization, teachers acquire knowledge necessary to teach specific subjects or year levels. The specialization also provides a sense of identity and facilitates the organization of teachers into common commitments and expertise [17]. It must be noted that teacher quality is a contributing factor to educational endeavor success [18]. However, it has been observed that out-of-field teaching is evident in schools in the Philippines, particularly in private schools, due to staffing limitations and resource constraints.

To be specific, out-of-field teaching refers to the practice where educators are assigned to teach subjects outside their area of specialization or training [19], and this concern continues to grow [20]. Both theory and empirical evidence suggest that out-of-field teaching can adversely affect teachers' work and students' learning [19]. Teaching subjects without adequate knowledge can be problematic and may lead to other problems [21], and the increasing cases of out-of-field teaching can be attributed to structural teacher shortage [22] together with aspects of school organizational practice [19]. Review of several extant literature revealed several themes related to out-of-field teaching. These include: (1) instructional challenges, (2) impact to teachers' self-efficacy and heightened stress levels, (3) management of the concern, and (4) opportunities for growth.

As to instructional challenges, out-of-field teachers face difficulties in content mastery, resource limitations [23]-[25], assessment preparation and pedagogical knowledge, resources, student motivation, and training [21]. More time is also spent on classroom management and disciplining students, less time spent teaching [26]. Our field teaching also influences teachers' subject enthusiasm [27], which eventually affects students as well. Teachers may struggle due to the interdisciplinary nature of subjects assigned to them [22]. As a matter of fact, out-of-field teaching has a negative impact on the likelihood of students taking college entrance examinations [28]. Crossing an unfamiliar territory generally describes this concern [29].

As to self-efficacy, teachers' self-efficacy and competence have become questionable in themselves because of out-of-field teaching. It creates a big impact on their teaching as they often struggle with confidence, effective teaching strategies, and delivering meaningful content in their class [30]. Out-of-field teachers, on average, have half a standard deviation lower in self-efficacy compared to in-field teachers. This difference is considered significant [31]. Also, it must be noted that challenges experienced in out-of-field teaching often lead to heightened stress levels affecting overall performance and well-being. Stress has been found to be a significant factor influencing teachers' work satisfaction and effectiveness, particularly when they are required to handle unfamiliar subjects [32], [33].

With reference to the addressing of the concern, support from management is vital [34], [35]. The need for instructional resources was also highlighted in several studies in relation to the call for sustainable support from management, e.g., [36]-[38]. Equally important is teaching practices to cope with the lack of skills, strategies, and content knowledge [18]. Self-learning and adaptive methods were also used. Retooling and mentoring programs led by subject experts can also be beneficial, particularly in improving content and pedagogical knowledge [21].

Although at first out-of-field teaching may seem to only be associated with challenges, some extant literature also shows the opposite. This refers to the opportunities for growth. Some teachers, particularly those with open personalities who can maintain a positive emotional and mental outlook, handle their situations with competence and are not facing significant professional development hurdles [22]. Others are able to develop a resilient mindset, which made the triumph over challenges [29]. Also, teachers who are able to identify with the subjects they teach are more likely to exhibit levels of interest, enjoyment, confidence, and commitment [20].

Generally, and based on extant literature, it can be said that out-of-field teaching is a complex phenomenon with many facets to take into consideration. This is also a concern that needs to be addressed. And this concern can be better addressed if insights from those who get to experience it are heard. Thus, the study fills a critical gap in the literature by focusing on the experiences of out-of-field junior high school teachers in non-government schools, where resources are often more constrained. While previous studies have provided general insights into the challenges and opportunities faced by out-of-field teachers, they have rarely contextualized these issues in resource-limited settings, be it material or human resources. This urgency is further underscored by the significant impact of out-of-field teaching on teacher self-efficacy, stress levels, and ultimately, student outcomes, which are all contributing factors to the attainment of SDG 4.

In the end, the novelty of this research lies in its dual focus on validating existing findings while providing context-specific insights, laying a foundation on more targeted and sustainable support mechanisms for educators. Conducting the study will not only validate findings from existing literature but can also contextualize the concern; thus, better assistance can be provided. This allows for the development and implementation of different programs and policies, ensuring that the educational leaders are better equipped to address the challenges of the out-of-field teachers in non-government settings while strengthening teacher growth and professional resilience.

2. RESEARCH METHOD

2.1 Design Research

In order to acquire a comprehensive understanding and perspective on the research topic, the research utilized the qualitative design, which explored the lived experiences of JHS teachers who were teaching outside their specialization in the provinces of Pampanga and Tarlac, Philippines. Specifically, a phenomenological

approach was used to allow an in-depth exploration of the phenomenon to understand the what and how of their lived experiences [39] through conversational interviewing.

2.2 Research Subjects

A total of ten informants were chosen through purposive sampling. Maximum variation was observed in order to capture an in-depth understanding of the phenomenon. Maximum variation ensures data collection from different perspectives [40]. The informants came from different areas of specialization, years of experience, and subjects handled, which provided a comprehensive perspective. The first group of informants was selected through the convenience sampling method, followed by the snowball sampling method, where the initial informants recommended other qualified JHS teachers based on the set criteria, allowing additional diverse and relevant informants.

2.3 Research Instruments

Informed consent was sent to the initially qualified informants via messenger, reiterating the purpose of the study, the confidentiality measure, and the rights of the informants, such as the right to withdraw from the interview at any time. After the informants responded to the informed consent letter, signifying their willingness to participate in the study, their availability at their most convenient time for the interview was asked. This was adapted from the ethical considerations in qualitative research [41].

Interviews were done face-to-face and virtually via Google Meet. Before the start of each interview, the purpose of the study was reiterated. Also, their rights before, during, and after the interviews were discussed together with the permission to record the interviews for transcription purposes. Informants were assigned pseudonyms to protect their identities. All recordings and transcriptions were safely stored to maintain the confidentiality of the information and the anonymity of the informants.

The interviews were carried out using the conversational interviewing method to make a natural and open dialogue with the informants [42]. Conversational interviewing was done in four parts: introduction, open conversation, cleanup, and wrap-up. The initial question asked was, "Describe your overall experience in teaching subject/s outside your specialization." Based on answers, follow-up questions were asked to have in-depth information about the experiences of the informants, allowing the conversational interviewing to unfold naturally.

2.4 Data Analysis

Recordings were transcribed using the TurboScribe online application. Transcriptions were meticulously reviewed to ensure their accuracy and reliability. Transcriptions were analyzed through Colaizzi's method. This is a phenomenological method of analysis that involves a systematized procedure designed to understand human experiences through different stages, highlighting the significance of the lived experiences of the informants [43].

To be specific, data analysis started with verbatim transcriptions. Relevant statements were then identified and extracted, followed by the creation of meanings from these statements. These formulated meanings were grouped into clusters of categories, which helped in developing a detailed and comprehensive description of the phenomenon. A positivist analysis of the symbolic representations within the data was then conducted, leading to the identification of the fundamental structure of the phenomenon. This was then returned to the informants for validation to ensure accuracy and trustworthiness of the results.

3. RESULTS AND DISCUSSION

The informants shared their valuable experiences in teaching outside their specialization. Table 1 describes the demographic profile of the informants showing their different backgrounds in teaching.

Table 1 Demographic profile of the informants

Pseudonym	Sex	Age	Years of Experience	Area of Specialization	Subject Handled Out of Area of Specialization
Rosana	Female	26	5	English	Christian Living Education
Paul	Male	27	3	Physical Education	Social Studies 10, Filipino
Eugene	Male	24	2	Filipino	Social Studies 7, Computer 8
Jun	Male	33	1	Math	Science 8,9
Basilio	Male	25	3	Science	Music, Arts, Physical Education, and Health 8

Lynda	Female	24	2	English	Technology and Livelihood Education 8
Josie	Female	23	2	English	Technology and Livelihood Education, Computer, Filipino, Music, Arts, Physical Education, and Health
Luigi	Male	25	3	Science	Technology and Livelihood Education 7
Bruno	Male	24	2	Math	Social Studied 9, Science 10
Carol	Female	34	4	General Education	Educasyon sa Pagpapakatao 7-10

Five significant categories were identified in the data from the interviews conducted, specifically: a.) challenges of teaching outside specialization, b.) strategies to overcome challenges, c.) professional growth, d.) student outcomes, and e.) opportunities for improvement. These categories were related to each other to capture the full meaning of the phenomenon.

Table 2: Summary of initial codes, clusters, and categories

Initial codes	Clusters	Categories
lack of subject knowledge too much time used for lesson preparation too many lessons to prepare language difficulties lowered self-assurance difficulty in answering students' questions	adjustment concerns confidence concerns	challenges of out-of-field teaching
institutional support and mentorship independent research and study use of personal experiences as references embracing the learning process enhanced credentials exposure to diverse teaching methods continuous professional development sharing of knowledge and insights with students building mutual understanding students excel despite the challenges active participation of students in class discussions	institutional-initiative self-initiative professional improvement teacher-student collaboration relationship with students student outcomes	strategies to overcome challenges opportunities for growth impact on students
provision of training and workshops provision of support and encouragement development of better teaching materials hiring of qualified teachers	institutional support resource development	areas for improvement

3.1 Category 1: Challenges of out-of-field teaching

This category describes the informants' difficulties in teaching subjects outside their field of expertise. The narratives highlight the struggles of the teachers in dealing with the lack of subject knowledge, too much time being used for lesson preparation, and language difficulties. The experience also seemed to affect their confidence, as reflected in their lowered self-confidence and inability to answer students' queries.

These experiences are best illustrated by Luigi's statement: "...the critical part is if they're going to ask a question, and since it's not my specialization, if I didn't search or study the lesson, it's difficult for me to provide answers to them." Rosana expressed a similar sentiment: "There were also tendencies that sometimes, when the discussion is getting longer, we are moving away from the topic; there were times that I was struggling to answer questions of the students." Josie also aired her concern: "...unlike when I teach my specialization, even if I don't study, even if I just read it quickly, or I just scan the lesson, I can teach it right away. But this time, it's like double the effort that I put in to make the lesson proper and engaging."

These findings are parallel with extant literature. Concerns focusing on struggles in learning unfamiliar topics and content, which results in low self-confidence in teaching the subject, have been found [30], [37]. Similarly, out-of-field teachers experience the same difficulty in pedagogy and content mastery, which impacted their teaching effectiveness [25]. Thus, pedagogical content knowledge is important (PCK) for the teachers for effective teaching [44]. According to the authors, educators must improve their PCK as it helps them with their instructional decisions and makes them easily adapt the content, which plays a role in discussing the lessons effectively, thereby resulting in effective teaching [45], [46] and eventually enhancing students' outcomes [44].

3.3 Category 2: Strategies to overcome challenges

This category describes the strategies, both initiated by the institutions and the informants, as a response to the struggles they face. The narratives emphasize the grit of the teachers through independent research and study, lessons from personal experiences, and embracing the learning process. The institution also addresses the challenges of out-of-field teaching through institutional support and mentorship.

Paul described his strategy: "...after the class, what I do is research more, and after that, since one of my subjects is Filipino, I always ask my colleague, who is a Filipino major, regarding the topic and some of the unfamiliar terms and words." Jun shared a similar strategy: "Especially when I'm teaching biology, which is not my expertise, so I need to know all the everyday details before I teach it. The information that the students need and how to understand it easier. Sometimes, I do it through role-playing by myself." Basilio being reactive, his statements also support this category: "Sometimes, when the discussion is going deep, that's the time when it's really challenging. Wherein you can really think about it when the student asks. Oh my God, what will I answer here? So, we will just go through the ways where I give the questions back to the students repeatedly until they come up with a concept that I can't answer."

The strategies mentioned in this category align with recent research highlighting mechanisms to resolve difficulties. Adaptive teaching approaches and practices, and tailoring instructions according to students' needs, are important [47]. Mentoring is also highly regarded as a pillar towards professional advancement by helping teachers cope with the knowledge gaps through asking for help from expert or experienced teachers [48], and effective mentoring can strongly enhance professional competencies [49].

Role-playing as a strategy is a constructivist pedagogy. The effectiveness of role-playing before discussing a lesson enhances the preparation, thereby boosting students' engagement [50]. Through role-playing, the teacher will have a deeper understanding of the lesson as it allows the teacher to have a real classroom scenario in advance. The reactive approach is very much related to the guided inquiry approach. Research indicates that this approach helps enhance students' critical thinking skills and allows them to explore concepts, which leads to improved students' cognitive outcomes compared to traditional learning. These strategies highlight the value of joint effort, determination, and resourcefulness in coping with the hurdles faced in out-of-field teaching.

3.3 Category 3: Opportunities for growth

This category describes experiences that contribute to professional development. While initially overwhelmed, opportunities also opened. Experiences played a vital role in enhancing their credentials, being exposed to different teaching methods, and continuous professional development. Being an out-of-field teacher also provided the informants the opportunity to share knowledge and insights with their students and build mutual understanding.

Lynda shared her insights: "So, you don't see it as a struggle or challenge alone, but you see it as an opportunity. Yes, at the end of the day, it's you who will gain and benefit from it, not only your students but also you as a teacher, because you have the chance to learn something during the time you are there, and you should always be thankful for the school that gives you that opportunity." Bruno echoed this realization: "I feel like I learned more than the students. I learned more because they rely on the information that I give them based on the

book. As for me, I research; I do a lot of preparation so that I can teach them.” Carol also aired her views: “I take it as a new chance to learn other things. What if, in the future, I become better because of this?”

Out-of-field teachers gain benefits such as broadening their knowledge and improving their qualities as teachers [22]. They became more flexible and always did research on the subjects, which resulted in gaining more knowledge [49]. Thus, recognizing the importance of converting challenges into opportunities for academic growth because this cultivates resiliency and adaptability of teachers as well as students [50]. These realizations from teachers point out how being an out-of-field teacher plays a role in enhancing them professionally. Shaping these difficulties into opportunities for lifelong learning and growth.

3.4 Category 4: Impact on students

This category describes the impact of out-of-field teaching on students. The informants shared that at first they were not too confident in teaching the subjects assigned to them, but their willingness to go beyond and put in extra miles of effort positively impacted the students' output and engagement. These resulted in building better relationships with students, students excelling in class, and active participation of students during class discussions.

Jun best describes this category as he shared: “They always say that when we're in class, it's always fun. If I'm going to be late in a minute or two, they will go to the faculty to see me. They're always excited, and I can say that students are enjoying my class. ... They can do the exam and performance task easily.” Eugene reflected on the broader impact: “The good thing about the part where I teach computers. It's like a blessing and not hard for me because my students really get along because they are into technology... Since in the discussion I'm really into analogy, it's easier for them to think about what I'm discussing.” Rosana also averred: “Our students' output is okay. Every lesson has reflections, questions, and answers from the students based on their experience. So, I feel that the students' output is better when they have a reflection after our Christian Living Education lessons.”

Student outcomes stand as a testament to the efforts and adaptability of out-of-field teachers. Despite initial hesitations and confidence gaps, their dedication and willingness to invest additional effort positively influenced students' academic performance, engagement, and enjoyment. These outcomes highlight the reciprocal relationship between teacher preparation and student success.

Regarding the importance of building rapport with the students in promoting a conducive learning environment. To be specific, positive student-teacher relationships improve the academic performance, engagement, as well as behavior of the students [41], [51]. Also, emphasis on reflective practices demonstrates the role of introspection in deepening students' understanding and engagement. Reflective practices in classrooms are important as they enhance teaching effectiveness, resulting in improved student learning outcomes [52], [53].

The statements in this category highlight the future payoffs of the teachers' determination to teach subjects outside of their area of expertise. Improved student outputs affirm the transformative power of effective teaching through diverse strategies.

3.5 Category 5: Areas for improvement

This category highlights the suggestions to the school's management in addressing challenges related to out-of-field teaching. Informants emphasized the need for institutional support and resource development. They also highlighted the need for understanding from the management of the unique challenges they face.

Paul shared his thoughts: “Don't be too strict with the teachers with the deadlines, because, in a sense, the teacher doesn't know what the knowledge that the students need is. The teacher has to explore what to teach. So, more or less, just give them to explore it first. Then if you see that it's now okay, still give them guidance as well as motivation like, “You can do it! ”. Lynda suggested: “If you will ask the teacher to teach other subjects, make sure that you will give the materials or the resources that they need for that subject so that they can easily adapt to that subject. It's really hard if you do not have any single knowledge about the subject; at the same time, you can't have some support from your school.” Basilio also encouraged the school management: “...make sure that you are always complete with the teachers and all the specializations so that the quality of the education won't be compromised. If ever you really need to require a teacher to teach outside his or her specialization, at least compensate and provide training so that they will be qualified to teach that subject.”

The suggestion for leniency and motivational guidance highlights the importance of motivational strategies coming from the school leaders because they can elevate teachers' performance, which plays a role in aiming educational goals [54]. Additionally, research indicates that adequate support systems, including informational and methodological resources, like the professional learning community (PLC), which was not mentioned in the extant literature, and ongoing professional development programs for out-of-field teachers, are essential for these educators to navigate their unique challenges and develop a comprehensive understanding of the curriculum they are tasked with teaching [55]. The recommendations on material and human resources play a critical component in attaining SDG 4. Material resources refer to instructional facilities, laboratories,

technologies, and instructional materials. There should be a balance of material and human resources that management should invest in to leverage and elevate the academic performance of students [56].

These insights of the out-of-field teachers put emphasis on the importance of institutional support in dealing with their everyday battles, opening the door for improved teacher performance, student outcomes, and quality education. Additionally, this research initiative adds novelty by giving focus on the importance of PLC that the school leaders may employ tailored with professional development programs for out-of-field teachers. However, the study is still lacking empirical data on the implementation and outcomes of these strategies in the context of out-of-field teaching. Therefore, future studies could dig deeper to provide more comprehensive understanding in these initiatives towards teachers performance, student outcomes, and the attainment of SDG 4.

4. CONCLUSION

Based on the results of the study, out-of-field teachers faced both positive and negative experiences. The knowledge gap is the primary concern of the teachers, which also provokes interconnected issues such as low confidence and adjustment difficulties, a single problem creating a domino effect, thereby affecting teaching effectiveness. In spite of the difficulties being encountered, different strategies and various practices, including continuous learning, maximizing the resources available, and seeking mentorship, are done. Additionally, out-of-field teachers also recognize the opportunities that their experiences brought to them, resulting in a positive impact on their professional growth. Finally, several recommendations from the out-of-field teachers have been put into the table, such as institutional support and resource development.

REFERENCES

- [1] Ghufroon, F. K. Fitriyah, M. Sodikin, N. Saputra, S. M. Amin, S. M., and H. A. Muhimmah, "Evaluating the impact of teachers' personal and professional resources in elementary education on school-based human resource management: A case study in Indonesia," *SAGE Open*, vol. 14, no. 1. 2024, doi: 10.1177/21582440241231049
- [2] A. Arifin, S. S. Suryaningsih, and O. Arifudin, "The relationship between classroom environment, teacher professional development, and student academic performance in secondary education," *International Education Trend Issues*, vol. 2, no. 2, pp. 151–159. 2024, doi: 10.56442/ieti.v2i2.467
- [3] E. J. Ifesinachi, J. Dadzie, and A. C. Ocheni, "Enhancing students' academic achievement in basic science: the role of assessment for learning, classroom management, and teacher-student relationships," *European Journal of Education Studies*, vol. 11, no. 5. 2024, doi: 10.46827/ejes.v11i5.5298
- [4] A. M. M. Mahmudul Hasan, "Teachers' feedback and its impact on students' performance in education," *International Journal of Academic Pedagogical Research*, vol. 8 no. 3, pp. 21-31. 2024.
- [5] A. Câmpean, M. Bocoş, A. Roman, D. Rad, C. Crişan, M. Maier, L. Tăuşan-Crişan, Z. Triff, D. Triff, D. Mara, E. Mara, R. Răduţ-Taciu, I. Todor, C. Baciuc, M. Neacşu, I. Dumitru, C. C. Colareza, and C. E. Roman, "Examining teachers' perception on the impact of positive feedback on school students," *Education Sciences*, vol. 14 no. 3, p. 257. 2024, doi: 10.3390/educsci14030257
- [6] K. Daniel, M. M. Msafiri, F. Antony, and X. Wan, "Motivate students for better academic achievement: A systematic review of blended innovative teaching and its impact on learning," *Computer Applications in Engineering Education*. 2024, doi: 10.1002/cae.22733
- [7] J. Hong, W. Liu, and Q. Zhang, "Closing the digital divide: The impact of teachers' ICT use on student achievement in China," *Journal of Comparative Economics*. 2024, doi: 10.1016/j.jce.2024.06.003
- [8] G. Fuentes-Vilugrón, E. Sandoval-Obando, F. Caamaño-Navarrete, C. Arriagada-Hernández, P. Etchegaray-Pezo, F. Muñoz-Troncoso, I. P. Cuadrado-Gordillo, Pablo, and E. Riquelme-Mella, "Difficulties among teachers' emotional regulation: Analysis for the development of student well-being in Chilean schools," *Behavioral Sciences*, vol. 14 no. 9, pp. 749–749. 2024, doi: 10.3390/bs14090749
- [9] A. Hawrot and J. Zhou, "Do changes in perceived teacher behaviour predict changes in intrinsic reading motivation? A five-wave analysis in german lower secondary school students," *Reading and Writing*. 2023, doi: 10.1007/s11145-023-10472-w
- [10] K. Yoshida, "Roles of teachers in the SDG4 age: An introductory note," *Kokusai Kyōiku Kyōryoku Ronshū*, vol. 22 no. 2, pp. 7–14. 2020, doi: 10.15027/50527
- [11] N. Durrani, G. Qanay, G. Mir, J. Helmer, F. Polat, N. Karimova, and A. Temirbekova, "Achieving SDG 4, Equitable quality education after COVID-19: Global evidence and a case study of Kazakhstan," *Sustainability*, vol. 15 no. 20, p. 14725. 2023, doi: 10.3390/su152014725
- [12] L. Carvalho, D. Almeida, A. Loures, P. Ferreira, and F. Rebola, "Quality education for all: a fuzzy set analysis of sustainable development goal compliance," *Sustainability*, vol. 16 no. 12, p. 5218. 2024, doi: 10.3390/su16125218
- [13] A. Granada, "Education System In The Philippines: A Complete Guide." Kabayan Remit, April 14, 2021.
- [14] L Hobbs and G. Törner, "Teaching out-of-field as a phenomenon and research problem," *Examining the Phenomenon of "Teaching Out-of-Field"*, pp. 3–20. 2019, doi: 10.1007/978-981-13-3366-8_1
- [15] J. De La Cruz and R. Alda, "Out-of-field teaching: english teachers' experiences and practices. *Journal of Education and Innovation*," vol. 26 no. 3, pp. 33–45. 2024
- [16] A. Albrecht and L. O'Keeffe, "Beyond qualifications: Identity of out-of-field teachers in years 7-10 mathematics in south australia" *Mathematics Education Research Group of Australasia*, 2024.

- [17] H. A. R. Mercado and L. M. Morante, "Experiences of senior high school mathematics teachers in out-of-field teaching," *Salud, Ciencia Y Tecnología - Serie de Conferencias*, vol. 3, p. 1125. 2024, doi: 10.56294/sctconf20241125
- [18] L. Ma, "Challenges in the professional development of teachers teaching out-of-field in chinese elementary schools under the background of "structural teacher shortage," *Advances in Social Science, Education and Humanities Research*, pp. 419–427. 2024, doi: 10.2991/978-2-38476-253-8_51
- [19] M. Anana, "The dichotomy of specialization: Is a literature teacher necessarily a language teacher?," *UJAH Unizik Journal of Arts and Humanities*, vol. 21 no. 2, pp. 108–133. 2021, doi: 10.4314/ujah.v21i2.6
- [20] N. J. L. M. Madulara, "Out-of-field teaching: The stories of novice educators in teaching social studies," *International Journal of Research Publications*, vol. 112 no. 1. 2022, doi: 10.47119/ijrp10011211120224116
- [21] M. Rey and N. M. Tañola, "Ang magturo ay di biro: A hermeneutic phenomenological study on the lived-experiences of math educators in out-of-field teaching," *EPRA International Journal of Research & Development*, pp. 131–141. 2024, doi: 10.36713/epra15810
- [22] C. Shah, Helen, and P. W. Richardson, "Out-of-field teaching and instructional practices in Years 7-10 mathematics classes in Australia: evidence from TALIS 2018," *Handle.net*. 2024, <https://hdl.handle.net/10419/306474>
- [23] R. Porsch and E. Wilden, "Teaching English Out-of-Field in Primary School: Differences in Professional Characteristics and Effects on Self-Assessed Instructional Quality," pp. 117–134. 2022, doi: 10.1007/978-981-16-9328-1_6
- [24] M. H. Aburto, G. Elacqua, and M. Kutscher, "The Impact of Out-of-field STEM High School Teachers on College Decisions: Evidence from Chile." 2024, doi: 10.18235/0013116
- [25] L. F. and A. L. A. Abrantes, "Lived experiences of out-of-field senior high school teachers teaching physics," *International Journal of Multidisciplinary Educational Research and Innovation*, vol. 2 no. 1, pp. 117-143. 2024
- [26] M. J. Branzuela, E. C. Ayro, and M. J. D. Cruz-Vidal, "Teaching outside the box: Senior high school teaching experiences, challenges, and windows of innovations of non-social science majors," *International Journal of Multidisciplinary Applied Business and Education Research*, vol. 4 no. 7, pp. 2210–2222. 2023, doi: 10.11594/ijmaber.04.07.06
- [27] K. M. Smith, J. Hillier, and S. Erduran, "Examining Differences in Teacher Self-efficacy for In-field Versus Out-of-Field Teachers of Physics," *Challenges in Physics Education*, pp. 281–295. 2024, doi: 10.1007/978-3-031-72541-8_19
- [28] S. K. Apau, "Out-of-Field teaching in ghanaian basic schools: a matrix of basic school teachers' experiences in ekumfi district," *Social Education Research*, pp. 188–199. 2022, doi: 10.37256/ser.3120221314
- [29] E. Wheeley, H. Klieve, E. Park, and A. Du Plessis, "Preservice teachers' perceptions about out-of-field teaching: Implications for students, teachers and schools," *The Australian Journal of Teacher Education*, vol. 48 no. 4. 2023, doi: 10.14221/1835-517x.5619
- [30] S. Nakar and A. E. Du Plessis, "Facing the dilemma of the out-of-field teaching phenomenon in Vocational Education and Training (VET)," *Vocations and Learning*, vol. 16 no. 3, pp. 551–575. 2023, doi: 10.1007/s12186-023-09329-8
- [31] J. B. Napier, J. A. Luft, and H. Singh, "In the classrooms of newly hired secondary science teachers: the consequences of teaching in-field or out-of-field," *Journal of Science Teacher Education*, vol. 31 no. 7, pp. 802–820. 2020, doi: 10.1080/1046560X.2020.1800195
- [32] R. J. Ligawad, "Fitting the square peg in a round hole: Teaching experiences of out-of-field physical education teachers in the senior high school," *Deleted Journal*, vol. 2 no. 1. 2022, doi: 10.56901/rslq6891
- [33] R. Roxas, "Being out-of-field: A phenomenological research on the lives of teachers teaching non-major," *International Journal of Research Studies in Education*, vol. 11 no. 14. 2022, doi: 10.5861/ijrse.2022.b017
- [34] L. L. Tingzon and H. J. A. Buyok, "Lived experiences of non-TLE teachers teaching TLE subjects: A phenomenological inquiry," *European Journal of Education Studies*, vol. 9 no. 11. 2022, doi: 10.46827/ejes.v9i11.4538
- [35] J. W. Creswell, *Research design: qualitative, quantitative and mixed methods approaches* (4th ed), United States of America: SAGE Publications, Inc., 2014.
- [36] H. Mirza, F. Bellalem, and C. Mirza, "Ethical considerations in qualitative research: Summary guidelines for novice social science researchers," vol. 11, pp. 441–449. 2023.
- [37] A. Skukauskaitė and M. Sullivan, "Conversational interviewing grounded in interactional ethnographic principles", in Routledge eBooks, pp. 114–141. 2022. doi: 10.4324/9781003215479-8
- [38] K. Edward and T. Welch, "The extension of Colaizzi's method of phenomenological enquiry," *Contemporary Nurse*, vol. 39 no. 2, pp. 163–171. 2011, doi: 10.5172/conu.2011.163
- [39] A. T. Ahmed and Y. O. Shogbesan, "Exploring pedagogical content knowledge of teachers: A paradigm for measuring teacher's effectiveness," *Pedagogi Jurnal Ilmu Pendidikan*, vol. 23 no. 1, pp. 64–73. 2023, doi: 10.24036/pedagogi.v23i1.1540
- [40] E. Mizzi, "Pedagogical content knowledge in school economics," *Citizenship Social and Economics Education*. 2024, doi: 10.1177/14788047241276192
- [41] M. Muñoz-Galván and K. Padilla, "Pedagogical content knowledge about the sustainability of high school chemistry and biology teachers," *Journal of Environmental Studies and Sciences*, vol. 14 no. 4, pp. 652–665. 2024, doi: 10.1007/s13412-024-00919-z
- [42] E. Nabiebakye and L. Susan, "An examination of the challenges and strategies of adaptive instruction in junior high schools in the jirapa municipality of the upper west region of ghana," *Research on Humanities and Social Sciences*. 2022, doi: 10.7176/rhss/12-20-03
- [43] B. Galvez and R. A. Azarias, "Guro at gabay: Mentoring and coaching from the lens of selected public elementary teachers," *International Journal of Research Studies in Education*, vol. 13 no. 5. 2024, doi: 10.5861/ijrse.2024.24038
- [44] Y. Belavina and O. Klyuchko, "Mentoring as a developmental mechanism of the all-russian olympiad for primary school teachers "My First Teacher," *Primary Education*, vol. 12 no. 2, pp. 9–17. 2024, doi: 10.12737/1998-0728-2024-12-2-9-17

- [45] I. P. Kinasih and N. Hardiani, "Role playing and the changing of teacher understanding to middle school Mathematics lesson planning within ELPSA Framework," *Jurnal Pendidikan Matematika*, vol. 14 no. 2, pp. 183–198. 2020, doi: 10.22342/jpm.14.2.6647.183-198
- [46] I. Istiana, B. Jatmiko and B. K. Prahani, "Effectiveness of implementing guided inquiry to improve students' critical thinking skills," *SAR Journal - Science and Research*, pp. 275–280. 2023, doi: 10.18421/sar64-07
- [47] S. Lindriani and I. P. Suwarna, "Effectiveness of guided inquiry model in enhancing students' critical thinking on light waves" *Berkala Ilmiah Pendidikan Fisika*, vol. 11 no. 3, p. 339. 2023, doi: 10.20527/bipf.v11i3.16388
- [48] J. K. Putri, C. W. Gunawan and Y. Wiyatmo, "Implementation of guided inquiry to increase students' interest in learning physics and critical thinking skills," *Jurnal Pendidikan Fisika Dan Teknologi*, 10(2), 257–263. 2024, doi: 10.29303/jpft.v10i2.7091
- [49] M. S. A. Buenacosa and M. B. Petalla, "Embracing the unknown: Adaptability and resiliency of out-of-field secondary teachers teaching English in public schools," *Asian Journal of Education and Social Studies*, pp. 1–29. 2022, doi: 10.9734/ajess/2022/v37i2796
- [50] J. Geertsema and K. B. Laksov, "Turning challenges into opportunities: (Re)vitalizing the role of academic development," *The International Journal for Academic Development*, vol. 24 no. 1, pp. 1–6. 2019, doi: 10.1080/1360144x.2019.1557870
- [51] A. Nazish and M. A. Kang, "Exploring the positive teacher-student relationship on students' motivation and academic performance in secondary schools in karachi," *Academy of Education and Social Sciences Review*, 4(2), 149–159. 2024, doi: doi.org/10.48112/aessr.v4i2.710
- [52] B. M. Alnijres, "Reflecting on different aspects of classroom teaching: Mirrors on the road of educators' self-professional development," *Journal of Ecohumanism*, vol. 3 no. 7. 2024, doi: 10.62754/joe.v3i7.4469
- [53] M. Aryal, Reflective teaching and practices in the classroom. *Journal of Multidisciplinary Research Advancements*, 2(1), pp. 26-31. 2024
- [54] D. Soelistya, R. A. Santoso, A. Akhsin, and T. Triasmono, "The importance of guidance and motivational encouragement: the significance of leadership and communication in organizational management," *Kontribusi Research Dissemination for Community Development*, vol. 6 no. 2, 194. 2023, doi: doi.org/10.30587/kontribusi.v6i2.5929
- [55] A. E. Du Plessis, L. Hobbs, J. A. Luft, and C. Vale, *The out-of-field teacher in context: The impact of the school context and environment*, In Springer eBooks, pp. 217–242. 2019. doi: 10.1007/978-981-13-3366-8_9
- [56] C. Harber, *Human and material resources: finance, teachers and physical resources* In Springer eBooks (pp. 53–81). 2017, doi: 10.1007/978-3-319-57382-3_4