



HORIZONTAL DEPLOYMENT: THE PLIGHT OF BTVTED GRADUATES TEACHING CORE SUBJECTS IN PUBLIC SECONDARY SCHOOLS IN TAGUM CITY, PHILIPPINES

Harold P. Almendrasⁱ,

Joa H. Jao

Professional Schools,
University of Mindanao,
Davao City, Philippines

Abstract:

This paper aimed to discern the lived experience of BTVTED graduates handling core academic subjects in public secondary schools, empirically identify the challenges, adaptive strategies, and insights that would add to the growing body of knowledge in out-of-field teaching. This study examined the lived experiences of 12 BTVTED graduates, selected via purposive sampling, using a phenomenological approach and Colaizzi's six-step descriptive method. The researchers used a two-pronged approach to gather data and obtain these opinions: five participants participated in a focus group discussion (FGD), and the remaining seven provided in-depth interviews (IDI) to provide in-depth viewpoints. The data emerged 13 themes: pedagogical adjustment difficulties, systemic curriculum-related challenges, gaps in content mastery; professional identity struggles and self-doubt; pressure from student expectations; resourcefulness and continuous learning; leveraging technology and digital tools; adapting Tech-Voc approaches to core subjects; collaborative and peer-supported strategies; intensive lesson preparation and adaptation; flexibility and professional identity transformation; pedagogical growth and enhanced effectiveness; and system-level insights and reflective practice. These suggest that peer mentoring and seminars, the formal integration of adaptive strategies through training, and an intensive review of DepEd's hiring and deployment guidelines are key recommendations to address this phenomenon. Moreover, future research studies on this topic may be conducted in various dimensions to explore the broader prevalence of this phenomenon.

Keywords: education, out-of-field teaching, phenomenology, BTVTED graduates, Philippines

ⁱ Correspondence: email haroldalmendras00@gmail.com

1. Introduction

The phenomenon of educational mismatch is one of the most urgent and modern problems related to the present education crisis. Consequently, out-of-field teaching became more widespread and has been overlooked (Du Plessis, 2019; Salvador *et al.*, 2022). It happens when teachers are tasked with instructing students in a year level, subject, or area outside of their area of expertise, for which they lack the necessary credentials. These credentials can include teaching expertise, pedagogical content knowledge, and content knowledge (Rahayu & Osman, 2019; Ambroce & Daza, 2025). With various demands, BTVTEd teachers today face numerous challenges, often teaching outside their comfort zones without all the academic preparation they might ideally have. Many educators have had to develop new skills beyond their specialization through various means—watching tutorials online, learning independently, or seeking help from colleagues (Castillo *et al.*, 2024).

A research study examining teachers' experiences who graduated from the Bachelor of Technical-Vocational Teacher Education (BTVTED) program assigned to teach core academic subjects like Math, Science, English, and Social Studies in public secondary schools in Tagum City would offer valuable insights. As per CHED Memorandum No. 79, series of 2017, the program, formerly known as Bachelor of Technical Teacher Education (BTTE) is a laddered undergraduate degree that combines a college degree and TESDA programs in teaching specific areas in Industrial Arts or Home Economics, Information and Communication Technology or Agri-Fishery Arts – the four areas of technical and vocational track in the K+12 Curriculum.

Out-of-field teaching assignments that force educators to instruct outside of their areas of preparation and expertise are unacceptable because subject-specific teacher shortages continue to exist in many areas. Demapendan (2024) stated that teachers who teach subjects other than their specialization indicate a major scarcity of teachers who specialize in those fields. However, few studies still show the specific challenges faced by BTVTED degree holders who receive assignments teaching subjects far removed from the technical-vocational curricula for which they were trained. This qualitative study could shed light on how such out-of-field deployments impact teacher effectiveness, instructional quality, and student learning outcomes. Additionally, giving voice to the lived experiences of BTVTED graduates in this position would reveal the professional development needs, resource gaps, and policy adjustments required to better support teachers in these roles. Given the prevalence of out-of-field teaching globally, research examining this phenomenon among BTVTED graduates teaching core curricula could have widespread relevance.

2. Literature Review

Numerous studies demonstrate that teachers have challenges when instructing in subjects outside their area of expertise, a practice known as out-of-field teaching

(Aventura & Viña, 2023). Teaching in an out-of-field context has been seen globally. For almost 50 years, the United States has acknowledged the problem of out-of-field teaching, and there is currently a significant amount of domestic and international research on the matter that shows teachers struggles in teaching subjects outside their expertise (Hobbs & Törner, 2019; Van Overschelde & Piatt, 2020). Various countries across the globe, including Australia, Europe, South Africa, and Indonesia, have been engaged in an educational struggle (Branzuela, Ayro, & Cruz-Vidal, 2023). More teachers are teaching subjects outside of their areas of competence due to a lack of qualified educators, undermining a traditional duty that has gone overlooked (Co, *et al.*, 2021).

In the context of the Philippines' public schools, specifically in basic education, Technology and Livelihood Education (TLE), as well as Technical and Vocational Education (TVE), provide students with lifetime learning opportunities, which, when realized, have a ripple effect on the students' successes. TLE and TVE have an impact on people's lives around the world as they relate to globalization. Both TLE and TVE use their own ways to stimulate technology demand in students' education by allowing them to focus on one specialization till they graduate from Junior High School (JHS), which can serve as a stepping stone to their Senior High School (SHS) levels (Salvador *et al.*, 2022). As reported by the Second Congressional Commission on Education (EDCOM 2) during the House Committee on Appropriations hearing on the Department of Education budget, a concerning 62% of teachers in the Philippines are teaching subjects not aligned with their academic backgrounds. This mismatch is most pronounced in core subjects like Science, Araling Panlipunan (Social Science), Filipino, English, and Mathematics. (Senate of the Philippines, 2024).

Out of Field (OOF), misalignment, and mismatch of teachers in different fields are widely apparent across the Philippine education system disciplines. This can affect the learning experience of students. The teacher's inadequate understanding or lack of enthusiasm for the subject can impede the performance and engagement of their students. In physical science courses, teaching OOF presents difficulties for teachers in organizing and executing in-class education. (Napier *et al.*, 2020). As per the study carried out by Branzuela (2023), when developing effective teaching strategies to address learners' algebraic difficulties and improve arithmetic proficiency, math teachers who struggle with the same material may find it difficult to relate to their struggles. Moreover, as per the research undertaken by Salvador *et. al* (2022), it was discovered that Ilocos Norte's TLE teachers struggle to teach subjects in which they lack expertise. They balance their time between conducting in-depth studies, giving students insightful feedback, and producing fair assessments. The mismatch in subject assignments is not solely due to a teacher shortage; it is also a result of the way the institutions handle hiring, managing, and planning (Aventura & Viña, 2023; Olanrewaju & Omeghie, 2024).

This study anchored on the Trait and Factor Theory (Parsons, 1909). This theory anchors the study because it provides knowledge and understanding. This theory was developed by Dr. Frank Parsons in his book, *Choosing a Vocation*, in 1909. Parsons coined that an ideal career is based on matching human characteristics, such as skills,

values, and personality, with employment standards such as income and working conditions. The better the fit, the greater the individual's job satisfaction and success. It is matching careers to talents, skills, and personality. People perform best when they are in jobs best suited to their abilities. It is also focused on identifying individual characteristics (i.e., traits) and the environment or job needs (i.e., factors), so job seekers can find a career that closely aligns with their characteristics (Chartrand, 1991).

Moreover, this study is strongly anchored on Bandura's Self-Efficacy Theory (1977), which suggests that people who believe in their capabilities to do certain activities directly influence their behavior, motivation, and performance. In the context of education, teacher self-efficacy refers to teachers' beliefs in their ability to organize and perform activities required to successfully deliver teaching tasks. Self-efficacy involves the types of activities and context choices, the level of effort they exert, and how persistent they are in facing struggles and aversive environments, the greater the self-efficacy, the higher the coping efforts (Bandura & Adams, 1977).

Currently, there is a substantial gap in research about the lived experiences of BTVTED graduates who are assigned to teach outside their area, specifically in core subjects. The study by Buenacosta *et al.* (2022) on out-of-field secondary teachers teaching English in public schools revealed that further studies will show a wider scope of lived experiences of out-of-field teachers teaching multiple subject areas. Moreover, Smythe-Thompson (2022) alluded that to gain a more comprehensive understanding of OOF teaching, future research should explore its application in diverse educational settings, including rural and suburban schools. Thus, the researchers ascertained the dearth of existing studies specifying the lived experiences of BTVTEd graduates teaching core subjects in secondary public schools in the province.

This study offers significant global and social contributions, directly addressing Sustainable Development Goal 4: Quality Education. Its global significance lies in addressing critical gaps in educational literature regarding teacher qualification misalignment, policy implementation challenges, and professional identity formation when educators work outside their specialized training. Socially, the study holds considerable value for improving educational outcomes by identifying specific challenges these teachers face, potentially leading to better support systems and professional development opportunities that strengthen teaching effectiveness. The findings could inform more targeted interventions to ensure all students receive instruction from properly prepared teachers, a key component of SDG 4's target to increase the supply of qualified teachers substantially. By addressing this localized manifestation of a global challenge, the research contributes to both scholarly understanding and practical solutions that advance quality education as a fundamental human right and development priority.

The main purpose of this study is to unearth the plight of BTVTED graduates teaching core subjects in public secondary schools in Tagum City. This study sought to answer the following questions:

- 1) What pedagogical, content knowledge, and professional identity challenges do BTVTEd graduates encounter when teaching core academic subjects in public secondary schools in Tagum City?
- 2) How do BTVTEd graduates develop and implement adaptive strategies to deliver core subject instruction despite their technical-vocational educational background effectively?
- 3) What valuable insights and professional transformations have BTVTEd graduate teachers learned from dealing with the challenges of teaching core subjects?

Moreover, the findings of this study will be highly significant and beneficial to various people: the Department of Education officials, BTVTEd graduates, students, and future researchers. The Department of Education officials will be able to revisit teacher qualification policies. Updating these policies ensures that highly qualified and competent teachers are deployed to classrooms nationwide to safeguard students' learning experience. For BTVTEd graduates pursuing careers in teaching, the study's findings can offer insightful information. This study's findings can also be used to teach future educators various instructional strategies and best practices that will improve their training methods. The study's findings will give students insightful perspectives on the approaches and procedures used in the research process. Students can better understand by doing in-depth research and by assessing and using study results by reviewing the findings. Nevertheless, the results of this study will be a valuable resource for future researchers studying similar or related phenomena. These findings will also contribute to the existing body of knowledge by offering novel perspectives and insights into this field of research.

3. Material and Methods

This study utilized a qualitative research design, particularly phenomenological approach. Qualitative design is concerned with establishing answers to the whys and hows of the phenomenon in question. Sage Publications (2019) states that qualitative research is phenomenological in that it seeks to comprehend individuals' lived experiences as well as the behavioral, emotional, and social meanings that these experiences have for them. A phenomenological approach describes the essence of a phenomenon by exploring it from the perspective of those who have experienced it. This research technique, which enables the researchers to gain first-hand knowledge about the empirical social reality under investigation, includes fieldwork, participant observation, in-depth interviews, and full engagement in the activity being studied (Elliott & Crossley, 1994; Filstead, 1970).

This study was conducted in public secondary schools of the Division of Tagum City. The participants of the study were the BTVTEd graduates teaching core academic subjects in the Division of Tagum City. This study used a purposive sampling where specific criteria were set: least one year of teaching experience in Tagum City public schools (junior high school), graduates of BTTE/BTVTEd, and have experience teaching

core academic subjects (English, Mathematics, Science, Social Studies, or Filipino). 12 participants were included in the study. Exclusions would apply to teachers with insufficient experience, teachers at senior high school, those teaching only vocational subjects, private school teachers, and non-BTVTED graduates.

This study used an interview guide in both IDI and FGD interviews made by the researchers. It was verified by the thesis adviser and reviewed by five experts as part of the validation of the interview guide, which has a rating of 9.96 (Good). An interview guide in a study is important to ensure that the interview is systematic (Dor-Haim & Nir, 2023; Marshall & Rossman, 2016). With this, the validity, reliability, and authenticity of the findings of this research were ensured (Creswell, 2014; Guadalquiver & Tagadiad, 2023; Keravnos & Symeou, 2024).

As part of the preparatory activities for the study, an official letter requesting permission to conduct the research was produced and delivered to the Department of Education – Tagum City Division, addressed to the Schools Division Superintendent (SDS). This letter requested the appropriate authorization to proceed with data collection in specific schools within the division, including the objectives of the study, methodology, expected benefits, and ethical considerations. Following this, the researchers headed to the identified secondary schools to collaborate with the principal to ensure that the study was conducted formally. The selected participants were requested to sign a consent form and agree to the condition that their participation is voluntary and that they were willing to share their experiences as needed in the study. The researchers submitted all the data to the data analyst for data analysis which was analyzed, patterned and themed based on the responses. The researcher's thesis adviser also served as a secondary author for his constant supervision and guidance during and after the conduct of this study.

Furthermore, Colaizzi's method of thematic analysis was used in addition to data analysis to code transcripts systematically, obtain themes and patterns, and create a detailed account of the participants' experiences as BTVTED graduates teaching core subjects in Tagum City public schools. It followed the steps: (1) obtaining a general sense of each transcript, (2) extracting significant statements, (3) formulations of meanings, (4) organization of formulated meanings into clusters of themes and themes, (5) exhaustively describing the phenomenon, (6) describing the fundamental structure of the phenomenon, 7) returning to the participants to validate the findings from the study participants (Kr, 2022).

Nevertheless, to guarantee accuracy and academic integrity, the usage of artificial intelligence technologies such as QuillBot, Grammarly, Claude AI, and Gemini to help with text paraphrasing and reference formatting in this work is ethically disclosed by the researchers. All AI-generated information was responsibly utilized to further enhance contextual ideas and insights. The primary research, analysis, and intellectual contributions remain entirely the work of the researchers. These procedures were done to increase the credibility of the study and assure that ethical guidelines were strictly adhered to in conducting this study.

4. Results and Discussion

Presented in this section are the themes to describe the challenges, coping mechanisms, and insights of the BTVTED graduates teaching core subjects in public secondary schools.

Theme 1: Pedagogical, systemic and curriculum-related, content knowledge, and professional identity challenges of BTVTED graduates

The data highlighted that struggles of BTVTED graduates in teaching core subjects were greatly caused by the nature of the subjects, which are far different from what they are accustomed to in the BTVTED/BTTE curriculum from their college education, and even in their area of specialization. This requires teachers to know when and how to apply specific topics and to acquire knowledge about different approaches that would suit students effectively (Langelaan *et al.*, 2024). Moreover, the participants highlighted the content mastery gap they have, which not only includes a lack of facts to teach but also a deficit in specialized content knowledge. This drawback sets off a series of challenges, beginning with lesson planning, activity preparation, and understanding new subjects (Roxas, 2022). Their struggles also encompass the deep internal turmoil of shaken teachers' professional identity. This self-conflict triggers the confidence shortfall, manifesting as self-doubt and imposter syndrome. Imposter syndrome has a substantial role in how teachers perceive things (LaPalme *et al.*, 2022). Internal gaps in content mastery frequently combine these external pressures, causing teachers to doubt their own effectiveness and struggle with their professional identities. The intense pressure from student expectations contributes to this internal tension, creating a demanding environment where the need to project authority and expertise constantly competes with the raw learning curve of the profession. As stated by Agyapong *et al.* (2022), teachers' burnout, anxiety, and doubt are rooted in excessive demands on their energy, strength, and resources as teachers—which can result in reduced job satisfaction, poor work performance, or worse, leaving the teaching profession.

Theme 2: Resourcefulness and adaptive strategies of BTVTED graduates

The data uncovered that teachers need to be innovative and open to learning new things to remain effective. They accomplish this by incorporating useful, hands-on techniques from technical-vocational training into regular subjects and utilizing technology and digital tools to make lessons more engaging. They also work very hard to prepare and modify their lesson plans to meet the needs of their students. Digital technology is key to helping educators make effective instructional methods and materials for learning and collaboration (Haleem, 2022). This strategy is a powerful tool that helps the learners engage in the learning process. Ultimately, they maintain their strength by cooperating with other educators and receiving guidance from peers. Mentoring with experienced colleagues is widely accepted as an important support for guiding peers through the challenges of teaching subjects, helping them enhance job satisfaction and commitment as educators (Auletto, 2021), and minimizing work-related stress (Mosley & McCarthy,

2023). These strategies are powerful when teachers who are new to the field feel afraid of their insufficient content knowledge and demonstrate their pedagogical insufficiency inside the classroom. Otherwise, poor teacher competence and confidence development, as well as possibly poor student outcomes, can result from unsupportive situations where teachers are left on their own to learn new subject contents and instructional techniques (Wang *et al.*, 2025). These strategies made the difficult academic topics more important and engaging for the learners. Moreover, TVET teachers must adapt to the changes in subjects and teaching methods to keep their teaching relevant (Tanaka *et al.*, 2023) and continuously develop themselves and their practice (Arinaitwe, 2021).

Theme 3: Professional growth and reflective transformation in teaching practice of BTVTED graduates

Through their experiences, teachers realized that they must be flexible and willing to change how they see themselves as professionals. This shift helps them experience pedagogical growth, where they become more effective at teaching and managing their classrooms, even in subjects they are less equipped. Flexibility and the ability to adapt in educational environments are responses to time, location, demands in pedagogy, and teaching methods. To make this happen, teachers must be given enough proportion of flexibility that will help them adapt the kind of environment they are in, along with the content, teaching strategies, and students' needs (Grannäs *et al.*, 2025). As they look back on their work through reflective practice, they also gain a better understanding of how the entire school system works, allowing them to improve not just their own lessons, but how they navigate the challenges of the education system as a whole; recognizing various challenges in teaching, like the misalignment across academic disciplines (Dack & Triplett, 2019), the number of students in a classroom (Agyapong *et al.*, 2022), hiring subject-related teachers (Garcia & Weiss, 2019), continuous teacher training programs (Stevenson *et al.*, 2020), and other organizational issues. Although complete alignment in the curriculum is perfect; however, it is unwise to think that it will be done in a short period of time (Stevenson *et al.*, 2020). Teachers' innate adaptive strategies, alongside positive work ethics, have been critical to attaining high levels of learning outcomes regardless of the environment (Grannäs *et al.*, 2025).

5. Recommendations

In place of this study's finding, public academic institutions, where teacher misalignment prevails, may conduct structured peer training/mentorship and seminars for those non-academic teachers handling core academic subjects. These were beneficial not only in closing the content knowledge gap and subject-specific strategies issues, but also as a mechanism for peer validation and the emotional struggles of misaligned BTVTED graduates.

With that, public schools may have a formal integration of these adaptive strategies through various trainings to recognize that the teachers' ability to adapt and learn new subject content efficiently is as crucial as their core subject expertise.

Thus, the Department of Education may review its guidelines for hiring and deploying teachers in every school to ensure the rigorous selection of qualified teachers fit for the area needed of specialization in schools. Deploying subject-expert teachers could lessen the overwhelming pressure on misaligned teachers and have a relatively significant impact on student outcomes.

6. Conclusion

As this study explored into the lived experiences of BTVTED graduates teaching core academic subjects, the results revealed that the challenges faced by BTVTED graduates primarily stem from systemic and other curricular issues that place a burden on their professional practices. Additionally, BTVTED graduates endured pedagogical and content knowledge encounters whilst undertaking assignments beyond their academic specialization, causing them to feel persistent professional incompetence.

Furthermore, although BTVTED graduates faced both personal and professional setbacks and doubts with their assignments in handling core academic subjects, they have developed adaptive strategies such as being open to continuous learning, resourcefulness, maximizing the use of technology and digital tools, and time management to hurdle the pressure and content knowledge constraints.

Nevertheless, the situation of BTVTED graduates teaching core academic subjects was never easy because of the trials they encountered throughout their journey; however, they remained steadfast, resilient, and achieved an increased level of teaching efficiency, pedagogical growth, and significant professional identity transformation despite their misalignment in teaching.

Acknowledgements

The gratitude and appreciation of the researchers also go to relatives, friends, colleagues, and other people who have willingly helped the researchers out with their abilities.

About the Author(s)

Harold P. Almendras is a Teacher I in the Senior High School Department at Tagum National Trade School within the DepEd Tagum City Division. He is a candidate for the degree of Master of Arts in Education (Technology and Livelihood Education).

Joa H. Jao is Associate Professor I and the Program Head of the Bachelor of Technical Vocational Teacher Education (BTVTED) program of UM Digos College.

References

- Agyapong, B., Obuobi-Donkor, G., Burbach, L., & Wei, Y. (2022). Stress, burnout, anxiety and depression among teachers: A scoping review. *International Journal of Environmental Research and Public Health*, 19(17), 10706, doi: 10.3390/ijerph191710706
- Ambroce, J. & Daza, S. (2025). Lived Experiences of Out-of-Field Public School Science Teachers: A Qualitative Research. *Psychology and Education: A Multidisciplinary Journal*, 36(10), 1172-1200, doi: 10.70838/pemj.36101
- Arinaitwe, D. (2021). Practices and strategies for enhancing learning through collaboration between vocational teacher training institutions and workplaces. *Empirical Research in Vocational Education and Training*, 13(1), doi: 10.1186/s40461-021-00117-z
- Auletto, A. (2021). Making sense of early-career teacher support, satisfaction, and commitment. *Teaching and Teacher Education*, 102, doi: 10.1016/j.tate.2021.103321
- Aventura, Jemarie, and Michelle Viña. "Out-of-Field Teaching: the Endeavors of Junior High School Teachers Teaching Non-Specialized Subjects Psychology and Education: a Multidisciplinary Journal." *Psychology and Education: A Multidisciplinary Journal*, vol. 8, no. 4, 27 Apr. 2023, <https://doi.org/10.5281/zenodo.7871380>
- Bandura, Albert, and Nancy E. Adams. "Analysis of Self-Efficacy Theory of Behavioral Change." *Cognitive Therapy and Research*, vol. 1, no. 4, Dec. 1977, pp. 287–310, doi: 10.1007/bf01663995.
- Branzuela, M. J., Ayro, E. C., & Cruz-Vidal, M. J. D. (2023). 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*, 4(7), 2210-2222, <http://dx.doi.org/10.11594/ijmaber.04.07.06>
- Buenacosa, Ma. Salvacion A., & Marisa B. Petalla. (2022). Embracing the Unknown: Adaptability and Resiliency of Out-of-Field Secondary Teachers Teaching English in Public schools. *Asian Journal of Education and Social Studies*, 37(2), 1-29, <https://doi.org/10.9734/ajess/2022/v37i2796>
- Chartrand, J. M. (1991). The Evolution of Trait-and-Factor Career Counseling: A Person × Environment Fit Approach. *Journal of Counseling & Development*, 69(6), 518–524, doi: 10.1002/j.1556-6676.1991.tb02635.x
- Co, A.G.E., Abella, C.R.G. and De Jesus, F.S. (2021) Teaching Outside Specialization from the Perspective of Science Teachers. *Open Access Library Journal*, 8, 1-13. doi: 10.4236/oalib.1107725
- Creswell, J. W. (2014). *Qualitative, quantitative and mixed methods approaches*. Sage Publication. <https://uk.sagepub.com/en-gb/asi/researchers-books>. Accessed 23 August 2024

- Dack, H., & Triplett, N. (2019). Novice Social Studies Teachers' Implementation of Differentiation: A Longitudinal Multicase Study. *Theory & Research in Social Education*, 48(1), 32–73, doi: 10.1080/00933104.2019.1640149
- Demapendan, J. P. C. (2024). Exploring the education mismatch: A phenomenological study of technology and livelihood education (TLE) teachers assigned outside specialization. *Indonesian Journal of Education Research (IJoER)*, 5(6), doi: 10.37251/ijoe.v5i6.1189
- Dor-Haim, P., & Nir, A. (2023). Perceptions of Courage: Elementary School Leaders' Perspectives. *Educational Management Administration & Leadership*, doi: 10.1177/17411432231177534
- Du Plessis, A. (2019). Out-of-Field Teaching is Out of Control in Australian Schools. Here's What's Happening | EduResearch matters. EduResearch Matters. <https://www.aare.edu.au/blog/?p=3778>. Accessed 03 December 2024
- Elliott, G., & Crossley, M. (1994). Qualitative Research, Educational Management and the Incorporation of the Further Education Sector. *Educational Management & Administration*, 22(3), 188–197, doi:10.1177/0263211x940220030
- Filstead, W. (1970). *Qualitative Methodology*, Markham, <https://doi.org/10.1093/sf/50.2.265>
- García, E., & Weiss, E. (2019, April 16). U.S. Schools Struggle to Hire and Retain teachers: The Second Report in “The Perfect Storm in the Teacher Labor Market” Series. Economic Policy Institute. <https://www.epi.org/publication/u-s-schools-struggle-to-hire-and-retain-teachers-the-second-report-in-the-perfect-storm-in-the-teacher-labor-market-series/>. Accessed 25 February 2025
- Grannäs, J., Frelin, A., & Östlin, T. (2025). Unpacking flexibility in innovative learning environments - teachers' experiences in practice. *Educational Studies*, 1–17, doi: 10.1080/03055698.2024.2448781
- Guadalquivir N. Jr. and Tagadiad C. (2023). Job Shift from Industry to Academe: The Plight of Education Unit Earners Teaching TLE Subjects. *International Journal of Innovative Science and Research Technology (IJISRT)*, 2140-2156, doi: 10.5281/zenodo.10477239
- Haleem, A., Javaid, M., Qadri, M. A., & Suman, R. (2022). Understanding the role of digital technologies in education: A review. *Sustainable Operations and Computers*, 3(1), 275–285, doi: 10.1016/j.susoc.2022.05.004
- Hobbs, Linda, and Raphaela Porsch. “Teaching Out-of-Field: Challenges for Teacher Education.” *European Journal of Teacher Education*, vol. 44, no. 5, 20 Oct. 2021, pp. 601–610, doi: 10.1080/02619768.2021.1985280
- Hobbs, L., & Törner, G. (2019). Hobbs, Linda & Törner, Günter. (2019). *Teaching Out-of-Field as a Phenomenon and Research Problem: International Perspectives on Teaching as a Non-specialist*. Springer, 3-20, doi:10.1007/978-981-13-3366-8_1
- Keravnos, N., & Symeou, L. (2024). Practices, Behaviours and Actions of Highly Trusted Primary School Principals in Cyprus: An In-Depth Examination. *Educational Management Administration & Leadership*, doi: 10.1177/17411432241262388

- Langelaan, B. N., Gaikhorst, L., Smets, W., & Oostdam, R. J. (2024). Differentiating instruction: Understanding the key elements for successful teacher preparation and development. *Teaching and Teacher Education*, 140, <https://doi.org/10.1016/j.tate.2023.104464>
- LaPalme, M., Luo, P., Cipriano, C., & Brackett, M. (2022). Imposter syndrome among pre-service educators and the importance of emotion regulation. *Frontiers in Psychology*, 13. <https://doi.org/10.3389/fpsyg.2022.838575>
- Marshall C. and Rossman GB (2016) Designing qualitative research. Newbury Park, CA: Sage Publications. <https://uk.sagepub.com/en-gb/asi/researchers-books>. Accessed 11 November 2024
- Mosley, K. C., & McCarthy, C. J. (2023). Beginning teacher mentoring: Associations between mentoring experiences and stress among first year teachers. *The Teacher Educator*, 58(4), 440-458, doi: 10.1080/08878730.2023.2175402
- Napier J., Luft J., & Singh H. (2020) In the Classrooms of Newly Hired Secondary Science Teachers: The Consequences of Teaching In-Field or Out-of-Field. *Journal of Science Teacher Education*, 31:7, 802-820, doi: 10.1080/1046560X.2020.1800195
- Olanrewaju, Akinola & Omeghie, Isunueo. (2024). Contributing Factors to Teacher Shortages in Public Schools in the United States of America. *EPRA International Journal of Multidisciplinary Research (IJMR)*. 417-419, doi: 10.36713/epra18269
- Parsons, F. (1909). *Choosing a vocation*. Boston: Houghton Mifflin. Gay
- Praveena, K.R., and S. Sasikumar. "Application of Colaizzi's Method of Data Analysis in Phenomenological Research." *Medico Legal Update*, vol. 21, no. 2, 19 Mar. 2021, doi: 10.37506/mlu.v21i2.2800
- Rahayu, Esti & Osman, Shuki. (2019). Riding out the storm: Out-of-field teaching practice in Indonesia. *Humaniora*, 10, doi:161. 10.21512/humaniora.v10i2.5628
- Roxas, R. (2022). Being out-of-field: A phenomenological research on the lives of teachers teaching non-major. *International Journal of Research Studies in Education*, 11(14), 49-57, doi: 10.5861/ijrse.2022.b017
- Salvador, R., Limon, M., Borromeo, C. M., Parinas, M. A., Manrique, L., de la Cruz, L., & Dalere, J. M. (2022). Exploring Technical-Vocational Education Teachers' Challenges and Adaptation Strategies in Teaching Courses Outside their Specializations. *Journal of Technical Education and Training*, 14(2), 34-48, doi: 10.30880/jtet.2022.14.02.004
- Senate of the Philippines. (2024, September 04). EDCOM 2: DepEd to address teacher mismatch, quizzed on low utilization rate in house budget hearing. https://legacy.senate.gov.ph/press_release/2024/0904_edcom1.asp. Accessed 20 September 2024
- Smythe-Thompson, M. (2022). *Fish out of water: experiences of teachers assigned to teach out-of-field in urban schools*, Doctoral dissertation, Morgan State University.
- Stevenson, N. A., VanLone, J., & Barber, B. R. (2020). A Commentary on the Misalignment of Teacher Education and the Need for Classroom Behavior Management Skills.

Education and Treatment of Children, 43(4), 393–404, doi: 10.1007/s43494-020-00031-1

Van Overschelde, J. P. & Piatt, A. (2020). U.S. Every Student Succeeds: Negative Impacts on Teaching Out-of-Field. *Research in Educational Policy and Management*, 2(1), 1-22, doi: 10.46303/repam.02.01.1

Wang, X., Husu, J., & Toom, A. (2025). What Makes a Good Mentor of In-Service Teacher Education? —A Systematic Review of Mentoring Competence from a Transformative Learning Perspective. *Teaching and Teacher Education*, 153, 104822, doi: 10.1016/j.tate.2024.104822