

Understanding the Link Between INSET Attendance and Teaching Efficiency of High School Teachers

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ABSTRACT

Recognizing the importance of in-service education and training (INSET) for teacher development, this study investigated its effectiveness in enhancing teaching efficiency among high school teachers at Southern Baptist College. Employing a convergent mixed-methods design with twenty-three participants, the study revealed that high school teachers generally perceive in-service education and training (INSET) positively and value its effectiveness in enhancing teaching skills and practices, but there is no significant relationship between the frequency of attending INSET programs and teaching efficiency. The study identified five essential guidelines that include conducting targeted needs assessments, practical application, individualized professional development plans, ongoing mentoring, and data-informed evaluation systems. The result revealed that the programs of in-service education and training attended by high school teachers were the pedagogy workshops, subject-specific training, technology integration, assessment and evaluation and professional development designed to enhance teacher's teaching skills, subject knowledge, and classroom management techniques. Majority of the respondents attended the programs conducted by Southern Baptist College, Inc. The themes such as personal and professional growth, improved teaching effectiveness, enhanced mental abilities, positive workplace changes, transformative challenges, and emphasize collaborative approaches were drawn to address challenges and maximize benefits of ongoing professional development initiatives. Moreover, the effectiveness of in-service education and training (INSET) attended by high school teachers is perceived positively. The high school teachers in majority got Very Satisfactory in their teaching effectiveness. However, there is a weak positive correlation between the effectiveness of attending in-service training (INSET) and teaching efficiency of high school teachers. Thus, null hypothesis was not rejected.

Keywords: In Service Education and Training (INSET), Teaching Efficiency, Teaching Effectiveness, Frequency, Program, Guidelines

INTRODUCTION

The in-service education and training (INSET) programs had a favorable impact on educators in the sense that they improved educators' self-efficacy and effectiveness in delivering collaborative educational interventions for their pupils (Tzivinikou 2015). This implies that INSET can help high school instructors

grow professionally and enhance their teaching practices. Junejo's (2017) agrees on the positive impact of INSET programs on educators' teaching performance by stating that teachers have positive perceptions regarding their own professional growth through the said programs. The results suggest that INSET programs have the ability to address teacher difficulties, increase professional growth, boost self-efficacy, and positively impact teaching performance.

According to Hervie and Winful (2018), a lack of in-service training is one of the reasons why teacher performance faces challenges, and this underscores the importance of INSET as a potential solution to address these critical shortcomings. Shah's (2011) research provided a contrasting viewpoint, implying that there is no significant difference in performance between trained graduate instructors who received INSET training and those who did not. Phin, (2014) revealed that competent teachers contribute to student learning and enhance the level of education quality, and teachers understand the relevance of INSET because it helps teachers become more confident in their profession by gaining people's respect and trust. With such demand, researchers wanted to investigate the effect of frequent in-service training on the teaching efficiency of high school teachers. It also aims to describe the experiences encountered by the high school teachers during their in-service education and training and its effect in their teaching performance.

CONCEPTUAL FRAMEWORK

This study conceptualizes the flow of the study showing the frequency of in-service education and training and its effectiveness. The experiences of the high school teachers in attending in-service education and training contributes the development of revise guidelines of INSET to improve teaching efficiency.

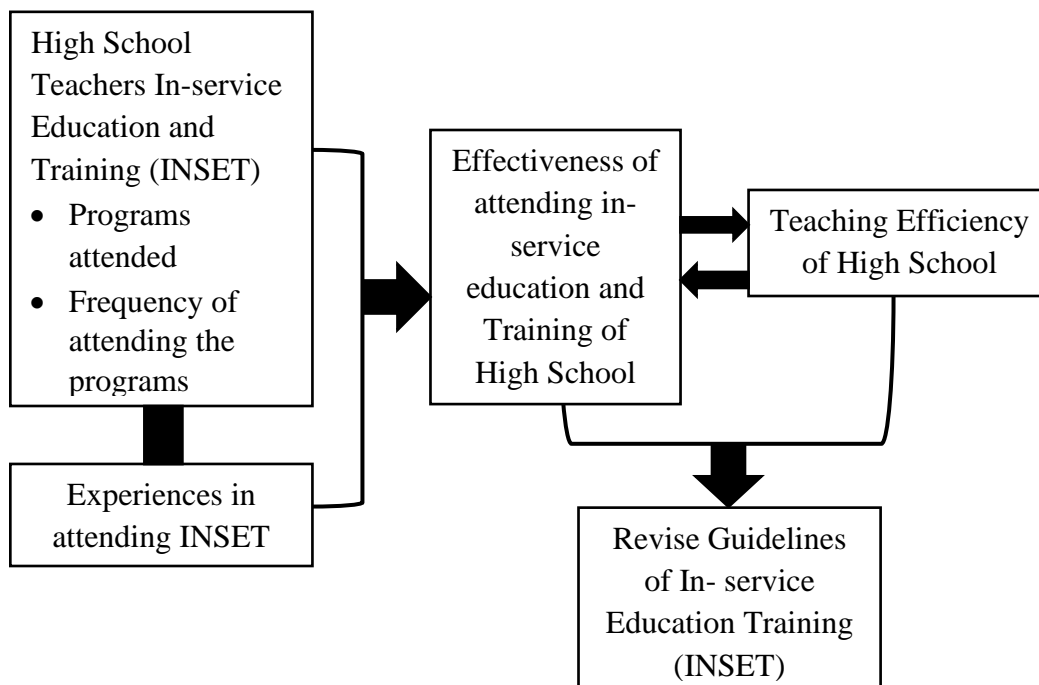


Figure 1 Conceptual Framework of the Study

REVIEW OF RELATED LITERATURE

This chapter presents the literatures related to the study which were taken from different sources.

In- service Education and Training (INSET)

Positive impact of ongoing teacher training programs (INSET), demonstrating their effectiveness in enhancing teacher qualifications, boosting classroom performance, and nurturing educator motivation (Nzarirwehi & Atuhumuze, 2019; Osamwonyi, 2016). However, unlocking its full potential requires acknowledging both its advantages and the complexities of implementation.

On the positive side, from 2021 to 2024, the Department of Education (DepEd) issued key guidelines and programs for teacher In-Service Education and Training (INSET), DM No. 032, S. 2024. Adapting to the pandemic, virtual INSET was introduced, and five days were allocated for performance review and school-based INSET. These diverse program options addressed various needs, including national initiatives and crucial policy areas like child protection. These DepEd guidelines aimed to equip teachers with relevant skills, address educational priorities, and ultimately improve learning conditions and student outcomes. Active learning approaches like case studies and simulations were also employed, proving to be effective in enhancing teacher skills and knowledge compared to passive lectures (Bluestone et al., 2013). Repetitive interventions tailored to real-world settings demonstrably improved teaching practices and potentially contributed to better student outcomes (Bluestone et al., 2013). Furthermore, well-designed computer-based learning, aligned with DepEd guidelines, was found to be as effective and more cost-efficient than traditional instruction (Bluestone et al., 2013). Beyond skills development, teachers perceived INSET as valuable for professional development and gaining respect, ultimately boosting their confidence and motivation (Phin, 2014; Safi, 2015).

However, challenges must also be considered. Not all teachers benefit equally, with individual factors and negative training environments playing a role (Ayvaz-Tuncel & Çobanoğlu, 2018). While training improves teacher outcomes, a clear link between INSET and specific student achievement metrics remains elusive (Bluestone et al., 2013). Striking a balance between addressing individual development needs and aligning training with school-wide goals can be challenging (Bolam, 2012). Additionally, effective INSET programs require dedicated resources and incentives, which may not always be readily available (Nzarirwehi & Atuhumuze, 2019). Finally, teachers, particularly women and those with higher education, sometimes express concerns about insufficient trainer qualifications (Hervie & Winful, 2018).

Despite these challenges, teacher attitudes towards INSET are generally positive. Teachers express enthusiasm for professional development and actively seek participation in programs (Safi, 2015). While some point to scheduling, material clarity, and trainer qualifications as areas for improvement (Hervie & Winful, 2018; Phin, 2014), effective follow-up support is appreciated for facilitating the application of learned skills in the classroom (Phin, 2014).

In conclusion, INSET offers a powerful tool for enhancing teacher effectiveness and ultimately student outcomes. However, careful planning, strategic implementation, and continuous evaluation are crucial for navigating the challenges and maximizing the benefits. Addressing individual needs, focusing on evidence-based practices, and ensuring high-quality training environments are key to unlocking the full potential of INSET programs.

Teaching Effectiveness

Enhancing student learning requires considering various factors for effective teaching. Paolini (2015) stresses the strategic alignment of assessment, practices, styles, and feedback with institutional goals. Seidel & Shavelson (2007) highlight domain-specific teaching components and research design, while Kini & Podolsky (2016) emphasize teacher experience, supportive environments, and subject/grade/district expertise. De Vries et al. (2014) link teachers' beliefs and participation in Continuous

Professional Development (CPD), and Tuytens & Devos (2014) suggest valuable feedback and school leader roles in boosting teacher evaluation's motivational impact. Maulana et al. (2015) explore factors influencing perceived teaching quality in induction programs.

Effective teaching offers distinct advantages and benefits. Paolini (2015) highlights alignment with student, program, and institutional needs, while Kini & Podolsky (2016) emphasize sustained student achievement gains and benefits for the school community. Munna & Kalam (2021) advocate for active learning, inclusivity, and elevated academic achievements, and Bolívar & Dávila (2016) showcase effective virtual learning strategies for the information age.

The impact on students and schools is multifaceted. Kini & Podolsky (2016) report sustained student achievement gains, while Munna & Kalam (2021) highlight elevated expectations and academic achievements. Fernández-García et al. (2019) explore how teacher experience positively impacts different teaching skill domains, influencing student perceptions. Bolívar & Dávila (2016) emphasize enhanced education through effective virtual learning strategies.

However, problems also exist. Fernández-García et al. (2019) identify varying student perceptions based on educational levels and teacher characteristics. De Vries et al. (2014) call for fostering teacher reflection alongside CPD participation, while Tuytens & Devos (2014) emphasize ensuring valuable feedback for teacher activation. Maulana et al. (2015) highlight the need to identify factors influencing teaching quality during induction programs.

In conclusion, effective teaching necessitates considering multiple factors, offers various advantages and benefits for students and schools, but also faces challenges that require ongoing attention and solutions.

Teaching Efficiency

Teaching efficiency emerges as a key player in shaping different areas of education. Studies by Bini & Masserini (2016) and Basher (2017) demonstrate how well-organized activities, clear information, and helpful materials, as seen in Google Classroom implementation, contribute to increased student satisfaction and enhanced learning outcomes, particularly in computer science. Nurturing a positive learning environment demonstrably leads to improved academic outcomes (Attique et al., 2019; Shahzad & Naureen, 2017).

Interestingly, teachers themselves play a significant role in fostering this efficient environment. Their self-efficacy, indicating their confidence in positively impacting students, plays a direct role in their success (Shahzad & Naureen, 2017). However, research by Bedir (2015) indicates that while teachers generally feel confident in areas like class management, they may require support in instructional methods.

Challenges do exist, however. Wanjala & Wanjala (2017) and Masbaño (2015) point to issues with time management and resource limitations, such as inadequate facilities and technology. Additionally, prospective teachers encounter distinct challenges, such as variations in individual student capabilities, relationships with supervisors and peers, and a deficiency in adequate preparation (Napanoy et al., 2021; Ganal et al., 2015). Even personal challenges like homesickness and financial adjustments can hinder their experience (Rabo, 2022; Ganal et al., 2015).

Addressing these challenges through in-service training, improved facilities, and emotional support becomes crucial in empowering both teachers and students. By recognizing the ripple effect of teaching efficiency and tackling the obstacles it faces, we can cultivate a more positive and effective learning environment for all.

Statement of the problem

This study aimed to construct new guidelines in implementing in-service education and training.

Specifically, this study answered the following questions:

1. What are the programs of in-service education training attended by High School Teachers?
2. How frequent the High School Teachers attended the program of in-service educational training?
3. What are the experiences of the High School Teachers in attending in-service education and training?
4. What is the level of effectiveness of in-service education and training attended by High School Teachers?
5. What is the level of teaching efficiency of High School Teachers?
6. What is the significant relationship between the level of effectiveness in attending in-service education and training and level of teaching efficiency of High School Teachers?
7. Based on the findings, what are the new guidelines in the implementation of in-service education and trainings?

Null Hypothesis

There is no significant relationship between the level of effectiveness in attending in-service education and training and level of teaching efficiency of high school teachers.

Significance of the study

The findings of this study will be beneficial to the following:

1. Administrators:

- **Resource Allocation:** Administrators can use the study's findings to make informed decisions about allocating resources for in-service training programs. If there is a positive result, administrators may prioritize and invest in high-quality professional development opportunities.
- **Strategic Planning:** The study can help administrators establish strategic plans for teacher professional development, ensuring that training programs meet the specific needs of their teachers and contribute to overall school progress.

2. Teachers:

- **Professional Development Opportunities:** Positive findings may encourage teachers to actively participate in professional development programs, recognizing their potential to enhance teaching skills and effectiveness.
- **Motivation:** Positive result may motivate teachers to engage in continuous learning and seek out relevant training opportunities to improve their instructional practices.

3. Students:

- **Enhanced Teaching Quality:** Improved teaching efficiency resulting from effective in-service education and training can positively impact student learning outcomes. Students may experience better-quality education and enhanced academic performance if their teachers benefit from well-designed professional development.

4. Policy Makers:

- **Informed Decision-Making:** The study's findings may inform them about the development or revision of education policies related to teacher training. Positive relationship may encourage them to support and fund initiatives that promote ongoing professional development for educators.
- **Quality Assurance:** The study can contribute to the establishment of quality assurance mechanisms in teacher education. Policymakers can use the insights to ensure that in-service education and training programs align with broader educational goals and standards.

5. Researchers:

- **Contributions to the Literature:** The study can contribute valuable insights to the existing body of research on teacher professional development. Researchers may build upon these findings, exploring related topics and further refining our understanding of effective in-service training practices.
- **Methodological Advancements:** The research may introduce innovative methodologies for studying the impact of professional development on teaching efficiency, providing a model for future studies in the field.

Scope and Delimitation

This study determined the programs of in-service education and training attended by high school teachers and the frequency of attendance. It also described the experiences encountered and their impact. Further, it determined the relationship between the level of effectiveness in attending in-service education and training and the level of efficiency of the teachers. The respondents were the high school teachers of Southern Baptist College, Inc. The study utilized a mixed-methods research design using a convergent mixed-methods design. The data was gathered through a survey and an interview questionnaire. It also utilized documentary analysis in determining the teaching efficiency rating. The data were described and interpreted using inferential statistics and thematic analysis.

Definition of Terms

The following terms were defined operationally as how it was used in the study.

Effectiveness – refers to the degree to the improvements of high school teachers in their teaching performance.

Frequency – refers to the number of times attended by high school teachers in a particular event or activity conducted by administrator of Southern Baptist College, Inc. within a specified time period.

In-service education and training – refers to workshops, seminars, conferences, online courses, and on-the-job training attended by high school teachers of Southern Baptist College, Inc. High school department.

Program – refers to the professional development or in-service education, designed to enhance high school teachers' knowledge, skills, and teaching practices.

Teaching Efficiency – refers to the optimal utilization of instructional time, resources, and strategies to achieve learning outcomes.

Guidelines – refers to the established principles or instructions of the administrator designed to guide the implementation and conduct of in-service education and training programs for high school teachers of Southern Baptist College, Inc.

METHODOLOGY

This chapter presents the methodologies that were used by the researchers. It includes the research design, research locale, respondents of the study, sampling techniques, research instrument, and statistical treatment of the data.

Research Design

The researchers employed a Convergent mixed-methods design. Convergent mixed method was used to examine the relationship between the effectiveness of attending in-service education and training and the teaching efficiency of high school teachers at Southern Baptist College, Inc., in M'lang, Cotabato. The convergence of these data sources will allow for a comprehensive analysis that captures both the statistical relationships and the contextual nuances, ultimately informing educational policymakers and practitioners

about the effectiveness of in-service education and training in enhancing teaching efficiency in high schools.

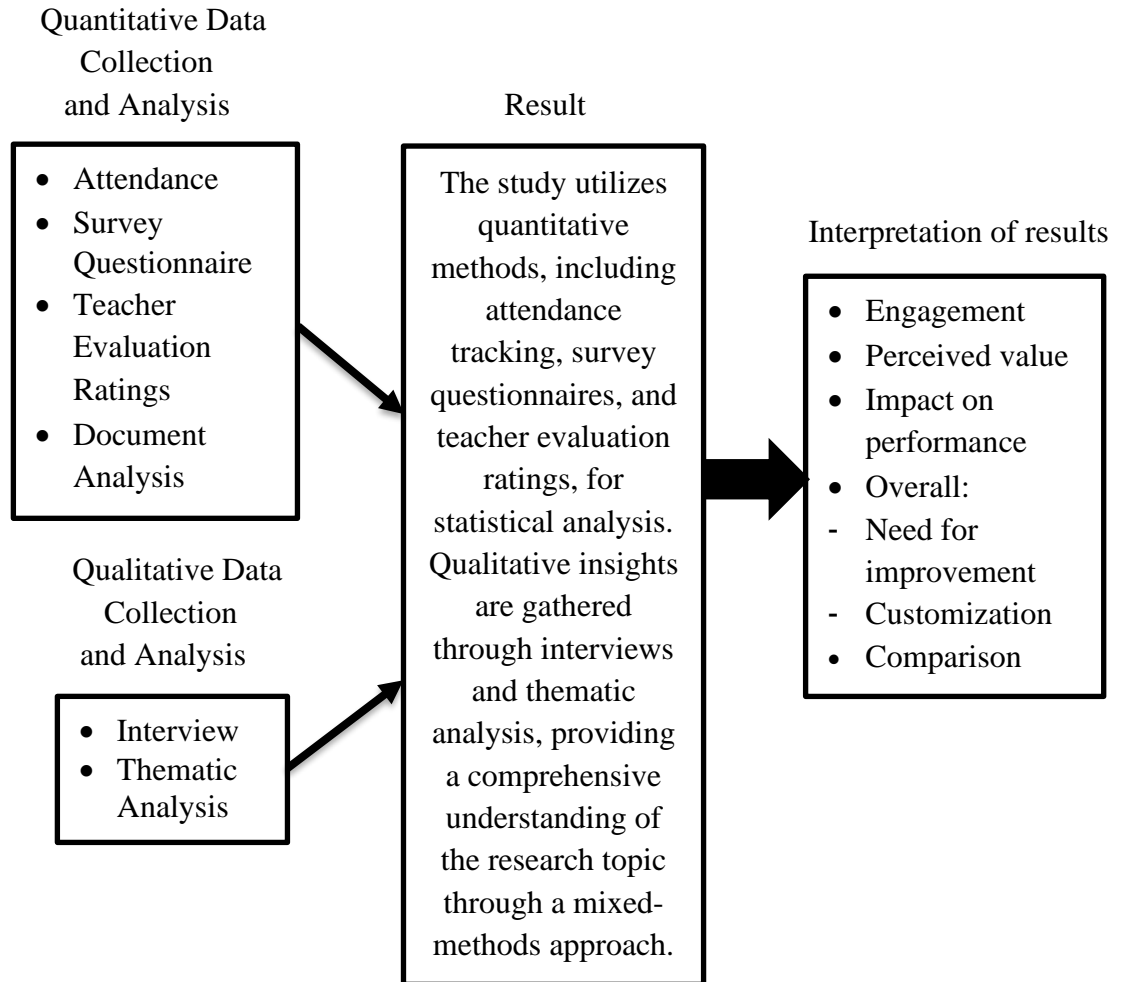


Figure 2 Schematic Diagram of Research Design

The study employs a convergent mixed-method design, combining quantitative and qualitative data collection and analysis. Quantitatively, attendance and participation in the INSET program are recorded and statistically analyzed using mean, percentage, and correlation tests, while teacher evaluation ratings are derived from formal assessments covering various dimensions. On the qualitative side, one-on-one interviews with high school teachers are conducted, exploring their experiences in the program and perceived impact on teaching efficiency. Thematic analysis is then applied to identify and analyze emerging themes from teachers' reported experiences and perceptions.

Research Locale

The study was conducted in the high school department of Southern Baptist College, Inc. (SBC) in M'lang, Cotabato. SBC is a Christian educational institution offering a diverse range of academic programs. From nursery and kindergarten to elementary and high school, the college provides a continuum of education. At the higher education level, students can pursue studies in liberal arts, education, business education, information technology, theology, and health-related courses. This Christian institution lives out the ideals

of truth, faith, and service and emphasizes a holistic approach to education, integrating faith-based values across disciplines to nurture both academic and spiritual growth in its students.

Respondents of the Study

The researcher gathered data from the identified high school teachers of Southern Baptist College, Inc., M'lang, Cotabato. There were twenty-three (23) high school teachers in total numeration with a balanced gender distribution of 6 males and 17 females. Subject expertise is well represented, including 4 English, 3 Mathematics, 3 Science, 3 Filipino, 5 Social Studies, 2 TLE, 2 MAPEH, and 1 business-related subject teacher. The age range spans from 22 to 60, providing a mix of experience and perspectives. Almost half of the teachers are single, and the rest are married. All staff members are licensed professionals, reflecting SBC's commitment to delivering high-quality education.

Research Instruments

In this study, a comprehensive research instrument was employed to systematically evaluate the relationship between effectiveness in attending INSET and teaching efficiency of high school teachers. The researchers utilized a set of adopted questionnaires, with Part 1 and Part 2 derived from Safi's (2015), specifically designed to gather data on the frequency of in-service education and training programs and their teaching effectiveness. Part 3 of the questionnaire was constructed using retrieved data from Southern Baptist College Inc., "Teacher Performance Evaluation Instrument" to determine the teaching efficiency. To enhance the depth of the study, validated questions for interviews were sourced from the Procedures Guide of Training and Development System by the Federal Authority for Government Human Resources (n.d.), specifically from sections 15 to 18, under the title "Questionnaire on Training Effectiveness" available at <https://www.fahr.gov.ae/Portal/Userfiles/Assets/Documents/dd82835.pdf>.

Moreover, in-depth and focused group discussion were done to gather the experiences and impacts of attending the programs of in-service education and training. The rating scale of the questionnaire ranged from 5- Outstanding; 4- Very Satisfactory; 3- Average High, 2- Average Low; 1- Needs Improvement.

Data Gathering Procedure

Before the researchers gathered data, they sought first the permission of the high school principal and wrote a letter of intent to get a record of the teachers' teaching efficiency rating. Upon receiving permission for a scheduled vacancy among the teachers, researchers immediately conduct the survey questionnaire contains programs attended, frequency of attending, teaching effectiveness in attending the in-service education and training, and teaching effectiveness of high school teachers. To acquire additional information, an interview was employed that aimed to seek experiences and impact of attending INSET among respondents. After the respondents completely answered the questionnaires, they immediately retrieved the needed data and analyzed it through statistical tools. Further, the answers from the in-depth and focused-group interviews were interpret through thematic analysis.

Statistical Analysis

The researchers employed different statistical tools for assessing the questions given in the study. A descriptive analysis was used to describe the data. The frequency distribution of data is used to calculate the frequency and percentage of data from various perspectives. To correlate the relationship between the two variables, the Pearson r was used through Jamovi, an open-source statistical software. And for the hypothesis test for r , which allows the researcher to decide whether the observed r could have emerged by chance or not, standardized t statistics were used. On the basis of the analysis, findings were drawn, conclusions were reached, and recommendations were made accordingly.

Presentation, Analysis, and Interpretation of the Data

This chapter deals with the presentation, analysis, and interpretation of the data gathered in this study. The various results are presented in the succeeding tables with corresponding discussions and explanations. It also answers specific problems stated in the previous chapter.

The Programs of INSET

The DM-OUHROD-2024-0037, entitled "Guidelines for the In-Service Training of Teachers (INSET) for the School Year 2023-2024," is scheduled in accordance with the specifications outlined in DepEd Order No. 22, s.2023, or the "Implementing Guidelines on the School Calendar and Activities for the School Year 2023-2024."

DepEd's In-Service Education and Training (INSET) Programs:

As outlined in DepEd Order No. 034 s. 2022, the mid-year break for the school year 2022-2023 is allocated for the conduct of the Midyear Performance Review and Evaluation, along with the School-Based INSET. Focusing on the programs of the National Educators Academy of the Philippines (NEAP) Central Office, the INSET programs for the school year 2023 include:

1. **Higher Order Thinking Skills – Professional Learning Packages (HOTSPLP):** Targeting English, Mathematics, and Science educators, this program aims to enhance teachers' skills in promoting higher-order thinking among students.
2. **Instructional Leadership Training (ILT):** This program focuses on strengthening learning conditions for early literacy, emphasizing the crucial role of instructional leaders in fostering a conducive learning environment.

At the School Division Office (SDO) level, the INSET prioritizes addressing teachers' learning needs, disseminating information on policies, and emphasizing key educational programs for professional development.

The programs offered by Southern Baptist College, Inc., High School Department focused on the programs and guidelines of the Private Education Assistance Committee (PEAC) and Association of Christian Schools, Colleges and Universities (ACSCU – ACI) for the school year's in-service education and training.

PEAC's INSET Programs for 2022 and 2023:

The PEAC INSET programs for both junior high school subjects and senior high school core subjects offer a comprehensive approach to professional development. In 2022, the theme "Engaging students to be reflective and self-directed learners in their achievement in K to 12 learning outcomes in the new normal" underscores the importance of adaptability and reflective teaching practices in the face of changing educational landscapes.

For 2023, the INSET for junior high school focuses on "Achieving student's mastery and differentiating instruction for standard-based learning recovery," emphasizing personalized approaches to address varying learning needs. The senior high school theme, "Assessing students' learning through a performance task reflective of the four exits of the K to 12 program in a volatile, uncertain, complex, and ambiguous (VUCA) world," reflects the need to prepare students for challenges in a rapidly changing world.

The In-Service Education and Training (INSET) programs offered by the Department of Education (DepEd) and the Private Education Assistance Committee (PEAC) implies a thematic alignment in emphasizing a reflective teaching practices and student mastery for a potential collaboration and knowledge. Addressing the preparation of students for a volatile, uncertain, complex, and ambiguous

(VUCA) world suggests a forward-looking perspective. It implies an acknowledgment of the necessity for educators to equip students not only with academic knowledge but also with critical skills and resilience to navigate the challenges of an ever-changing global landscape. The existence of common goals opens the door for a more integrated and cohesive approach to professional development, fostering a sense of unity and shared purpose within the education community that can contribute to the creation of a unified vision for education that addresses both current challenges and future uncertainties.

Frequency of in-service education and training attended by high school teachers

The findings presented in Table 2 regarding the frequency of attending in-service education and training revealed that a substantial majority of teachers, comprising 57%, attend such sessions two to three times a year. Concurrently, a notable minority of 13% attend in-service training only once.

The result implied that teaching profession generally demonstrates a commitment to ongoing learning, as evidenced by the vast majority of thirteen (13 or 56.52%) out of twenty-three (23) OR 56.52% high school teachers attending in-service education multiple times a year. However, attention may need to be directed toward the minority of three (3 or 13.04%) of teachers who participate less frequently in order to ensure that all teachers have equitable access to and engagement with professional development opportunities. Positive trend and regular engagement in in-service training can contribute on various aspects of professional development (Mahmood (2022) and Mirrezaei (2018)). According to Sanetti (2018), a segment of teachers with less frequent participation to INSET highlighted areas where improvements or targeted interventions may be needed to provide opportunities for skill development and ongoing implementation support.

Table 2. Frequency in attending In-service Education and Training

1.How often have you attended in-service training program in the past year?	Frequency	Percentage
Never	0	0%
Once	3	13.04%
2 -3 times	13	56.52%
4 – 6 times	7	30.44%
More than 6 times	0	0%

Experiences of High School Teachers attending In-service Education and Training

Participants view in-service education and training (INSET) as more than just a mandatory obligation; they see it as a valuable chance for both personal and professional development. INSET positively impacts teachers by addressing immediate needs, influencing the classroom environment, and improving overall educational outcomes. It emphasizes the significance of ongoing professional development in empowering educators to navigate the dynamic landscape of education successfully. A well-designed INSET program is crucial for teacher satisfaction, ensuring relevance to their roles, and fostering a sense of purpose and professional identity. Ultimately, INSET contributes to the improvement of teaching effectiveness, adaptability, addressing diverse learning needs, fostering collaboration, creating positive learning environments, and instilling a commitment to continuous improvement and lifelong learning among educators.

Table 3 show the experiences of high school teachers attending in-service education and training (INSET). Based on the conducted in- depth interview group, experiences reveal a multi-faceted landscape shaped

by six key themes: personal growth, improvement, mental ability, positive changes, transformation, and collaboration.

Personal growth emerges as a primary motivation for educators engaging in INSET programs that offers fertile ground to nurture their skills, stay abreast of educational trends, and refine their teaching effectiveness. Participating in INSET also facilitates improvement by providing avenues to acquire new knowledge and teaching methodologies that continuous the learning process to fuels their professional development. Mental ability underscores the satisfaction derived from INSET programs by enhancing critical thinking, problem-solving, and creativity skills among educators. This augmentation not only enriches the teaching experience but also contributes to a more fulfilling professional journey.

Moreover, the application of acquired knowledge or skills yields positive changes in the workplace. These changes manifest as increased efficiency, improved teamwork, enhanced communication, and a more supportive atmosphere. Such transformations foster heightened productivity, job satisfaction, and organizational success.

However, navigating the INSET landscape isn't without its challenges. Encountering obstacles often necessitates personal and professional transformations, reflecting the dynamic nature of education. Educators must adapt to new methodologies, overcome hurdles, and cultivate resilience to effectively engage with INSET initiatives.

Amidst these challenges, collaboration emerges as a vital tool for coping and overcoming complexities. By fostering collaborative efforts, including sharing expertise, seeking feedback, and providing ongoing support, educators can address challenges more efficiently and create a positive learning environment conducive to professional development.

In essence, experiencing INSET encompasses a journey of growth, improvement, and adaptation. Through the cultivation of mental abilities, facilitation of positive changes, and collaborative approaches to overcoming challenges, educators emerge equipped to navigate the ever-evolving landscape of education with confidence and efficacy.

Participants recognize in-service education and training (INSET) as pivotal for personal and professional growth, viewing it as more than a mandatory requirement. They emphasize its positive impact on educators' skills and classroom environments, highlighting the transformative effects on workplace dynamics and organizational success. Moreover, they stress the importance of collaborative approaches in addressing challenges and maximizing the benefits of ongoing professional development initiatives.

Table 3. Experiences of High School Teachers attending In-service Education and Training (In-depth Interview)

Questions	Answers	Theme	Interpretation
1. What motivated you to participate in the in-service education and	<p>R1 – I participated INSET to actively contribute to my professional development because it provides me with opportunities to enhance my skills and stay updated on educational trends”.</p> <p>R2 – to learn new ideas that can be applied to my daily teaching.</p>	Personal Growth	Participants in these responses see INSET not just as a mandatory obligation but as a valuable opportunity for personal and professional growth, ensuring they are well-equipped to meet the evolving demands of

<p>training programs?</p>	<p>R3 – It enhances my skills as teacher to thrive in many challenges of varied generations. R4 – to stay updated on the latest educational trends, research, and advancements in their subject areas R5 – for professional upgrading and is likely to refresh us. R6 – to stay compliant with professional development expectations and maintain the credentials.</p>		<p>education and contribute effectively to their roles as educators.</p>
<p>2. How the experiences in INSET helps your professional development?</p>	<p>R1 - educators acquire new skills and making them more effective in the classroom. R2 – It enhances teaching effectiveness. R3 – It boost my confidence that positively impacts my classroom management and instructional delivery. R4 – Learned new strategies that better cater different learning styles and address the unique needs of my students. R5 – To acquire strategies for managing classroom behavior and promoting a positive classroom environment. R6 – It promotes digital literacy among educators.</p>	<p>Improvement</p>	<p>The positive impact of INSET is multifaceted. It not only addresses the immediate needs of teachers by providing them with updated knowledge and skills but also has a ripple effect on the classroom environment, student engagement, and overall educational outcomes. It emphasizes the role of ongoing professional development in empowering educators to navigate the dynamic landscape of education successfully.</p>
<p>3. What specific aspects of the in-service education and training programs contributed to your</p>	<p>R1 - Interactive and engaging content. R2 – New knowledge and developed creativity in mind in dealing with student. R3 - Skills and professional development R4 - facilitators, accommodation, content and the support given by our administrators</p>	<p>Mental Ability</p>	<p>Teachers' satisfaction with in-service education and training programs is positively influenced by the programs' capacity to stimulate mental abilities, fostering critical thinking, problem-solving, and creativity, ultimately contributing to</p>

satisfaction ?	R5 - Clearly defined objectives and expected outcomes R6 - knowledgeable and experienced instructors or facilitators		a more fulfilling professional experience.
4. Have you been able to apply the knowledge or skills acquired from the training in your professional responsibilities? If so, could you provide examples of the impact on your work?	R1 – Yes, it frequently addresses the integration of technology in the classroom. R2 – Yes, it creates a positive and productive learning environment. R3 – Yes, it emphasizes understanding and accommodating diverse learning styles. R4 – Yes, it enhanced collaboration and communication. R5 – Yes, it handles discipline issues and foster positive behavior. R6 – Yes, it creates a supportive atmosphere for student learning.	Positive Changes	Training on professional responsibilities denotes a transformative shift in the workplace. It increased efficiency, enhanced teamwork, improved communication, and a more supportive atmosphere, that leads to heightened productivity, job satisfaction, and overall organizational success.
5. What are the challenges you have encountered in attending INSET?	R1 – Less interactive activities. R2 – Lack of proper evaluation. R3 – no follow ups R4 – programs occur during regular working hours R5 – adopting new practices. R6 – Resistance to change (in terms of technology advancement)	Transformation	The inherent challenges encountered in engaging with and implementing INSET encompass various aspects which underscore the complexities involved in fostering effective professional development initiatives.
How you cope the challenges?	R1 – share with the group your expertise R2 – have regular feed backing on the effectiveness of INSET sessions R3 – monitor the progress plan to sustain and continue the improvements.	Collaboration	Utilizing a collaborative strategy to tackle the obstacles faced during participation in INSET sessions, underlining the significance of exchanging expertise, soliciting consistent feedback, tracking

	<p>R4 – Considering availability and workload</p> <p>R5 – Foster a positive and supportive learning environment</p> <p>R6 – Provide ongoing support and coaching</p>		<p>advancements, taking into account availability and workload, nurturing a constructive learning atmosphere, and offering continuous support and guidance.</p>
Comments	<p>R1 – stay updated with the latest teaching methodologies and educational trends</p> <p>R2 – Addressing teaching challenges by offering practical strategies and resources.</p> <p>R3 – INSET tend to have more engaged and effective teaching style/ activities.</p> <p>R4 – feedbacks and follow up helps educators reflect on their practices, growth, and development tailored to their needs.</p>	Professional Development	<p>Educators recognize the significance of ongoing professional development in their practice, acknowledging the value of staying current with teaching methodologies and trends, addressing challenges with practical strategies, enhancing teaching effectiveness, and utilizing feedback for personalized growth.</p>

Effectiveness of attending in-service education and training

Table 4 shows that the effectiveness of attending in-service education and training (INSET) is generally perceived as effective by the participants. The respondents assigned the highest mean of 4.48, or a very high level of effectiveness, which explains that there is a comprehensive and impactful experience in attending INSET to the notion that the methods employed by the trainers were useful. This indicates a positive perception of the instructional strategies and approaches utilized during the training sessions. On the other hand, the lowest mean of 2.96, or moderate level of effectiveness, indicates a satisfactory impact on the teachers’ participation in INSET programs had no role in the teacher grading system. This finding implies that educators generally find in-service education and training (INSET) to be effective, particularly in terms of the instructional strategies and approaches employed during the training sessions. This positive perception indicates that educators value the methods utilized by trainers to enhance their professional development. However, the relatively low mean attributed to the belief that participation in INSET programs has no impact on the teacher grading system highlights a potential area for improvement in aligning professional development efforts with performance evaluation systems. Gao (2017) emphasizes that the lack of recognition or impact on their professional standing may be a key factor influencing their relatively lower enthusiasm levels.

The overall mean of 3.942, or high level of effectiveness, suggest a positive overall outcome from attending INSET. The participants found the training valuable, relevant, and impactful in improving practical skills and teaching practices (Zheng, 2013; Drushlyak, 2021). Atay (2006) further supports

the idea that attending INSET programs positively impacts the enhancement of professional development. Tailored INSET programs effectively address challenges and improve teachers' competency and confidence in handling diverse classroom environments, contributing to their overall performance and professional growth (Sari, 2007).

Table 4. Effectiveness of attending in-service education and training

Indicators	Mean	Verbal Description
1.The method used by the trainers were useful	4.48	Very High
2.The training site was selected in accessible area	4.09	High
3. Feedback were provided by the trainers to the participants	3.96	High
4.The skills and knowledge you learned in training program is applicable in the classrooms	4.22	Very High
5.Participation in INSET programs had no role in teacher grading system, and it is one of the main reason for low rate of enthusiasm for participation	2.96	Moderate
OVERALL MEAN	3.942	High

Legend:

Mean Range	Verbal Description
4.20-5.00	Very High
3.40-4.19	High
2.60-3.39	Moderate
1.80-2.59	Low
1.00-1.79	Very Low

Teaching Efficiency

The quest to improve the learning experience through the use of innovative techniques and specialized solutions. It goes beyond traditional approaches, stressing deep learning, critical thinking, and diversity to address students' different needs in today's fast-changing educational context.

Table 5 shows the teaching efficiency of high school teachers at Southern Baptist College, Inc. The data revealed a mean of 3.95, which explains that the teaching efficiency of high school teachers is very satisfactory. Out of 23 high school teachers, there were three (3) got a rating of Outstanding and twenty (20) had the rating of Very Satisfactory. It implies that the high school teachers prioritize thorough lesson preparation before engaging with their classes. This involves their commendable skill in pinpointing individual students' needs, interests, and abilities, analyzing learning tasks, devising and testing suitable strategies and materials tailored to students' requirements, adequately preparing for daily learning activities, and demonstrating ongoing professional and cultural development.

The result was supported by Opdenakker (2006), who found that employing a learner-centered teaching approach and demonstrating strong classroom management skills and effective classroom practices thereby enhanced teaching efficiency. Utilizing effective teaching practices, including adept classroom management and instructional strategies, is pivotal for attaining a highly satisfactory teaching efficiency rating (Stronge, 2011). Furthermore, the quality and readiness of teachers significantly contribute to this

outcome, as well-prepared and qualified educators tend to garner higher ratings (Lewis, 1999). Moreover, teacher efficacy, defined as the confidence in one's capacity to positively influence student learning, emerges as a critical factor influencing teaching efficiency (Kleinsasser, 2014).

Table 5. Teaching Efficiency of High School Teachers in Southern Baptist College Incorporated

High School Faculty	Efficiency Rating for Sy 2022-2023	Verbal Description
1	4.20	Very satisfactory
2	3.96	Very satisfactory
3	4.09	Very satisfactory
4	4.01	Very satisfactory
5	3.94	Very satisfactory
6	3.90	Very satisfactory
7	3.65	Very satisfactory
8	3.84	Very satisfactory
9	3.95	Very satisfactory
10	3.95	Very satisfactory
11	4.25	Outstanding
12	3.86	Very satisfactory
13	3.79	Very satisfactory
14	3.53	Very satisfactory
15	3.71	Very satisfactory
16	4.22	Outstanding
17	4.40	Outstanding
18	3.94	Very satisfactory
19	3.60	Very satisfactory
20	4.02	Very satisfactory
21	4.17	Very satisfactory
22	4.00	Very satisfactory
23	3.85	Very satisfactory
Overall Mean	3.95	Very satisfactory

Legend:

Rating	Description
4.21-5.00	Outstanding
3.41-4.20	Very Satisfactory
2.61-3.40	Satisfactory
1.81-2.60	Good
1.00-1.80	Poor

The Relationship between the level of Effectiveness in attending In-service Education and Training and Level of Teaching Efficiency of High School Teachers

The table 6 shows the relationship between level of effectiveness in attending INSET and teaching efficiency of high school teachers. The correlation coefficient (r) of 0.229 suggests a weak positive correlation between the effectiveness of the frequency of in-service training and teaching efficiency. However, the p-value of 0.294 indicates that this correlation is not statistically significant at the conventional significance level of 0.05.

Since the p-value is greater than 0.05, we cannot reject the null hypothesis, which states that there is no significant relationship between the frequency of attending in-service trainings and teaching efficiency. In other words, based on the available data, the extent of attending in-service education and training have a little influence in the teaching efficiency of high school teachers of Southern Baptist College, Inc. High School Department.

The extent of attending INSET (In-Service Education and Training) may not directly correlate with teaching efficiency (Ross, 1994; Waters, 2006; Somers, 2002). Rather, the utilization of INSET knowledge and the structure of the INSET programs, including the nature of course components and school-based follow-up activities, emerge as more influential factors (Ross, 1994; Waters, 2006). Moreover, the impact of INSET on teachers' practices can vary depending on the content of the courses and the working conditions provided (Somers, 2002).

Table 6. Relationship between Level of Effectiveness in attending In-service Education and Training and Level of Teaching Efficiency

VARIABLES	r	p-value	Degree of Relationship	Level of Significance	Decision
Effectiveness of Frequency of In-service Training Teaching Efficiency	0.229	0.294	Weak Relationship	Not Significant	H ₀ not rejected

Proposed New Guidelines of INSET

Training (INSET) serves the purpose of enhancing the effectiveness, relevance, and impact of the training program. These guidelines were developed to align with evolving educational policies, technological advancements, and changing student needs. They aim to improve teacher effectiveness by providing updated strategies, methodologies, and tools for classroom instruction. The new guidelines also emphasize the importance of continuous professional development, encouraging a culture of lifelong learning among teachers. Additionally, they address the specific context and challenges of the educational institution, promoting inclusivity and equity in education. The introduction of new guidelines ensures that the training remains responsive to emerging trends, fostering a dynamic and adaptive approach to teacher development in the ever-evolving field of education.

Based on the data gathered, there are five essential guidelines for conducting an effective in-service education and training (INSET) program aimed at enhancing teaching efficiency.

1. conducting a targeted needs assessment ensures that the INSET content addresses specific areas requiring improvement;

2. placing a strong emphasis on practical application ensures that the skills and knowledge gained are immediately relevant to the classroom setting;
3. implementing individualized professional development plans empowers educators to set personalized goals aligned with their unique needs and strengths;
4. providing ongoing mentoring and support helps educators navigate the implementation of new strategies and overcome challenges;
5. employing a data-informed evaluation system allows for the assessment of INSET's impact on teaching efficiency, enabling program refinement and continuous improvement.

By adhering to these guidelines, educators can design and deliver INSET programs that foster continuous growth and excellence in teaching practice.

Summary of Findings, Conclusions, and Recommendations

This chapter presents a summary of key issues, conclusion and offers some recommendations based on the study findings. On the basis of the presented findings and information, the chapter shows the implication of the study findings and practice regarding in-service education and training (INSET) in secondary schools. The chapter ends by identifying new areas that prospective researchers may wish to explore more.

Summary of Findings

Based on the data gathered, the researchers had come up with these findings:

1. The programs of in-service education and training attended by high school teachers were the pedagogy workshops, subject-specific training, technology integration, assessment and evaluation and professional development designed to enhance teacher's teaching skills, subject knowledge, and classroom management techniques.
2. Majority of high school teachers attended 2-3 times the in-service education and training (INSET) programs conducted by Southern Baptist College, Inc.
3. High school teachers attending INSET experience a multi-faceted landscape shaped by six key themes: personal and professional growth, improved teaching effectiveness, enhanced mental abilities, positive workplace changes, transformative challenges, and emphasize collaborative approaches to address challenges and maximize benefits of ongoing professional development initiatives.
4. The effectiveness of in-service education and training (INSET) attended by high school teachers is perceived positively overall as to enhance their professional development and teacher standing.
5. The level of teaching efficiency of high school teachers in majority was Very Satisfactory that indicates thorough lesson preparation and demonstrate commendable skills.
6. There is a weak positive correlation between the effectiveness of attending in-service training (INSET) and teaching efficiency of high school teachers. Therefore, there is no significant relationship between the frequency of attending in-service trainings and teaching efficiency which hypothesis was not rejected at 0.05 level of significance.
7. There were five essential guidelines for effective implementation of in-service education and training (INSET) programs that aimed to enhance teaching efficiency. These include conducting targeted needs assessments, emphasizing practical application, implementing individualized professional development plans, providing ongoing mentoring and support, and employing data-informed evaluation systems to assess impact and ensure continuous professional growth.

Conclusions

Based on the findings, the researcher concluded that the extent of attending in-service education and training does not guarantee effective and efficient teaching performance. Teachers themselves engage in diverse in-service education and training programs, perceiving them positively for enhancing teaching skills. While there's no significant correlation between frequency of participation and teaching efficiency, implementing targeted needs assessments and individualized professional development plans could optimize the impact of such programs, emphasizing ongoing support and data-informed evaluation for continuous professional growth.

Recommendation

1. Programs of in-service education and training (INSET) attended by high school teachers enhance teaching skills, subject knowledge, and classroom management techniques. Thus, it should be developed and enhanced by policy makers and educational institutions, creating more effective and engaging INSET programs that meet the diverse needs of teachers through the effective implementation of new guidelines.
2. The effectiveness of attending INSET shows a weak positive correlation with the teaching efficiency of high school teachers. Thus, it should be improved by requiring attendance for INSET participation every year.
3. Teachers are encouraged to have on-going participation in professional development opportunities like INSET through the financial help and support of the school, administrators, and other stakeholders.
4. School administrators should connect constantly with the teachers and support them in any endeavor to develop and maximize their professional potential and growth, which contributes to overall school progress.
5. Conduct a longitudinal study tracking teachers' participation in INSET programs over several years and assessing their teaching efficiency through various metrics such as student performance, classroom observations, and student feedback.

BIBLIOGRAPHY

1. Attique, M., Hussain, S., & Ali, A. (2019). Impact of motivation on students' and teachers' efficiency and school effectiveness in Pakistan. *Global Regional Review*, IV(III), 171–178. [https://doi.org/10.31703/grr.2019\(iv-iii\).19](https://doi.org/10.31703/grr.2019(iv-iii).19)
2. Ayvaz-Tuncel, Z., & Çobanoğlu, F. (2018). In-service teacher Training: Problems of the teachers as learners. *International Journal of Instruction*, 11(4), 159–174. <https://doi.org/10.12973/iji.2018.11411a>
3. Bedir, G. (2015). Perception of teaching efficacy by primary and secondary school teachers. *DOAJ (DOAJ: Directory of Open Access Journals)*. <https://doaj.org/article/ddc52565fee0465e844d1c8ec0582f33>
4. Bluestone, J., Johnson, P., Fullerton, J. T., Carr, C., Alderman, J., & BonTempo, J. (2013). Effective in-service training design and delivery: evidence from an integrative literature review. *Human Resources for Health*, 11(1). <https://doi.org/10.1186/1478-4491-11-51>
5. Bolívar, C. R., & Dávila, A. (2016). Propuesta de buenas prácticas de educación virtual en el contexto universitario. *RED. Revista De Educación a Distancia*, 49. <https://doi.org/10.6018/red/49/12>

6. DepEd, (2024), Department of Education Region IV-A Calabarzon City Schools Division of Dasmariñas. DM Order No. 22, s. 2023 titled Implementing Guidelines on the School Calendar and Activities for the School Year 2023-2024. <https://depeddasma.edu.ph/dm-no-032-s-2024-guidelines-on-the-conduct-of-in-service-training-for-teachers-inset-for-school-year-2023-2024/>
7. DepEd, (2024), depedtambayan. Guidelines on the Conduct of the In-Service Training for Teachers (INSET) for SY 2023-2024. <https://www.deped-tambayan.com/2024/01/guidelines-on-conduct-of-in-service.html>
8. De Vries, S., Van De Grift, W., & Jansen, E. (2013). How teachers' beliefs about learning and teaching relate to their continuing professional development. *Teachers and Teaching: Theory and Practice*, 20(3), 338–357. <https://doi.org/10.1080/13540602.2013.848521>
9. Dhanavel, S. P. (2023). *Continuing professional development of English language teachers: Perspectives and Practices from India*. Springer Nature.
10. Fernández-García, C., Maulana, R., Inda-Caro, M., Helms-Lorenz, M., & García-Pérez, O. (2019). Student perceptions of Secondary Education teaching effectiveness: general profile, the role of personal factors, and educational level. *Frontiers in Psychology*, 10. <https://doi.org/10.3389/fpsyg.2019.00533>
11. Ganal, N. N., Andaya, O. J. F., & Guiab, M. R. (2015). Problems And Difficulties Encountered By Student Teachers Of Philippine Normal University Isabela Campus. *EPH - International Journal of Science and Engineering*, 1(4), 44–56. <https://doi.org/10.53555/ejse.v1i4.108>
12. Gao, J., & Wu, B. (2017). Revitalizing traditional villages through rural tourism: A case study of Yuanjia Village, Shaanxi Province, China. *Tourism Management*, 63, 223–233. <https://doi.org/10.1016/j.tourman.2017.04.003>
13. Harvey, T., Drolet, B. M., & DeVore, D. P. (2014). *Leading for excellence: A Twelve Step Program to Student Achievement*. Rowman & Littlefield.
14. Hervie, D. M. (2018). Enhancing Teachers' Performance through Training and Development in Ghana Education Service (A Case Study of Ebenezer Senior High School). *Journal of Human Resource Management*, 6(1), 1. <https://doi.org/10.11648/j.jhrm.20180601.11>
15. Hoyle, E., & Megarry, J. (2012). *World Yearbook of Education 1980: The Professional Development of Teachers*. Routledge.
16. Human Resources 15 – 18 (n.d.). Questionnaire on training effectiveness. <https://www.fahr.gov.ae/Portal/Userfiles/Assets/Documents/dd82835.pdf>
17. İlhan, A., Tutak, T., & Poçan, S. (2021). Matematik öğretmen adaylarının uygulanan güncel ve eski lisans programlarına ilişkin görüşleri. *Balıkesir Üniversitesi Sosyal Bilimler Enstitüsü Dergisi*, 24(46), 895–921. <https://doi.org/10.31795/baunsobed.926763>
18. Junejo, M. I., Sarwar, S., & Ahmed, R. (2017). Impact of In-Service Training on performance of teachers a case of STEVTA Karachi region. *DOAJ (DOAJ: Directory of Open Access Journals)*. <https://doi.org/10.22555/ijelcs.v2i2.1944>
19. Khaldi, M. (2024). Fostering pedagogical innovation through effective instructional design. *IGI Global*.
20. Kini, T., & Podolsky, A. (2016). Does teaching experience increase teacher effectiveness? A review of the research. <https://doi.org/10.54300/625.642>
21. Kleinsasser, R. C. (2014). Teacher efficacy in Teaching and Teacher Education. *Teaching and Teacher Education*, 44, 168–179. <https://doi.org/10.1016/j.tate.2014.07.00>

22. Mahmood, M., Ostrovskiy, A., & Capar, N. (2022). Effect of orientation training on employee and firm performance. *Global Business and Organizational Excellence*, 42(4), 49–62. <https://doi.org/10.1002/joe.22173>
23. Marzano, R. J., & Waters, T. (2009). *District leadership that works: Striking the Right Balance*. Solution Tree Press.
24. Maulana, R., Helms-Lorenz, M., & Van De Grift, W. (2015). A longitudinal study of induction on the acceleration of growth in teaching quality of beginning teachers through the eyes of their students. *Teaching and Teacher Education*, 51, 225–245. <https://doi.org/10.1016/j.tate.2015.07.003>
25. Mirrezaei, S. H., Ayoubi, A., Mosallanejad, A., & Mousavifard, F. (2018). The effect of in-service training on employees' productivity in education and training organisation,
26. Munna, A. S., & Kalam, A. (2021). Teaching and learning process to enhance teaching effectiveness: literature review. *IJHI (International Journal of Humanities and Innovation)*, 4(1), 1–4. <https://doi.org/10.33750/ijhi.v4i1.102>
27. Napanoy, J. B., Gayagay, G. C., & Tuazon, J. R. C. (2021). Difficulties encountered by pre-service teachers: basis of a pre-service training program. *Universal Journal of Educational Research*, 9(2), 342–349. <https://doi.org/10.13189/ujer.2021.090210>
28. Nzarirwehi, J., & Atuhumuze, F. (2019). In-Service teacher training and professional development of primary school teachers in Uganda. *IAFOR Journal of Education*, 7(1), 19–36. <https://doi.org/10.22492/ije.7.1.02>
29. Paolini, A. (2015). Enhancing teaching effectiveness and student learning outcomes. *The Journal of Effective Teaching*, 15(1), 20–33. <http://files.eric.ed.gov/fulltext/EJ1060429.pdf>
30. Procedures Guide of Training and Development System- Federal Authority for Government Human Resources 15 –18 (n.d.). Questionnaire on training effectiveness. <https://www.fahr.gov.ae/Portal/Userfiles/Assets/Documents/dd82835.pdf>
31. Rabo, M. (2022). Teacher –Students relationship as a tool for positive academic performance in Nigeria. *British Journal of Multidisciplinary and Advanced Studies*, 3(1), 42–53. <https://doi.org/10.37745/bjmas.2022.0018>
32. Resources, M. a. I. (2018). *Pre-Service and In-Service Teacher Education: Concepts, methodologies, tools, and applications: Concepts, Methodologies, Tools, and Applications*. IGI Global.
33. Resources, M. a. I. (2021). *Research Anthology on Inclusive Practices for Educators and Administrators in Special Education*. IGI Global.
34. Rienties, B., Hampel, R., Scanlon, E., & Whitelock, D. (2022). *Open world learning: Research, Innovation and the Challenges of High-Quality Education*. Routledge.
35. Ross, J. A. (1994). The impact of an inservice to promote cooperative learning on the stability of teacher efficacy. *Teaching and Teacher Education*, 10(4), 381–394. [https://doi.org/10.1016/0742-051x\(94\)90020-5](https://doi.org/10.1016/0742-051x(94)90020-5)
36. Safi, S. (2015). In-service Training Programs for Schools Teachers in Afghanistan: Teachers' Views about effectiveness of the In-service training. *In-service Training Programs for Schools Teachers in Afghanistan: Teachers' Views About Effectiveness of the In-service Training*. <http://www.diva-portal.org/smash/record.jsf?pid=diva2:843263>
37. Sanetti, L. M. H., Williamson, K. M., Long, A. C. J., & Kratochwill, T. R. (2017). Increasing In-Service teacher implementation of classroom management practices through consultation,

- implementation planning, and participant modeling. *Journal of Positive Behavior Interventions*, 20(1), 43-59. <https://doi.org/10.1177/1098300717722357>
38. Seidel, T., & Shavelson, R. J. (2007). Teaching Effectiveness Research in the past Decade: The role of theory and research design in Disentangling Meta-Analysis Results. *Review of Educational Research*, 77(4), 454–499. <https://doi.org/10.3102/0034654307310317>
39. Shah, S. M. A., Kiani, K. M., Mahmood, Z., & Hussain, I. (2011). In-Service Training of Secondary Level Teachers: a Follow up of Teachers' Performance in Comparative Perspective. *Journal of Education and Practice*, 2(2), 40–49. <https://www.iiste.org/Journals/index.php/JEP/article/download/127/7>
40. Shahzad, K., & Naureen, S. (2017). Impact of Teacher Self-Efficacy on Secondary school students' academic achievement. *Journal of Education and Educational Development*, 4(1), 48. <https://doi.org/10.22555/joed.v4i1.1050> Shiraz, Iran. *International Journal of Productivity and Quality Management*, 24(1), 134. <https://doi.org/10.1504/ijpqm.2018.091168>
41. Somers, J., & Sikorová, E. (2002). The effectiveness of one in-service education of teachers course for influencing teachers' practice. *Journal of In-service Education*, 28(1), 95–114. <https://doi.org/10.1080/13674580200200173>
42. Stronge, J. H. (2018). *Qualities of effective teachers*. ASCD. Teacher quality a report on the preparation and qualifications of public school teachers. (1999). DIANE Publishing.
43. Tuytens, M., & Devos, G. (2013). How to activate teachers through teacher evaluation? *School Effectiveness and School Improvement*, 25(4), 509–530. <https://doi.org/10.1080/09243453.2013.842601>
44. Tzivinikou, S. (2015). The Impact of An In-Service Training Program on The Self-Efficacy Of Special And General Education Teachers. *Problems of Education in the 21st Century*, 64(1), 95–107. <https://doi.org/10.33225/pec/15.64.95>
45. Wanjala, E. A. (2012). Level of teachers' efficiency in work performance in public secondary schools in Wajir-North District-Kenya. *International Journal of Scientific Research*, 4(4). <http://erepository.uonbi.ac.ke/handle/11295/7217>