

In-service training and teacher job performance: A study of senior high schools in the Bongo District of Ghana

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ABSTRACT

This study examined the influence of in-service training on the job performance of senior high school teachers in the Bongo District of Ghana. By way of its theoretical framework, Odiorne's Theory of Human Capital was found to be suitable, and the same was utilised in guiding the study. The study employed a descriptive survey design. A sample size of one hundred and thirteen (113) out of a targeted population of one hundred and sixty-three (163) teachers from four (4) senior high schools in the administrative area was obtained using the simple random sampling technique. The data collection tool was a questionnaire that the researcher constructed. Descriptive statistical tools, thus means and standard deviations, were used to analyse the data. The study revealed that in-service training promotes networking among teachers and enhances teachers' performance in the teaching and learning situation. Further, some notable challenges of implementation include inadequate trainers in the various subject areas and inadequate funding. To conclude, therefore, in-service training programmes do have a multitude of positive effects on the core mandate of teachers. However, there are knotty challenges that should be addressed. This study thus recommends the need for relevant stakeholders in education to intervene by pulling their synergies together in order to address these concerning challenges.

Keywords: Bongo District, Challenges, In-Service Training, Job Performance, Senior High School Teachers

I. INTRODUCTION

In-service training has become an important component of institutions, particularly educational institutions (Akpalu & Markom, 2022; Otoo et al., 2018). Each educational institution's core human resources determine its performance (Swanson, 2022). Every educational institution ought to have quality teachers in order to raise the level of knowledge, skills, and overall performance of its students (Saks, 2022). The improvement of the professional competence of staff members of institutions is addressed by all developmental tasks related to their professional growth, including education, training, and professional development (Nasiopoulou et al., 2022). Improvement in productivity and performance of teachers is driven by in-service training.

In-service training plays a very significant role in the development of an institution. First, it reduces the supervision required in executing duties (Iqbal et al., 2020). Hence, time and resources that could have been used for providing supervision can be channelled into other profitable activities of the institution. In-service training also increases the viability and flexibility of institutions and enhances their ability to keep pace with changing trends (Esfijani & Zamani, 2020). It is also critical for an institution's growth and success. Developing in-service training programmes allows the staff of institutions to be more productive and develop their expertise in areas such as critical thinking and problem-solving skills (Haleem et al., 2022). To prevent skill obsolescence among staff members in every organisation especially, educational institutions, in-service training programmes help greatly in learning advanced job-related information in addition to providing fundamental skill augmentation (Hassan et al., 2020). According to Islam and Amin (2021), the management of an institution is tasked with helping staff members stay competent in their line of work through in-service training. They cited increased productivity in institutions as evidence to support their assertion that devoting resources and time to organising in-service training programmes for staff is undoubtedly in the best interest of the institutions.

The importance of in-service training for academic institutions' teaching personnel cannot be down played. It promotes productivity of teachers (Breznik & Law, 2019). In-service training also serves as an effective means of increasing the morale of teachers to work even harder towards achieving school goals. This implies that In-service training promotes better human relationships among teachers of educational institutions enabling them to perform adequately. This goes a long way to promote teamwork in institutions (Mislia et al., 2021). Therefore, in-service training is seen as a way to build the capacity of staff that would help them improve upon their performance.



Several studies have focused on in-service training of teachers. A study conducted by Iqbal et al. (2020) investigated the relationship between in-service training and its influence on the work performance of teachers in South Asia. Koomson et al. (2022) evaluated the effects of in-service training on the performance of teachers in other parts of Ghana. In light of the foregoing, this study seeks to ascertain the influence of in-service training on the job performance of senior high school teachers in the Bongo District of Ghana.

1.1 Statement of the Problem

In the context of Ghana, several studies have examined training concerning the staff of educational institutions (Akpalu & Markom, 2022; Owusu-Mensah et al., 2015; Hervie & Winful, 2018). For instance, Akpalu and Markom (2022) in their study found out that there is a strong correlation between in-service training and the performance of academic staff in the technical universities in Ghana. Again, Hervie and Winful (2018) posited that there exists a positive correlation between in-service training and the performance of teachers.

However, it appears that not enough studies exist in this domain. This study intends to fill the gap by ascertaining in-service training and its influence on the job performance of senior high school teachers in the Bongo District of Ghana. Additionally, the study will cover the challenges associated with the implementation of in-service training in the study area.

1.2 Research Objectives

- i. Ascertain the influence of in-service training on the job performance of teachers at the senior high school level.
- ii. Find out the challenges of implementing in-service training at the senior high school level.

1.3 Research Questions

- i. How does in-service training influence the job performance of teachers at the senior high school level?
- ii. What challenges affect the implementation of in-service training at the senior high school level?

II. LITERATURE REVIEW

2.1 Theoretical Review

2.1.1 The Theory of Human Capital

This study is anchored on Odiorne's (1984) Theory of Human Capital. The theory was first developed by Becker (1962) and Rosen (1976) and further revised by Odiorne (Wright, 2021). Theory of human capital holds that investing in individuals has economic advantages for both the individuals as well as society. For the improvement of individual labour productivity, human capital investment is as vital as physical capital investment (Nankervis et al., 2022).

To the extent that this study focuses on the nexus between in-service training and human capital formation, the theory is relevant in this regard. Professional development of senior high school teachers through well-tailored training programmes has a positive effect on job performance and productivity.

2.2 Empirical Review Based on Objectives i and ii

2.2.1 Explaining In-Service Training

In-service training refers to practical training, which encompasses both short-term and formalised long-term programmes designed to improve an employee's skills and qualifications and boost their productivity at work. When a person participates in formal or informal work-related learning activities through opportunities given by their employer, it is known as in-service training (Nzarirwehi & Atuhumuze, 2019). These activities help employees become more proficient and advance their professional growth. Teachers everywhere ought to regularly avail themselves for these opportunities.

In-service training is essential and fundamental to the advancement of education in the current world. Luo et al. (2019) posit that through in-service training, trainees' roles and capabilities can be enhanced to better satisfy institutional needs in terms of skills and knowledge. In the words of Nkya and Bimbiga (2023), in-service training enables teachers to be more rational and systematic in their teaching. In today's society, in-service training is critical to the growth of education.

2.2.2 Influence of In-Service Training on Teachers Job Performance

The value of in-service training has recently gained prominence for its role in improving the job performance of teachers in different systems of education. Ellyana (2020) in her study conducted in Indonesia concludes that in-service training has tangible benefits in the enhancement of teachers' learning processes. Employing action research within two iterative cycles, the study noted considerable improvements in the performance of teachers regarding lesson



planning, instruction, and assessment. Gull et al. (2022) provide additional evidence from Pakistan where a moderate positive impact of in-service training on teachers' job performance was reported. Their empirical study with 243 teachers from the Kasur district documents the reinforcing effect of in-service training on pedagogical skills and professional development.

In another study, Anulika (2020) demonstrates the existence of strong and significant relationships between in-service training and the job performance of secondary school teachers in Nigeria. The study found that attending professional workshops, orientations, and conferences as a participant were correlated to higher performance on the job. The research demonstrated the importance of in-service training in public secondary schools with a substantial sample of 619 teachers, as well as utilizing vigorous statistical analyses. Further, it advocated for improved availability to professional training and governmental initiatives for on-going teacher development.

Likewise, Iqbal et al. (2020) examined the factors that motivate training and person-job fit as it relates to TVET teachers in South Asia. They concluded that both motivational factors and training had a significant impact on performance with person-job fit operating as a central moderating variable. This implies that the impact of training is stronger when instructors are assigned to positions that are commensurate with their skills and interests. This conclusion suggests that impact is maximized when training is contextually appropriate and specifically designed to responsive educator needs.

Moreover, Ogunbayo and Fatai (2022) studied teacher productivity in Lagos, Nigeria, differentiating between trained and untrained teachers. Their results indicated an advantage for trained teachers in multiple areas of instructional practice and overall productivity relative to their untrained peers. The study highlighted that in-service training enhances not just performance but also establishes a culture of responsibility on the part of the educator and ongoing improvements to their work. It advocated the need for regular evaluations along with motivation and performance sustaining incentives.

In-service training and teacher performance as well as students' performance has been linked by studies like that of Mugarura et al. (2022) in Uganda. Employing a mixed-method approach, the study illustrated that continual professional development increased teacher morale and effectiveness, which subsequently improved student results. The study recommends systematic study leave frameworks alongside the employment of substitute teachers to maintain instructional continuity during training periods for teacher development. Further, it emphasized the need for schools to integrate professional development into their core operational frameworks as a foundational strategy.

Through a mixed methods research approach in Kampala, Uganda, Uzorka et al. (2024) contributed to the discourse by demonstrating the impact of in-service training on teaching and students' academic performance. Enhancing teaching quality and student performance were notable results of in-service training, blending both quantitative and qualitative data. A key takeaway from this study was the emphasis on peer collaboration and hands-on workshops as particularly effective training elements. Moreover, 61% of teachers surveyed cited improved instructional practices, while 71% acknowledged enhanced student achievement.

In Rwanda, Gacinya (2024) studied the in-depth effects of continuous in-service training on an instructor's in-class performance. The study illustrated some of the strongest positive relationships in professional knowledge, skills, values, and performance within the realm of teaching. Performing regression analysis for these dimensions showed each above-mentioned factor had a notable independent impact on classroom effectiveness. The study strongly recommended government commitment to facilitating in-service training at all education levels.

Lastly, Junejo et al. (2018) analysed in-service training programs offered within the STEVTA framework in Pakistan and its effects on teachers' professional skills, subject knowledge, and teaching effectiveness, reporting marked gains resulting from these programs. Following the training, teachers reported improved satisfaction and confidence in their roles. The study suggested that programs be designed at the specific disciplinary level and embedded within career pathways to ensure interest and applicability over time.

In conclusion, studies decisively highlight that in-service training is a benefit to teachers regardless of the education setting in which they work. For instance, it enables effective planning of lessons, heightened enthusiasm for teaching, and better academic and behavioural performance among students. In-service training is a significant contributor to professional efficacy.

2.2.3 Challenges Affecting the Implementation of In- Service Training in Educational Institutions

In-service training for teacher professional development is an essential practice that allows teachers to deepen their understandings of strategies, subject matter, and technology. However, in-service training is not implemented with great success in many educational institutions. There are numerous studies indicating a shortage of the foundational elements necessary to facilitate in-service training, which continues to be an impediment to effective training. For instance, Uddin's (2020) study of the Bangladesh Madrasah Teachers Training Institute indicated that the lack of adequate logistics were preventing the Institute from training the numerous english teachers across the entire country.



In a similar vein, Mahara (2024) conducted an explanatory case study in Nepal and indicated that a lack of financial and material support was preventing on-going training opportunities in schools. In Tanzania, Mchami and Mhando (2023) were also able to indicate that a lack of funding was adversely impacting the ability of training programmes to operate consistently. The points made in these studies reflect the idea that without consistent and upkeep of infrastructure, funding, and equipment, teacher in-service training is not able to be reproduced or consistently performed across schools.

Another common challenge is the lack of qualified and trained trainers or personnel to properly deliver training in these programmes. Uddin (2020) identified that the main training institute in Bangladesh had no full-time professional trainers and this caused inconsistencies and poor training delivery. Mahara (2024) mentioned that in Nepal, there are inadequate subject matter experts who can properly tailor the training to better suit teachers' real instructional needs in their classroom contexts. Without quality facilitators, the quality of content and the delivery of the training has a significant impact on teachers learning new skills to transfer into their classroom situations (Uddin, 2020; Mahara, 2024).

Regardless of the context, multiple studies indicate challenges surrounding training and related policy issues. Mchami and Mhando (2023) discovered that many training programs in Tanzania were poorly defined and there was little if any follow up, meaning they did not support sustained change. Mahara (2024) also mentioned ineffective policies that did not give clarity or legitimacy to in-service training in the school calendar. Similarly, Almohammadi and Almuhammadi (2024) indicated that if teachers are not involved in the design or planning of training, then it cannot address real challenges they face in teaching practice. It is clear that effective planning support and policies are essential to make in-service training more purposeful and actionable.

Low teacher motivation and inadequate time are also significant barriers. Uddin (2020) and Mahara (2024) stated that teachers are often apathetic about attending professional development training, either because they do not find the modules applicable to their practice, or they are too stressed regarding their numerous responsibilities. Mahara (2024) intimated that teachers often struggle to incorporate what they learn due to time barriers and congested classrooms. In Morocco, Lmortaji (2024) discovered similar concerns, especially when the teachers did not have clear direction on how to incorporate new ICT tools to enhance their practice.

Relating these findings, it is clear from these studies that a combination of resource deficits, lack of qualified trainers, inadequate planning, poor policies, and limited engagement by teachers are barriers to effective practice in-service training. These factors limit the number and quality of professional learning activities to which teachers have access and reduce teachers' abilities to transfer the knowledge and skills from the in-service training to their classrooms.

III. METHODOLOGY

3.1 Research Design

The descriptive survey design was utilised in this study. Shah et al. (2021) posit that the preoccupation of this design is to describe the present nature of a phenomenon under study. Hirose and Creswell (2023) assert that a descriptive survey design identifies and defines the problem, chooses the instruments for data collection, then describes, examines and evaluates the results aimed at addressing the research questions as set out. This design falls in line with the intent and purpose of the researcher hence the rationale for its utilisation. Accordingly, Mishra and Alok (2022) intimate that this design makes it possible for a researcher to gather data from a wider group.

3.2 The Population of the Study

The population comprises teachers from four senior high schools in the Bongo District of Ghana. Approximately, one hundred and sixty-three (163) teachers constituted the target population. The breakdown of same has been displayed on Table 1.

Table 1

Population of the Study

S/N	School	Teacher Population
1	Bongo Senior High School	46
2	Gowrie Senior High / Technical School	50
3	Zorkor Senior High School	41
4	Azeem-Namoo Senior High/Technical School	26
Total		163

3.3 Sampling Techniques and Sample Size

Sample size determination was done for this study using a table designed by Krejcie and Morgan (1970). Out of one hundred and sixty three (163) teachers, one hundred and thirteen (113) teachers constituted the sample size.

Simple random sampling technique was used to elect respondents from the targeted schools. This technique was adopted and followed through using the lottery method to ensure that all respondents had equal chances of being selected for the study. The sampling of respondents was done to reflect the size of the populations of the individual senior high schools.

3.4 Data Collection Instrument

A self-constructed questionnaire served as the data collection tool. The instrument is a Likert scale questionnaire and in a continuum that ranges from Strongly Disagree, Disagree, Neutral, Agree and to Strongly Agree. It consists of three parts. The first part elicited the biographical data of respondents. The second and third parts engaged respondents on the influence of in-service training on the job performance of teachers and the challenges in implementing in-service training. Data collected via a questionnaire are easy to analyse in relative terms. Again, its administration is not time consuming. These among others informed the researcher's decision for its utilisation.

3.4.1 Testing for Validity and Reliability of the Instrument

Relying on the experiences of senior colleagues in the subject area, the questionnaire items were examined by three professors to ascertain validity of same before the pre-testing activity. The senior academics offered some insightful suggestions about the questionnaire items and subsequently, the instrument was amended to cater to the suggestions made.

As regards its reliability, a pilot study was conducted in two senior high schools as a composite study. These schools were outside the study area. As a consequence, thirty (30) teachers responded to the instrument. Exactly a week was used to administer and retrieve the questionnaires from the respondents. The questionnaires were then subjected to a reliability analysis test. The overall alpha coefficient or Cronbach's alpha stood at 0.8124 making the instrument fit for purpose.

3.5 Data Collection Procedure

Before data collection commenced, the researcher obtained permission to carry out the study from the Ghana Education Service through the headmasters of the senior high schools selected. Following that, the questionnaires were administered to respondents to elicit their responses. The data collection exercise lasted two weeks.

3.6 Data Analysis Plan

Data were analysed using the descriptive statistics of means and standard deviations. To the extent that such statistical tools make it easy to understand the data that have been analysed and that a wide readership will appreciate the import of such, the researcher thus resorted to the utilisation of such tools. Furthermore, the analyses were directed at addressing the respective research questions as captured. Subsequently, results have been presented on simple statistical tables.

3.7 Ethical Considerations

The researcher assured respondents that there would not be consequences by their participation in the study. To this end, confidentiality and informed consent would be guaranteed. Further, participation is optional, and respondents may choose whether to take part in the study and or opt out as and when the need be.

IV. FINDINGS & DISCUSSION

4.1 How does In-Service Training Influence the Job Performance of Teachers at the Senior High School Level?

This research question sought to ascertain how in-service training influences the job performance of teachers in senior high schools. The data collected in respect of this question are presented on Table 2 as seen below. Key: Strongly Disagree- 1, Disagree-2, Neutral-3, Agree-4, Strongly Agree-5

Table 2
Influence of In-Service Training on Teachers Job Performance

Statement	Mean	Std. Deviation
Teachers are able to build effective networking systems through in- service training	4.27	0.879
In- service training promotes ethical behaviour and teacher professionalism	4.15	0.938
In- service training brings out teachers potentials and build their competence and capabilities	4.25	0.931
In-service training offers teachers the opportunity to be abreast of new techniques and strategies in their subject areas	4.40	0.892
In-service training improves teachers performance	4.30	0.925
In-service training assists in teachers promotion and job status	4.30	0.948

As shown in Table 2, all the statements related to the research question fall within the response category of agreement. For instance, the statement “in-service training improves teachers’ performance” recorded a mean score of 4.30 and a standard deviation of 0.925, indicating strong agreement among respondents. The relatively low standard deviation suggests homogeneity in their responses. This finding aligns with Anulika (2020), who reported a positive correlation between teachers’ participation in training courses and their performance. Similarly, Ogunbayo and Fatai (2020) emphasized that teacher productivity improves through such programmes, which in turn enhances students’ academic performance.

Regarding the promotion of ethical behaviour and teacher professionalism, the mean and standard deviation values were 4.15 and 0.938, respectively, demonstrating respondents’ agreement and consensus. This observation supports Ellyana’s (2020) assertion that teachers who attend in-service training are better equipped to address issues related to lesson planning, instruction, and assessment. Likewise, Gull et al. (2022) highlighted that such programmes sharpen teachers’ pedagogical skills and promote professional development.

Furthermore, the statement “in-service training aids teachers’ promotion and job status” yielded a mean of 4.30 and a standard deviation of 0.948, again indicating agreement and consistency among responses. Similarly, “through in-service training, teachers are able to build effective networking systems” attracted a mean of 4.27 and a standard deviation of 0.879, reaffirming positive perceptions of the role of training.

From the foregoing, there is no ambiguity about the stance of the teachers on how training programmes of such nature will inure to the benefit of the teacher. The verdict is clear and therefore educational authorities need to give such programmes some priority attention in the scheme of things.

4.2 What Challenges Affect the Implementation of In- Service Training at the Senior High School Level?

This research question elicited the perspectives of respondents about the challenges that beset the implementation of in-service training in senior high schools. Table 3 as seen below, depicts such challenges.

Table 3
Challenges Affecting the Implementation of In-service Training

Statement	Mean	Std. Deviation
Inadequate trainers in the various subject areas	4.18	1.104
Inadequate financial support from the education ministry and education service of Ghana	4.08	1.010
Lack of monitoring and supervision mechanisms	4.19	0.980
Low teacher motivation	3.14	1.017
Inadequate logistical support at the school level	4.75	0.727

In reference to Table 3 above, there exists a myriad of challenges in relation to the implementation of in-service training programmes at the senior high school level. For instance, the statement “inadequate trainers and/or experts in the various subject areas” has a mean value of 4.18 and a corresponding standard deviation value of 1.104. This implies that respondents agree that this challenge manifests as an obstacle to implementing such programmes. Similarly, Mahara (2024) expresses the view that there are no qualified experts in the various fields to tailor such training programmes to suit teachers’ needs in the classroom. Accordingly, Uddin (2020) intimates that subject matter experts are not readily available to assist in the organization and implementation of in-service training. Again, respondents concur with a mean value of 4.08 and a standard deviation value of 1.010 that inadequate financial support from the education authorities constitutes a challenge to the smooth implementation of such laudable programmes. This assertion by the respondents resonates with Mchami and Mhando (2023) when they noted that lack of funds prevents on-going training in schools. The implication is that these programmes may not be carried out on a regular basis because of the financial burden that may arise.

On the issue of the lack of monitoring and supervision mechanisms, respondents intimate some agreement with a mean of 4.19 and a standard deviation of 0.980. Accordingly, Mchami and Mhando (2023) intimate that many training programmes suffer from little or no follow-ups. This implies that the absence of such mechanisms may lead to a situation where the acquisition of new knowledge from in-service training may not be implemented to the letter. Again, on the matter of low teacher motivation, the mean and standard deviation values are 3.14 and 1.017 respectively. This largely suggests some neutrality on the part of respondents.

However, it is clear that teachers' individual responses are a bit dispersed from the mean in comparative terms. According to Uddin (2020) and Mahara (2024), teachers show apathy towards professional development programmes when they are not able to relate to or find such modules useful in their classroom practices. Finally, the statement "inadequate logistical support at the school" is a challenge that attracts a mean of 4.75 and a standard deviation of 0.727. This suggests a strong agreement. Again, there exists homogeneity in the responses as per the standard deviation value. This observation is worrying given the backdrop that teachers that avail themselves for training are unable to put the new knowledge into practice because of logistical and material constraints at the school level.

V. CONCLUSIONS & RECOMMENDATIONS

5.1 Conclusions

In-service training has a significant and positive influence on the job performance of senior high school teachers. Largely, such trainings promote teacher competencies and professional development. Teachers are thus able to contribute effectively towards the achievements and successes of the core mandate of their respective institutions. Regardless, there are challenges in relation to implementation, which the relevant stakeholders should aim at addressing.

5.2 Recommendations

It is imperative to note that based on the findings of this study, the following recommendations have been proffered to education authorities and some other educational stakeholders regarding the way forward. First, the Ministry of Education and Ghana Education Service should allocate adequate funds for the training of trainers in the various disciplines. Following this, adequate refresher courses and workshops should be organised regularly for teachers. Additionally, Ghana Education Service in collaboration with headmasters of the various schools should develop effective monitoring and supervision mechanisms to ensure that teachers implement to the letter, the new knowledge acquired through in-service training.

Finally, Non-governmental organisations that are into education development and delivery should collaborate with Ghana Education Trust Fund in the provision of infrastructure and other logistics and materials. This will help the various schools support such trainings. Alternatively, a few of such programmes that do not require in-person attendance could be organised online.

REFERENCES

- Almohammadi, M., & Almuhammadi, A. (2024). The effect of service training on English teachers' beliefs and attitudes. *International Journal of English Linguistics*, 13(4), 104–116. <https://doi.org/10.5539/ijel.v14n4p104>
- Anulika, A. G. (2020). In-service training as correlates of teachers' job performance in public secondary schools in Enugu State, Nigeria. *European Journal of Education Studies*, 7(11), 390–411.
- Apkalu, V. L., & Markom, M. N. B. (2022). The impact of training and development on the performance of academic staff in technical universities in Ghana (A conceptual paper). *International Journal of Academic Research in Business and Social Sciences*, 12(1), 1793–1806.
- Becker, G. S. (1962). Investment in human capital: A theoretical analysis. *Journal of Political Economy*, 70(5, Part 2), 9–49.
- Breznik, K., & Law, K. M. Y. (2019). What do mission statements reveal about the values of top universities in the world? *International Journal of Organizational Analysis*, 27(5), 1362–1375.
- Ellyana, Y. (2020). The in-service training in improving teacher's performance in learning process. *Jurnal PAJAR (Pendidikan Dan Pengajaran)*, 4(5), 957–963.
- Esfijani, A., & Zamani, B. E. (2020). Factors influencing teachers' utilisation of ICT: The role of in-service training courses and access. *Research in Learning Technology*, 28, 2313.
- Gacinya, J. (2024). The influence of continuous in-service training and teachers' classroom performance: Case study of public secondary schools in Kicukiro District-Rwanda. *The Strategic Journal of Business & Change Management*, 11(1), 468–482. <http://dx.doi.org/10.61426/sjbcm.v11i1.2863>
- Gull, S., Khan, T. M., & Jabbar, M. N. (2022). Effectiveness of in-service teaching training on job performance of teachers: An empirical study. *Global Educational Studies Review*, 7(1), 314–321.

- 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, 275–285.
- Hassan, M. S., Mizanuzzaman, M., & Islam, K. M. A. (2020). The effects of training to the employee performance and development: A study of Fareast Islamic life insurance company limited, Bangladesh. *International Journal of Business and Management Future*, 4(2), 17–40.
- Hervie, D. M., & Winful, E. C. (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, 1–8.
- Hirose, M., & Creswell, J. W. (2023). Applying core quality criteria of mixed methods research to an empirical study. *Journal of Mixed Methods Research*, 17(1), 12–28.
- Iqbal, N., Khan, M. M., Mohmand, Y. T., & Mujtaba, B. G. (2020). The impact of in-service training and motivation on job performance of technical & vocational education teachers: Role of person-job fit. *Public Organization Review*, 20, 529–548.
- Islam, M. S., & Amin, M. (2021). A systematic review of human capital and employee well-being: Putting human capital back on the track. *European Journal of Training and Development*, 46(5/6), 504–534.
- Junejo, M. I., Sarwar, S., & Ahmed, R. R. (2018). Impact of in-service training on performance of teachers: A case of STEVTA Karachi region. *International Journal of Experiential Learning & Case Studies*, 2(2), 50–60.
- Koomson, C. K., Patterson, V., Darku, A., & Owusu-Fordjour, C. (2022). Impact of in-service training programme on the TPACK of science teachers: A case of New Juaben-North municipality in the Eastern Region of Ghana. *EDUCATIO: Journal of Education*, 7(2), 58–64.
- Krejcie, R. V., & Morgan, D. W. (1970). Determining sample size for research activities. *Educational and Psychological Measurement*, 30(3), 607–610.
- Lmortaji, H. (2024). An in-service teacher training model as a basis for an effective integration of ICT in education in Morocco. *Journal of Information Systems and Technology Management*, 21, 1–16. <https://doi.org/10.4301/s1807-1775202421003>
- Luo, C.-C., Wang, Y.-C., & Tai, Y.-F. (2019). Effective training methods for fostering exceptional service employees. *Journal of Hospitality and Tourism Insights*, 2(4), 469–488.
- Mahara, K. K. (2024). Receiving and implementing in-service teacher training programmes: Identifying challenges from teachers' perspectives. *KMC Journal*, 6(1), 153–175.
- Mchami, D., & Mhando, S. (2023). Exploration of the challenges facing in-service training operation in public secondary schools in Tanzania. *Innovation in Economy & Policy Research*, 4(1), 1–15. <https://doi.org/10.46610/jepr.2023.v04i01.001>
- Mishra, S. B., & Alok, S. (2022). *Handbook of research methodology*. Educreation Publishing.
- Misliya, M., Alim, A., Usuf, E., Tamsah, H., & Yusriadi, Y. (2021). The effect of training and education and teacher certification allowances on teachers. *Cypriot Journal of Educational Sciences*, 16(4), 1368–1383.
- Mugarura, P., Ssempala, F., & Nachuha, S. (2022). Role of in-service teacher training as a tool for the student's performance in selected public secondary schools in Kisoro District. *International Journal of Educational Policy Research and Review*, 9, 1.
- Nankervis, A., Baird, M., Coffey, J., & Shields, J. (2022). *Human resource management* (11th ed.). Cengage AU.
- Nasiopoulou, P., Williams, P., & Lantz-Andersson, A. (2022). Preschool teachers' work with curriculum content areas in relation to their professional competence and group size in preschool: A mixed-methods analysis. *Scandinavian Journal of Educational Research*, 66(3), 533–548.
- Nkya, H. E., & Bimbiga, I. (2023). Unlocking potential: The positive impact of in-service training on science and mathematics teachers' teaching strategies. *Research on Humanities and Social Sciences*, 13(16), 27–36.
- 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.
- Odiorne, G. S. (1984). *Strategic management of human resources: A portfolio approach*. Wiley.
- Ogunbayo, S. B., & Fatai, O. B. (2022). Understanding the levels of productivity of teachers who are exposed to in-service training. *Asian Journal of Assessment in Teaching and Learning*, 12(2), 89–99.
- Otoo, C. I., Assumeng, J. B., & Alfred, K. (2018). Training and professional development practices for employees in the Ghana education service. *International Journal of Science and Research*, 8(2), 1904–1915.
- Owusu-Mensah, F., Anyan, J. A., & Denkyi, C. (2015). Staff development practices of open and distance learning institutions in Ghana: The case of the distance education programme of University of Education, Winneba, Ghana. *Journal of Education and Practice*, 6(14), 79–86.
- Rosen, S. (1976). A theory of life earnings. *Journal of Political Economy*, 84(4, Part 2), S45–S67.
- Saks, A. M. (2022). Caring human resources management and employee engagement. *Human Resource Management Review*, 32(3), 100835.



- Shah, R., Minaz, M., & Akhtar, Z. (2021). Dynamic role of knowledge management in Pakistani universities for competitive advantages. *International Research Journal of Education and Innovation*, 2(2), 30–40.
- Swanson, R. A. (2022). *Foundations of human resource development*. Berrett-Koehler Publishers.
- Uddin, M. R. (2020). In-service training for secondary English teachers of Bangladeshi Madrasahs: Investigating adequacy and effectiveness. *PAROLE: Journal of Linguistics and Education*, 10(1), 36–45.
- Uzorka, A., Kalabuki, K., & Odebiyi, O. A. (2024). The effectiveness of in-service teacher training programs in enhancing teaching quality and student achievement. *Forum for Education Studies*, 2(3), 1465–1465.
- Wright, P. M. (2021). Rediscovering the “human” in strategic human capital. *Human Resource Management Review*, 31(4), 100781.