# Evaluating the Influence of In-service Training on the Job Performance of Teaching Staff of Colleges of Education in the Northern Region of Ghana

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**Abstract**

The purpose of this study was to evaluate the influence of in-service training on the job performance of teaching staff of colleges of education in the Northern Region, Ghana. The investigation employed a descriptive survey design. A sample size of one hundred and thirteen (113) teachers from four (4) colleges of education was used for the study. The data was collected using a well-structured self-designed questionnaire. Descriptive statistics in the form of percentages, mean, and standard deviation were used to analyse the data. The study revealed that in-service training has a significant and positive influence on the job performance of teaching staff at the colleges of education. The study further revealed that Information and Communication Technology (ICT) is the key area in which teachers in colleges of education require intensive training. Cutting-edge technologies such as Virtual Instructor-led Training (VILT), eLearning, Augmented Reality (AR), and Virtual Reality (VR) could be of good help in this direction. Based on the results and conclusions of the study, it was recommended that authorities in the colleges of education should ensure that effective and well-resourced ICT laboratories are provided in the various colleges of education where college teachers can have free access to improve their knowledge in ICT.
**Keywords:** Influence, Performance, In-Service, Job, Teaching Staff

## 1. Introduction

In-service training has become an important component of institutions particularly educational institutions (Appal & Markom 2022). Each educational institution's core human resource determines its performance (Swanson, 2022). Every educational institution has to have top-notch instructors to raise its students' knowledge, abilities, and overall performance, even though many other important variables contribute to its success (Saks, 2022). The preservation and improvement of the professional competence of staff members of institutions are addressed by all developmental tasks related to their professional growth, including education, training, and professional development (Nasiopoulou, Williams & Lantz-Andersson, 2022). The improvement of the productivity and performance of the staff especially educational institutions has always been driven by in-service training. Employers sincerely try to provide opportunities for their staff members to get familiar with knowledge, abilities, attitudes, and behaviors through their training programmes (Nassazi, 2013). The education sector must become more technologically aware, dynamic, and up-to-date to meet the constantly expanding requirements of the modern educational system (Saykili, 2019). To ensure this there is a need to grow pre-service teachers' effective technology integration knowledge through teacher training institutes to assist the pre-service teachers link their knowledge, pedagogy, and content in teaching (Todeur, Scherer, Baran, Siddiq, Valtonen & Sointu (2019). It is also noted that incorporating ICT into educational systems is the best alternative way of keeping countries' development in line with the digital era, which has become the order of the day (Numonjonov, 2020). To raise the educational sector to the heights of worldwide standards; skilled and knowledgeable staff is constantly needed (Ojiemhenkele, 2014).

It is worth noting, that the foundation of the education sector in every economy rests on teachers in educational institutions (Ornstein et al., 2016). Hence, all teaching personnel in educational institutions must undergo extensive in-service training to keep up with the changing demands of the education sector in today's competitive world (Saleem & Zamir, 2016).

The term "in-service training" according to Esfijani and Zamani (2020) refers to practical training, which covers both short-term and formalised long-term programmes designed to improve staff members' skills and qualifications and boost their productivity on the job. Esfijani and Zamani added that in-service training is instruction provided to individuals while they are engaged in performing a certain task. It is a purposefully designed education, in the opinion of Oghly (2023), to fill in the knowledge gaps in technological and scientific areas to satisfy the demands of a particular institution.

To prevent skill obsolescence among staff members in every organization especially; educational institutions, in-service training programmes help greatly in learning advanced job-related information in addition to providing fundamental skill augmentation (Hassan, Mizanuzzaman & Islam, 2020). In the views of 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.

Several studies have been based on in-service training of educational staff. A study conducted by Iqbal et al. (2020) investigated the association between in-service training and motivation influence on the work performance of teachers of Technical Vocational Education and Training (TVET) in South Asia. The study's findings revealed a strong positive correlation between in-service training and the job performance of the TVET teachers.

Koomson et al. (2022) used a case study design with a quantitative approach to research, to evaluate the effects of in-service training in specific Web 2.0 tools on the performance of science teachers within the New-Juaben North Municipality of the Eastern Region of Ghana. The results of the study showed that providing science teachers with in-service training in Web 2.0 tools significantly improved their performance, which in turn helped their students perform better.

About the need for in-service training for teaching staff; particularly those at colleges of education, the requirement for in-service training in schools is becoming more important as a means of preparing the tutors for new challenges and educational change (Henry & Namhla, 2020). Teachers' professionalism, has been improved by in-service training, which helps institutions to achieve their objectives. Teachers can improve their professional productivity, expertise, understanding, and dedication by participating in in-service training, which combines personal and professional learning (Henry & Namhla, 2020).

In-service training promotes academic and life experiences that help staff to be competent and content in a certain professional capacity (Nkya & Bimbiga, 2023). This means in-service training's main goal is to give teachers, especially at colleges of education the chance to learn new concepts and teaching techniques (Popova et al. (2016).

Teachers' in-service training in the opinion of Ali et al. (2021), empowers the teachers to have a methodical and rational teaching approach. This creates an avenue for a deliberate process whereby teachers' efficacy is increased in response to new knowledge, new ideas, and changing circumstances to raise the standard of students' education (Osamwonyi, 2016).

According to Ekpoh et al. (2013), the development of teachers' professionalism in their knowledge and skills to raise the caliber of jobs is fundamentally impacted by in-service training. Through in-service training, teachers may recognise and appraise the culture of the school critically, which can affect how things are done there. In addition, instructors who take part in in-service training show higher performance regarding content knowledge, class control, teaching approach, and student appraisal. Also, in-service training gives teachers many chances to pursue professional growth and learn fresh ideas, approaches, and methodologies.

According to Kabadayi (2016), in-service training has the power to alter teachers' attitudes and abilities while also improving students' performance. It affects how teachers educate, how students learn, and how students are taught. During in-service training, teachers learn evaluation strategies, management abilities, and broader subject-matter content that promote the efficacy of development in schools.

According to a defined approach, in-service training is concentrated on altering the attitudes and behaviors of staff members, administrators, and teachers rather than the number of people enrolled in in-service trainings (Donkor & Banki, 2017). To Donkor and Banki, it is practically impossible for anyone to begin working or pursuing a career and stick with it without making any adjustments.

Osamwonyi (2016) asserts that it is vital to consider in-service training from a variety of angles. He pointed out

in his work that in-service training allows instructors to adjust to varying circumstances and fosters a highly flexible work environment. He added that in-service training serves as a form of staff or employer motivation and will continue to boost innovation in the teaching and learning process. In-service training undoubtedly aids educators learn new concepts and teaching techniques to develop their competence in the classroom. In-service training also ensures improvement in staff morale, knowledge, communication, and involvement in organising school activities (Hervie & Winful, 2018). Goodnight et al. (2020), attest that after undergoing in-service training, teachers' attitudes improve, their levels of confidence rise, and they become more prepared to deal with a variety of resistive situations. This demonstrates that a well-planned and executed in-service training programme will benefit students, instructors, and schools in general.

According to Asiyai (2016), in-service training will ensure that learning activities are designed to enable effective teachers to make corrections to policies, curriculum development, teaching, and opinions on how to increase productivity and student achievement. Asiyai added that since the changes that are anticipated have a direct connection between teachers, learners, and institutes, in-service training for teachers will not only benefit the individual teacher but also the students and the school.

Concerning training needs assessment of teaching staff in colleges of education, an evaluation of training needs identifies staff members' current levels of ability, skill, or knowledge in one or more areas and matches those levels to the standards of competence established for their positions within the institution (Draghici, Fistis, Carutasu & Carutasu, 2021). Needs for training, according to Draghici et al. (2021), can be determined by matching current abilities to those that are necessary. Management can decide the most effective methods to address ability gaps among individual members of staff, particular job categories, or groups or teams by doing its research before assuming that all staff require different or even the same training (Goli et al. (2022).

Lauzier and Bilodeau-Clarke (2023) assert that appraisals can be carried out at any time, but they are frequently done following hiring, during performance reviews, when performance needs to be improved, for career development plans, for succession planning, or when organisational changes necessitate corresponding changes to the jobs of staff members. The appraisals in the views of Lauzier et al (2023), should be done frequently to identify an organisation's training needs, knowledge and skills of its employees, and the efficiency of the training initiatives.

According to Sugiarti (2022), training needs might occur at three different organisational levels. Firstly, at the top management level which sets needs at the strategic level by taking note of the establishment's mission, goals, techniques, and problems that need to be fixed. Secondly, the tactical level, where desires are decided with middle management while taking into consideration variations in the harmonization and cooperation between organisational units. Finally, the operational level is where needs are considered with lower executive management and other employees while taking into account issues about operations; such as inadequate performance of specific employees and departments. Sugiarti believes that it is important, to take into account how to provide enough harmonization and integration of the needs within the three levels to help an establishment, especially an educational institution to come out with human resource training goals that will make both formal and informal human resource training methods and programmes create a workforce that enables effectiveness and competitiveness. Finding needs that are pertinent to an organisation's goals is the initial obstacle. There are three areas for assessing training needs, according to Nassazi (2013). These are: solving issues, that dwell on staff performance; improving specific working procedures, which concerns enhancement despite the performance issues; and adjusting the institutional condition resulting from novelties. It is important to conceptualise that while identifying training requirements, procedures that can help ensure the availability of qualified candidates must be developed, improved, and maintained (Nassazi, 2013). In earlier research, several methods for determining staff training needs were emphasised (Gan & Lam, 2020). These were the profile comparison (changes in skills) and problem-centered (performance gap) approaches. In the same way, past researchers have recognised so many ways of assessing training needs depending on either new or existing personnel (Nassazi, 2013). The requirement for new talents could arise due to certain technology and strategic shifts.

Regarding the influence of in-service training on the job performance of teachers, organisations such as educational institutions make investments in staff through in-service training to provide them with the expertise and abilities required to carry out their duties and obligations at work. These in-service trainings, according to Niati et al. (2021) are essential to an all-encompassing strategy for managing human resources that will increase productivity. Therefore, it is essential that all institutions, whether private or public, place a high value on staff in-service training. Aruna and Anitha (2015) assert that institutions with falling or stagnating productivity should emphasize in-service training to enhance staff performance. Therefore, leaders of organisations including

educational institutions must provide excellent staff in-service training that emphasises staff development policies (Lussier & Hendon, 2019).

In-service training as a major human resource strategy increases staff productivity and the institution's performance (Adejare et al., 2020). Secondly, in-service training boosts instructors' professional skills, knowledge, and attitudes that improve students learning in higher education. Also, academic institutions, use in-service training as a strategy to help teaching staff gain, enhance, preserve, and expand their knowledge, expertise, and abilities (Mishra et al.,2021).  Furthermore, when teaching staff in academic institutions receive regular, structured feedback, along with in-service training opportunities and increased standards, their production increases (Chahtli et al., 2021).

In-service training promotes staff and the institution's growth. The institution ensures staff members' personal and professional growth through in-service training which is one of the more significant parts of growing staff skills and knowledge (Fei & Abdullah, 2023). The focus on staff by an institution and the raised expectations that come with the in-service training opportunity may cause the staff members' output to grow on its own (Elnaga & Imran, 2013).  Institutions, such as colleges of education can gain enormous advantages from in-service training strategies that include "train-the-trainer" programmes that prepare staff to become instructors of a skill. In-service training, also helps staff members learn how to conduct their duties more effectively to develop team members to take over as supervisors (Demarle-Meusel et al.,2020).

Constant in-service training programmes organised for academic staff such as; tutors of colleges of education have the effect of boosting staff members' self-esteem, motivation, and confidence as well as their overall conduct. In-service training, in addition, enhances staff happiness with their work and increases productivity and return on investment (ROI) through enhancing the knowledge, skills, decision making and productivity of the staff (Alhasto, 2023; Rawashdeh & Tamimi, 2020). This means members of the teaching staff of all educational institutions become more committed, devoted, and helpful to their institutions through in-service training (Gudeta, 2022). This is in line with the belief of Haghdadi (2021) that in-service training for staff in educational institutions boosts their sense of self-worth, self-confidence, and job happiness. According to Haghdadi (2021) providing staff of an educational institution with specialized skills encourages them to actively contribute to the process of raising the caliber of services provided by their institutions. It is important to add, that there is no question that success-related advantages for members of staff and the institution are produced by in-service training, which improves performance for both the staff and the institution. Malaolu and Ogbuabor (2013) posit that educational institutions that offer advanced continuous in-service training to their staff stand the chance of enhancing their performance compared to those that do not. In this light, in-service training of teachers of education colleges in Ghana is an urgent need because of the transition of the colleges from diploma-awarding to degree-awarding institutions (Yaqub, Owusu, Cole & Ofosua, 2020). The change in education colleges in Ghana from diploma to degree-awarding institutions in the year 2018, required by law that staff, especially the teaching staff are trained to function well as per the new status of the institutions (Yaqub et al., 2020). This was necessary because upgrading the Colleges of Education to a degree-awarding status suggested that many activities in the colleges including teaching previously done by the staff required some significant changes which proved difficult for some members of staff to adjust. In light of this, all teaching staff according to Yaqub et al. (2020), at the various colleges of education across the country were given special opportunities to upgrade their level of education to a master's degree or higher to maintain their positions as tutors in the colleges. In the same vein, many, if not all of the teaching staff at the colleges of education in Ghana have gone through a series of in-service training to augment their expertise and abilities (Buabeng, Ntow & Otami, 2020). There was, therefore, the need to evaluate the influence of these in-service pieces of training on the job performance of teachers at the various colleges of education.  In the context of Ghana, several studies have examined training concerning the staff of educational institutions (Akpalu & Markom, 2022; Hervie & Winful, 2018). For instance, Akpalu and Markom (2022) in their look at the impact of training on the performance of academic staff in the technical universities in Ghana, found that there is a strong correlation between in-service training and the performance of academic staff in the technical universities in Ghana. In another development, a research work carried out by Hervie and Winful (2018), to determine how teacher performance is affected by in-service training in the Ghana Education Service (G.E.S), concluded that there exists a positive relationship between in-service training and the performance of teachers in the Ghana Education Service.

Despite this, it seems only a few studies on in-service training focused particularly on colleges of education were conducted. Thus, this present study was an attempt to evaluate the influence of in-service training on the job performance of the teaching staff of colleges of education in the Northern Region of Ghana.

## 1.1 The Aim of the Study

The main aim of the study was to evaluate the influence of in-service training on the job performance of teaching staff of the colleges of education in the Northern Region of Ghana.

## 1.2 Objectives of the Study

The specific objectives of the study were to:

1. Identify the training needs of the teaching staff of colleges of education.

2. Evaluate the influence of in-service training on the job performance of tutors of colleges of education.

## 1.3 Research Questions

As a step towards achieving the study's objectives, the research sought solutions to the research questions listed below:

1. What are the training needs of the teaching staff of colleges of education?
2. In which way does in-service training influence the job performance of teachers at the colleges of education?

## 2. Research Method

### 2.1 Research Design

Descriptive survey design was used by the researcher in this investigation. A descriptive study seeks to identify who, what, when, and how of a certain activity. The focus is more on seeing, describing, and documenting characteristics of a situation as it happens than on explaining environments, independent variables were chosen for this survey (Shah et al. (2021). The researchers envisaged that the descriptive survey would allow them to analyze how in-service training influences teachers' job performance at the education colleges in the Northern Region of Ghana.

### 2.2 Population of the Study

The study's population comprised the teaching staff of four colleges of education in the Northern Region of Ghana: Tamale College of Education (36), Bagabaga College of Education (70), E.P College of Education (41), and St. Vincent College of Education (16), located in Tamale, Bimbila, and Yendi respectively. At the time of the study, a total of one hundred and sixty-three (163) teaching staff were at the post and actively working at the four (4) colleges of education. This represents 85 males constituting (75.2%) and 28 females constituting (24.8%).

### 2.3 Sample and Sampling Size Selection Technique

2.3.1 Sampling Technique

A stratified proportionate sampling procedure was used to determine the sample population of the teaching staff in each of the four (4) colleges of education. The stratified proportionate sampling technique helped the researcher to ensure a fair representation of the teaching staff in each college in the population as the population of the teaching staff in each of the colleges was not the same.

Hence, the use of stratified proportionate sampling ensured that a sample in each college was chosen based on the teaching staff population of each college relative to the whole population of the investigation.

2.3.2 Sample Size Selection Technique

The sample size was determined for this study using a table designed in 1970 by Krejcie and Morgan. With a population size of one hundred and sixty-three (163) from all four colleges of education in the Northern Region, a sample size of one hundred and thirteen (113) was used for this study (Krejcie & Morgan, 1970) which is made up of Bagabaga College of Education (49), Tamale College of Education (25), E. P College of Education (28), and St. Vincent College of Education (11).

**2.4 Instrument for Collecting Data**

The primary data was collected through the use of a well-structured self-prepared questionnaire. The use of questionnaires was chosen since it made sure that data collection was standardised and each respondent received the same question in the same manner. Also, the use of the questionnaire was suitable for the teachers of the education colleges as they were literate respondents (Borgobello, Pierella & Pozzo, 2019).

The questionnaire contained thirty-nine (39) items with closed and open-ended questions in a predetermined order. The questionnaire was also divided into five sections covering the following topics: personal and sociodemographic characteristics, current training policies and practices, staff needs for training, the influence of in-service training on the job performance of tutors in colleges of education, challenges facing college tutors in participating in in-service training, and measures in addressing the challenges faced by college teachers in advancing their careers through in-service training. The questionnaire was designed with the research questions in mind to guarantee a strong association between study variables.

The items in the survey questionnaire were rated on a 5-point Likert scale. From strongly agree to strongly disagree, participants were allowed to evaluate the extent of agreement with statements measuring a variety of variables. A mean analysis of the factors was created using SPSS and interpreted using the following criteria:

| Mean Range | Response | Interpretation |
|---|---|---|
| 4.21 – 5.0 | Strongly agree | Very high |
| 3.41 – 4.20 | Agree | High |
| 2.61 – 3.40 | Neutral | Moderate |
| 1.81 – 2.60 | Disagree | Low |
| 1.00 – 1.80 | Strongly disagree | Very low |

Before the distribution, the questionnaire was pre-tested using five teaching staff from Bagabaga and Tamale Colleges of Education. The pre-testing of the instrument was typically done to find any flaws in the research instrument (Lenzner, Hadler & Neuert, 2023). The pre-test enabled the researchers to modify the questionnaire as needed (Lenzner et al.,). Also, the purpose of the pre-testing was to assess the content validity and reliability of the instrument.  Five teaching staff from Bagabaga and Tamale College of Education who took part in the pre-test were later removed from the main investigation to reduce bias. Regarding the validity of the instrument, the researchers used a test-retest to estimate the reliability using the five teaching staff of Bagabaga and Tamale Colleges of Education. The test-retest results indicated a reliability estimate of 0.82. This was suitable for the study based on Pallant's (2010), view that a reliability estimate of 0.70 and above is sufficient and acceptable.

**2.5 Data Collection Method**

Using a letter of introduction from the Department of Educational Management and Policy Studies of the University for Development Studies, the researchers made a formal introduction to the principals at each of the colleges visited. The researchers distributed questionnaires to the targeted teaching staff with kind approval from the principals of each college under examination. Sampled respondents who were members of the teaching staff at the four colleges of education, completed the well-structured questionnaire to provide the primary data. The respondents of this study were shielded from any consequences that might have arisen from it during its conduct. Written information regarding the study's objectives was provided to participants in full. Confidentiality and informed consent were guaranteed. As a result, participation in the study was optional, and respondents had the choice of whether or not to complete the questionnaires. To protect their privacy, the names of respondents and their respective institutions were not recorded, and all completed questionnaires were kept in a secured location with limited access. The researchers also gave due acknowledgment to all academic sources used, including books, papers, theses, and field data.

**2.6 Data Analysis Plan**

With the use of SPSS, or the Statistical Product and Service Solution Version 20, the data collected was analysed. The two research questions were analysed using the mean and standard deviations. To produce the necessary reports, variables were coded in the variable view and the data from the completed questionnaires was also entered in the data view. Each closed-ended question and its response which were coded and entered into the SPSS programme resulted in a subsequent production of descriptive analysis (frequency tables and percentages).

## 3. Results and Discussion

**Research Question One:** What are the training needs of the teaching staff at the education colleges? This research question aimed at exploring the training needs of teachers in the colleges of education. Table 1 contains responses to this question.

**Table 1:  Specific future training needs of staff members**

| Statement | Frequency | Percentage |
|---|---|---|
| ICT Training | 68 | 60.2 |
| Pedagogical Skills and Competencies | 16 | 14.2 |
| Training in Research Work | 29 | 25.7 |
| **Total** | **113** | **100.0** |

Source: Field Data (2023)

It is evident from Table 1 that as many as sixty-eight (68) out of a total of one hundred and thirteen (113), representing 60.2% of the respondents chose Information and Communication Technology (ICT) as the specific future training they required to enhance their efficiencies and effectiveness at their workplaces. For training in research work and pedagogical skills and competencies, twenty-nine (29) and sixteen (16) representing 25.7% and 14.2% respectively of the respondents, indicated those as areas they require knowledge in to help them address certain key challenges at their workplaces.

**Research Question Two:** What influence does in-service training have on the job performance of tutors at the colleges of education? This research question, which sought to accomplish the second objective of this study, aimed at establishing the extent to which in-service training influences the job performance of teaching staff at the colleges of education. To analyze this, various variables that were capable of influencing the job performance of college tutors were identified, and their importance was evaluated from 1 to 5 on a scale. Where 1 denotes strongly disagree, 2 disagree, 3 neutral, 4 agree, and 5 strongly agree, in that order. Table 1 provides a summary of the results.

**Table 2:  Influence of in-service training on staff job performance**

| Statement | N | Min | Max | Mean | Std. Deviation |
|---|---|---|---|---|---|
| Effective training improves staff skills | 113 | 1 | 5 | 4.36 | 0. 877 |
| Effective training enhances staff effectiveness | 113 | 1 | 5 | 4.27 | 0.879 |
| Effective training encourages ethical behaviour on the part of 113 the staff | | 1 | 5 | 4.15 | 0.938 |
| Effective training unravels staff potential for future job challenges | 113 | 1 | 5 | 4.25 | 0.931 |
| Effective training offers staff the opportunity to learn new techniques of working which enhances efficiency | 113 | 1 | 5 | 4.40 | 0.892 |
| Effective training improves staff performance in their current job and prepares them for an intended future job | 113 | 1 | 5 | 4.30 | 0.925 |
| Effective training enhances staff job status | 113 | 1 | 5 | 4.30 | 0.948 |
| Effective training makes the work of internal supervisors easier | 113 | 1 | 5 | 4.23 | 0.964 |

**Source: Field Data (2023) Mean Ranges and their Interpretations**

*4.21- 5.0 = Strongly Agree, 3.41- 4.20 = Agree, 2.61- 3.40 = Neutral, 1.81- 2.60 = Disagree, and 1.00–1.80 = Strongly Disagree,* Babbie (2020).

The results in Table 2 indicate a very high agreement level among respondents with a mean value of 4.36 and a standard deviation of 0.877 that effective in-service training enhances the abilities of the teaching staff at the colleges. With a mean score of 4.27 and a standard deviation of 0.879, the respondents also showed a high degree of agreement that effective in-service training enhances the effectiveness of the tutors in the colleges of education. The statement that effective in-service training encourages ethical behaviour on the part of the staff in an institution, garnered a high degree of agreement from respondents, with a 4.15 mean value and a 0.938 standard deviation. The respondents' degree of agreement with the mean score of 4.25, with a standard deviation of 0.931, the claim that successful in-service training unravels staff members' potential for future job challenges was very high.

Additionally, a high level of agreement recording a mean of 4.40 and a standard deviation of 0.892 was found among respondents for the claim that effective in-service training allows staff members of the institution to learn new techniques of working that increase workforce efficiency. Furthermore, a mean value of 4.30 as well as a standard deviation of

0.925 were found to support the idea that efficient in-service training boosts staff members' performance in their current jobs and gets them ready for intended future tasks, demonstrating a very high level of consensus among respondents about that assertion.

It is also evident from Table 2 that respondents strongly agreed stating that effective in-service training programmes arranged for staff of an institution improve staff job status within the institution, with a mean value of 4.30 and a standard deviation of 0.948. For the argument that with effective in-service training for staff, the work of internal supervisors of institutions is made easier, with a mean of 4.23 and a standard deviation of 0.964, the respondents' degree of agreement was found to be high. Generally, one could mention categorically that all respondents in the survey agreed to the notion that effective in-service training in organizations, especially in academic institutions like colleges of education helps improve staff skills, enhance staff effectiveness, encourages ethical behaviour on the part of the staff, and unravels staff potential for future job challenges. The respondents also believe that with effective in-service training staff members are offered the opportunity to learn new techniques of working which enhances efficiency among the workforce, improves staff performance on their current job and prepares them for an intended future job, enhances staff job status, and also makes the work of internal supervisors in institutions easier.

### 3.1 Discussion of Results

**Research Question One:** What are the training needs of the teaching staff at the education colleges?

Results regarding the training requirements for tutors at the colleges of education showed that

60.2%, constituting more than half of the respondents, require training in Information and Communication Technology (ICT). Adequate knowledge of ICT among teaching staff of all academic institutions is undoubtedly relevant, especially in recent times when knowledge acquisition is completely characterized by digitalization. This finding is in line with Numonjonov's (2020) study that incorporating ICT into educational systems is the best alternative way of keeping countries' development in line with the digital era, which has become the order of the day. With the adoption of ICT as a key component in our educational curriculum, in the opinion of Numonjonov (2020), knowledge in certain key areas such as innovations in education, modern education, pedagogical technology, and pedagogical skills is promoted.

With knowledge of ICT, teachers can quickly and readily access online databases, learning portals, and digital libraries that offer a variety of resources and tools on important issues in education for their lesson deliveries. This may contribute to the establishment of a more captivating and engaging learning environment. Teachers at the colleges of education may find it extremely difficult to properly deliver lessons and supervise students' research work if they lack sufficient knowledge of ICT, especially as modern teaching strategies at the tertiary level contain IT components.

The study also revealed that the teachers at colleges need pedagogical skills training as well as adequate knowledge in research work. This implies that the teaching staff in the various colleges of education are not provided with pedagogical skills training as well as training in research work. Thus, in-service training on pedagogical skills and research work must be organised regularly for the teaching staff by management in the colleges of education to ensure that the tutors acquire up-to-date skills in pedagogical skills to provide quality teaching in the colleges.

Adequate knowledge in research work as well as pedagogical skills, are prerequisites in teaching at colleges in recent times. It is for this reason that respondents in this study, in their choice for future training they require apart from ICT, chose training in research work and pedagogical skills and competencies. Fortunately, with adequate knowledge of ICT teachers can access a great deal of information on critical professional issues such as innovative methods of professional teaching, research work, pedagogical technology, and pedagogical skills. This undoubtedly greatly contributes to improving the professional development of tutors in the colleges of education.

With adequate ICT training, teachers in the colleges of education can easily connect with their students by using

email, messaging apps, and online discussion forums. This allows students in the colleges of education to ask questions and receive real-world responses which help in creating a more engaging and fascinating learning environment. This together with the fact that technology has taken over almost every aspect of teaching and learning in the educational sector across the globe, makes it crucial for educators of pre-service teachers to train the next generation of teachers for the integration of ICT in education.  This conclusion is consistent with Todeur, Scherer, Siddiq, and Baran (2019) who stated that for tutors to use contemporary teaching methods to convey knowledge to students, especially at the tertiary level, they must have ICT skills.

**Research Question Two**: What influence does in-service training have on the job performance of tutors at the colleges of education?

Table 2, demonstrates the degree to which respondents agreed with this statement. First of all, the respondents believed that with efficient in-service training, the institution's staff members would be better able to do their teaching roles. This idea had an average mean score of 4.36, which shows that the majority of respondents hold this particular opinion. The finding is in line with the views of (Alhasto, 2023; Rawashdeh & Tamimi, 2020) who found that in-service training enhances staff happiness with their work and increases productivity, and return on investment (ROI) through enhancing the knowledge, skills, and decision-making of staff. It is further buttressed by (Osamwonyi, 2016) that in-service training is a deliberate process whereby teachers' efficacy is increased in response to new knowledge, new ideas, and changing circumstances to raise the standard of students' education.

Additional ways that in-service training influences how well staff members do their jobs as tutors at the colleges of education is its ability to enhance the effectiveness of the staff members and also encourage ethical behaviour on the part of the staff in the institutions, as well as its ability in helping staff in unraveling their potential for future job challenges. These notions recorded average mean scores of 4.25, 4.15, and 4.25 respectively. These findings are consistent with Mishra et al. (2021) who found that academic institutions use in-service training as a strategy to help teaching staff gain, enhance, preserve, and expand their knowledge, expertise, and abilities.

The study's findings indicate that other significant aspects were identified as key influences of efficient in-service training on the job performance of tutors in colleges of education. As shown in Table 2, effective in-service training offers staff, particularly college tutors, the chance to acquire new working techniques that boost workforce productivity. Further evidence of respondents' substantial agreement with the claim that in-service training improves staff performance in their current positions and prepares them for expected future roles can be seen in Table 2. For this, an average mean value of 4.30 was noted. The average mean score of 4.30 in Table 2 indicates that respondents firmly agree with the claim that excellent in-service training elevates staff members' positions within the institution. These findings are buttressed by Demarle-Meusel et al. (2020) that in-service training helps staff members learn how to conduct their duties more effectively to develop team members to take over as supervisors (Demarle-Meusel et al.,2020).

When institutions implement effective in-service training, it reduces the work of their internal supervisors in monitoring and supervising tasks that have been assigned to members of staff. It is widely believed that one of the primary objectives of every in-service training is to close the knowledge or skill gaps that have been noticed among staff in the performance of their duties. Hence, aside from the ability of in-service training to help keep employees abreast with changing trends within the industries they are working to prevent staff obsolescence, it keeps staff knowledge in their jobs up-to-date. Therefore, the assertion that in-service training reduces the monitoring and supervisory tasks of internal supervisors received overwhelming support from respondents, a mean score of 4.23 on average was recorded for this. This study finding is in line with Oghly (2023), who stated that in-service training is purposely designed to fill in knowledge gaps in technological and scientific areas to satisfy the demands of a particular institution. The belief is that training is the only best method available to close the gap between an institution's activities and the anticipated needs of a developing society. In the same vein, Aruna and Anita (2015), shared a similar view when they stressed in their article that training is especially important for institutions whose gradual adoption of new technology increases the danger of staff obsolescence.

## 4. Conclusions and Recommendations

### 4.1 Conclusion

The study conclusions were: Firstly, teaching staff at the colleges of education require training on certain key topics in Information and Communication Technology (ICT). These key topics, according to the study's findings must be relevant to the teaching jobs of the tutors. It was also concluded that in-service training has a significant

and positive influence on the job performance of tutors in the colleges of education as the findings had it that it improves staff knowledge, promotes the continuous professional development of the teaching staff, and generally promotes the quality of teaching and learning particularly in the colleges of education.

## 4.2 Recommendations

The researchers recommend that authorities in the colleges of education must ensure that effective and well-resourced ICT laboratories are provided at various colleges of education across the country to give the teaching staff free access to improve their knowledge in ICT topics relevant to their work as instructors. Secondly, the Ghana Tertiary Education Commission (GTEC) and all other organisations that are linked to Education Policy Planning at the tertiary level in the country should come up with a policy that mandates in-service training as a requirement for the promotion of teachers at the colleges of education.

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