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SOCIOLOGY | RESEARCH ARTICLE

Exploring work environment factors influencing the application of teacher professional development in Ghanaian basic schools

Usman Kojo Abonyi^{1*}, Rita Yeboah² and Austin Wontepaga Luguterah³

Abstract: This study explored the work environment factors that support or constrain the application of teacher professional development initiatives in Ghanaian basic schools. Utilizing qualitative research paradigm, 15 teachers were purposively selected and interviewed from one educational district in Ghana. Findings from the study showed that headteachers support through the provision of the required teaching and learning resources, peer support through culture of shared norms, beliefs and values and the opportunity to share knowledge during school-based in-service training (INSET), interest and commitment shown by students toward learning, and availability of needed teaching and learning materials supported transfer of learning of teachers. In contrast, lack of time due to rigid and inflexible school timetable, teacher workload, and inadequate teaching and learning resources constrained effective transfer of professional development of teachers. The study concludes that educational policy-makers and training practitioners need to support infrastructures that would empower headteachers to be resourceful in order to assist and provide teachers with the required teaching and learning facilities to facilitate the transfer of their learning.



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PUBLIC INTEREST STATEMENT

Around the globe, considerable amount of financial resources and time are spent on teacher professional development programmes. It is believed that the higher the exposure of teachers to high-quality professional development, the greater the chances they report using a greater variety of strategies to teach their students. Nonetheless, research suggests that following such training programmes trainees do not successfully apply their learning back into the workplace. Thus, in order to build a consistent picture of the organisational factors that could help teachers to maximise the impact of their learning, this study explored the work environment factors that support or constrain the application of teacher professional development initiatives in Ghanaian basic schools.

Subjects: Adult Education; Lifelong Learning; Work-based Learning;; Educational Research; Education Studies; Teachers & Teacher Education; Continuing Professional Development

Keywords: Training transfer; work environment; professional development; teacher; supervisor support

1. Introduction

In Ghana, the Ghana Education Service (GES) recognizing the potential impacts of teacher professional development, has over the years made several attempts at providing continuous professional development programmes for its teachers with the aim of sharpening their skills and knowledge to improve quality education in schools (Mensah, 2016). This is evidenced by the establishment of a National in-service training (INSET) unit within the Teacher Education Division (TED) of the GES charged with the responsibility of identifying professional development needs of teachers and linking up with appropriate training institutions to provide training for teachers. There has also been the promulgation of the Pre-Tertiary Teacher Professional Development and Management (PTPDM) Policy seeking to design a career progression path for teachers with strong emphasis on providing continuous professional development for teachers.

Based on these initiatives, a number of in-service professional development programmes are offered at school, cluster and district levels by the GES, local Non-Governmental Organizations (NGOs) and some development partners (Perry & Bevins, 2018). Distance learning opportunities also exist in Ghanaian higher education institutions which allow teachers to take courses, especially during vacations, to enable them gain the requisite academic proficiency and professional competencies in schools (Atta & Mensah, 2015; Kusi & Mensah, 2014).

Nonetheless, while a number of training interventions are organized for teachers in Ghanaian basic schools, classroom instruction has not been effective (Jull et al., 2014) while learning outcomes have fallen far below the targets of the Ministry of Education (MoE) in recent years (World Bank, 2014). Results of the Early Grade Reading Assessment (EGRA), for example, between 2013 and 2015 indicated that just 2% of Primary 2 pupils were able to read at an appropriate grade level with 50% unable to recognize a single word (World Bank, 2018). Moreover, the 2015 Early Grade Mathematics Assessment (EGMA) found that higher order mathematical concepts were a challenge with 75% of P2 pupils unable to answer a single conceptual knowledge subtask correctly.

It appears from these abysmal performances that not much of what teachers learn during training programmes are translated fully into the classroom context to improve student learning outcomes. Nonetheless, there is not much evidence of comprehensive transfer studies in teacher education involving the transfer of learning of practicing teachers in Ghana. The purpose of this study was therefore to attain an understanding of the work environment factors that support or constrain the application of teacher professional development initiatives in Ghanaian basic schools.

A number of studies contend that the process of transfer is complex with a multiplicity of variables (Chauhan et al., 2016; Na-Nan et al., 2017) and vary from one training and application context to the other (Ford et al., 2018; Saks et al., 2014). A study of this nature is therefore paramount to help educational leaders, policymakers and organizers of training programmes to understand the dynamics of transfer in order to look for ways to minimise transfer losses while improving the yield from teacher training programmes so as to bridge the gap between teacher learning and student learning outcomes.

2. Literature review and theoretical background

2.1. Literature review

Globally, organisations including educational institutions invest significant amount of time and money into training with the goal of increasing employee performance (Grossman & Salas, 2011; Lancaster et al., 2013). Yet, approximately 10% to 15% of the training content results in

behavioural change in the workplace (Cromwell & Kolb, 2004; Ford et al., 2018) which indicates a questionable return on investment (Blume et al., 2010).

Several researchers have therefore proposed theoretical frameworks to investigate the variables which directly or indirectly influence trainees' learning and the transfer of training as well as the interventions intended to enhance transfer (Aguinis & Kraiger, 2009). Researchers generally agree on categorising these transfer variables into three broad areas: trainee characteristics, training design, and work environment (Blume et al., 2010).

Work environment factors remain vital since they either facilitate or hinder effective transfer of training (Alias et al., 2017). Research suggests that while trainees may be highly motivated individuals who have attended excellent training courses and are keen to use their new skills, constraints in the post-training work environment may prevent them from applying what they have learned in their jobs (Blume et al., 2010; Burke & Hutchins, 2008). Similarly, programmes that are designed and delivered effectively will fail to yield positive transfer outcomes when the subsequent work environment does not encourage the use of targeted behaviours (Grossman & Salas, 2011).

Within the work environment, support of the supervisor has been shown to be a powerful determinant of successful transfer of training (Burke & Hutchins, 2008; Yaghi & Bates, 2020). Immediate superiors are in a more proximal position to better understand employee training and developmental needs (Kim et al., 2019). To enhance transfer, Burke and Hutchins (2008) suggest that before the learning experience supervisors should communicate goals regarding the desired performance, the conditions under which the performance will be expected to occur on the job and the criterion of acceptable performance. Also, after the learning experience, trainees should be prompted by their supervisors to set proximal and distal goals for applying newly acquired competencies in the workplace (Taylor et al., 2005).

A number of studies have also emphasized that peer support from the organisation also encourages transfer (Chiaburu & Marinova, 2005; Raliphada et al., 2014). A study by Chiaburu and Marinova (2005), for example, reported that peer support showed a strong, direct relationship with transfer, as well as an indirect influence through its impact on motivation. It is further argued that an organizational environment that is open to new ideas and supports and invests in change may facilitate the transfer process (Botke et al., 2018). Feedback concerning the newly acquired knowledge and skills, and how these relate to job performance, increases the probability of its transfer to the workplace (Velada et al., 2007).

Moreover, research has consistently shown that positive transfer is strengthened when trainees are provided with opportunities to use new learning in their work setting (Lim & Morris, 2006). Thus, trainees need ample opportunities to apply their new skills to the workplace for positive transfer to occur (Burke & Hutchins, 2008). Some studies have also noted the practical conditions in daily work routines that support application in the workplace, such as a reduced workload to allow the practicing of new skills, a short time interval between learning and application, a match between programme content and work roles, and the availability of the equipment and autonomy necessary to adapt working procedures (Blume et al., 2010; Clarke, 2013).

In contrast, commonly cited work environment barriers to learning transfer include high workloads and lack of time to apply new learning, limited opportunity to perform skills, supervisor sanctions and inadequate supply of requisite resources to trainees (Clarke, 2013; Ma et al., 2018; Na-Nan et al., 2017). Holton et al. (2000) found that change resistance correlated negatively with motivation to transfer suggesting that the higher the degree of change resistance in the organization the lower the degree of transfer.

Examining the factors existing in the school environment that influence beginning teachers' transfer of learning of Information and Communication Technology (ICT)-enhanced learning activities in Ghana, Agyei and Voogt (2014) found that existing workplace conditions regarding ICT resources, school culture and teachers' participation in decision-making appeared unfavourable and did not foster effective transfer. Specifically, lack of ICT resources and unfavourable school cultures were perceived as barriers to teachers' use of ICT in schools.

Identifying the organisational factors that are inhibiting employees to transfer learning into the workplace in the South African Public Service context, Raliphada et al. (2014) found that lack of resources like cars and telephones served as a hindrance in ensuring that employees implement what they have learned. The study further reported that lack of knowledge by supervisors of what subordinates have been exposed to during the training interventions, lack of incentives associated with innovative behaviour, lack of follow up on implementation after training, resistance to change and culture of dictatorship emerged as some of the barriers to implementation of what employees learn during training programmes.

2.2. Theoretical background

Yamhill and McLean (2001) have articulated a number of theories and conceptual frameworks to explain why people desire to change their performance after attending a training programme, what training design contributes to people's ability to transfer skills successfully, and the kind of organizational environment that supports people as they apply the knowledge, skills, and attitudes gained in a training programme to their job. Since this study investigates the work environment factors that influence teachers in applying their professional learning, the transfer climate framework proposed by Rouiller and Goldstein (1993) was utilized as the conceptual lens.

Rouiller and Goldstein (1993) suggest that transfer climate consists of two types of workplace cues, including eight distinct dimensions (Table 1). The first set of workplace cues labelled as situation cues remind trainees of opportunities to use what they have learned when they return to work. There are four types of situation cues: goal cues, social cues, task cues, and self-control cues.

The second set of workplace cues—consequence cues—is the feedback trainees receive after they apply the knowledge, skills, and attitudes they gained in the training to their jobs. There are four types of consequences: positive feedback, negative feedback, punishment, and no feedback. According to Rouiller and Goldstein (1993), features of a positive transfer climate have been identified as cues that prompt trainees to use new skills, consequences for correct use of skills and remediation for not using skills, and social support from peers and supervisors in the form of incentives and feedback.

3. Methodology

3.1. Research method

To gain better insights into participants' realities and experiences of work environment factors that support or inhibit the transfer of teacher professional development, this study was located within the qualitative research paradigm (Bryman, 2008). Qualitative researchers concern themselves with understanding rather than explaining, experiencing naturalistic observations somewhat than controlled measurement, and undertaking a subjective exploration of reality from the insiders' perspective as opposed to the predominant outside perspective in the quantitative paradigm (Creswell, 2013; Denzin & Lincoln, 2011). This approach was deemed appropriate for the study as it enabled the researchers to make sense and gain in-depth understanding of the complex contextual factors that support or inhibit training transfer among teachers in the Ghanaian context.

3.2. Sample and sampling technique

A purposive sampling strategy was adopted to invite participants to take part in the study. In purposive sampling, cases are selected because they are information rich and illuminative as they

Table 1. Transfer climate framework

<i>Situation cues.</i> These cues serve to remind trainees of their training or provide them with opportunities to use their training when they return to their jobs.
<i>Goal cues</i> —These cues serve to remind trainees to use their training when they return to their jobs.
<i>Social cues</i> —These cues arise from group membership and include the behaviour and influence process exhibited by supervisors, peers, and subordinates.
<i>Task cues</i> —These cues are concerned with the design and nature of the job itself; for example, equipment available that allows trainees to use the skills they gained in training.
<i>Self-control cues</i> —These cues refer to various self-control processes that permit trainees to use what they have learned.
<i>Consequences.</i> As employees return to their jobs and begin applying their learned behaviour, they encounter consequences that affect their use of what they have learned.
<i>Positive feedback.</i> Trainees are given positive information about their use of trained behaviour.
<i>Negative feedback.</i> Trainees are informed of the negative consequences of not using their learned behaviour.
<i>Punishment.</i> Trainees are punished for using trained behaviours; for example, more-experienced workers ridicule the use of techniques learned in training.
<i>No feedback.</i> No information is given to the trainees about the use or importance of the learned behaviour.

Source: Rouiller and Goldstein (1993), p. 383.

both offer useful manifestations of the points of interest and are relevant to the research questions (Bryman, 2008; Patton, 2002). In this study, the researchers ensured that only teachers who had actively engaged in a series of training programmes with sufficient teaching experience were included in the study.

In doing so, the researchers contacted the Training Officer at the education office of the La Nkwantanang Madina Municipal Assembly who provided the list of attendees of the various professional development programmes organized for teachers over the past 2 years in the Municipality. The researchers then invited 20 teachers who had participated in at least two of the professional development activities organized in the Municipality of which 15 accepted the invitation to participate in the study.

The training programmes that had been organized in the selected district were in the form of workshops and included Jolly Phonic workshop for the Early Childhood teachers, Dyslexia identification and management workshop, workshops for the teaching of mathematics, science, English, and ICT, effective classroom management, and school/cluster-based INSET. All the 15 participants had attended two or more of these training workshops.

3.3. Data collection method and procedure

All the 15 participants were interviewed through semi-structured questions enabling the researchers to use the same format and sequence of words and questions to ensure the trustworthiness of the study (Cohen et al., 2007). An interview guide was designed based on the literature review and categorised into two sections. While section A contained questions on the demographic characteristics of the participants, section B contained questions on the work environment factors that influence training transfer as gleaned from the literature.

Recognizing that the process of qualitative research is largely inductive, with the inquirer generating meaning from the data collected in the field (Creswell, 2007), each participant was first asked the following two questions: What do you perceive as the factors in the work environment that support the application of the knowledge and skills you gain from training programmes in your school? What do you perceive as the factors in the work environment that hinder the application of the knowledge and skills you gain from training programmes in your school?

The researchers then followed with further probing questions depending on their responses to the two questions being asked. The duration for each session was approximately 40 minutes. All interviews were tape-recorded allowing the researchers to take notes and to guide participants into areas needing more in-depth knowledge or to related areas that appeared relevant to the subject.

The study adhered strictly to ethical requirements. Consent was obtained from the District education office of the selected district, headteachers of the selected schools and each of the 15 participants who took part in the study. The participants were informed that their participation was voluntary and that they could withdraw from the study at any time during the study if they wished to do so. Finally, the researchers guaranteeing anonymity and confidentiality to all participants used symbols and numbers to identify the interview transcripts while pseudonyms were given to each participant.

To strengthen the trustworthiness of the study, the researchers used the strategy of member checking where after transcribing the interviews, the transcript was given to the participants to verify if the notes reflected an account of what they told me. Also, through thick description strategy, the researchers have provided detailed account of the various steps used in the conduct of the study.

3.4. Data analysis

The thematic analysis technique was chosen as it was best suited to the research question. Braun and Clarke (2006) referred to thematic analysis as a method for identifying, analysing and reporting patterns (themes) within data. In order to identify patterns and organize the data into categories, the transcribed material and notes were read through several times with close attention given to emerging themes in the data.

Upon reading through several times, the multiple pages of text were subdivided into more manageable segments with reference to the analytical themes guiding the study. Direct quotations of interviewees' views were used to enhance credibility and authenticity of findings. While the analysis was mainly guided by a-priori codes, the researchers made room for emerging themes which were developed by direct examination of the perspectives articulated by the participants.

4. Findings

In line with the prime objective of the study, the results were categorised under factors that support transfer of teacher professional development and factors hindering training transfer of teachers. Factors that support transfer of teacher professional development include supervisor support, peer support, students' interest and commitment to learning, and availability of teaching and learning materials. On the other hand, factors hindering training transfer include lack of time and rigid/unfavourable timetable, lack of teaching and learning materials and facilities, and teacher workload.

4.1. Factors that support transfer of teacher professional development

4.1.1. Supervisor support

Interviewees in the study underscored the critical roles that supervisors (headteachers) played in their ability to successfully apply the knowledge, skills, and attitudes gained through training and learning programmes. First, ten teachers interviewed reported that their headteachers supported in providing majority of the materials and resources they needed to facilitate the transfer of the knowledge and skills gained during training into the workplace. They added that their headteachers consistently made sure that teachers' needs were met so they can comfortably apply the knowledge learnt from the training. Recounting her experience, T1 commented that

Well, in my school, my headteacher is a very great source of inspiration. She's always on us ... the headteacher is always ready to buy teaching aids or learning materials whenever we bring that to her notice. In one particular workshop, where we were taught to use a lot of rhymes and teach children words with songs, she actually bought us sets of television in the nursery department just to apply what we had learnt during the workshop. I keep on using "we" because sometimes I don't go alone, but with other colleagues.

In addition to the provision of the teaching and learning materials to support training transfer, the participants reported that their headteachers were open to innovation which enabled them to experiment the new things they had learnt from training programmes. They pointed out that they were not then scared at all to suggest things that they thought would assist the pupils in their studies. They indicated that they did not feel intimidated because even when they got some things wrong in the process of applying the new knowledge and skills they had learnt, their headteachers would not scold them but see it as a learning process. For example, T3 commented that

The leadership of my school makes it flexible for me to initiate projects and programmes from training. For instance, I began an initiative in my school, where every morning there is a debate on a topic and students are allowed to air their views. I was given the opportunity to start a debate club in my class where we train students on how to write and engage with literature.

Moreover, the participants reported that their headteachers provided them the opportunity to transfer their training at the workplace. According to them, there was little interference from the headteachers which afforded them the opportunity to transfer their learning. While they admitted that there is supervision carried out by their headteachers, the participants were of the view that they were given what they described as "academic freedom" and hence they are able to implement what they learn from training programmes.

4.1.2. Peer support

Another factor promoting transfer of teacher professional learning is peer support. According to the interviewees, their schools had a culture of shared norms, beliefs and values. As a result, teachers share their success stories and provide positive and constructive feedback to each other thereby enhancing their desire to learn and transfer their learning. T14 commented that

In my school, every Thursday teachers meet to discuss their work and share experiences. In such meetings, teachers who may have attended any training are given the opportunity to share their knowledge with the entire staff and build a team to implement such ideas. For me, this really helps in transferring the knowledge I acquire during any training.

It emerged from the interviews that schools had school-based INSET sessions where teachers in the school are allowed to share and teach fellow teachers the new things learnt at the training attended. T12 intimated that

In one of these sessions, I was asked to share and teach my colleagues on the use of flash cards. Fellow teachers were prepared to buy into the fresh things that have been suggested to be done. By working together in an extremely interactive environment, fellow staff members agreed to try the use of flash cards in teaching not only in English but incorporate it in the teaching of other subjects. The corporation among peers encouraged and endorsed the application and implementation of what I had learnt.

Also, T5 commented that

One factor that promotes my effort in applying what I learn is the fact that I am given the opportunity to train my colleague teachers. I therefore feel encouraged to attend workshops to learn new things and also impart them to my colleagues and students.

The study result thus suggests that there is an opportunity for teachers to interact and share ideas following training interventions and that stimulate the application of what they learn during training to the classroom context.

4.1.3. Students interest and commitment to learning

Most of the participants expressed that students' interest in their new approach of teaching encourages them to apply more of the new teaching methods learnt from the training. The general impression from interviewees was that the pupils' interest and commitment demonstrated in their teaching and learning programmes motivate them to apply what they had learnt at the training. For instance, T7 reported that

I have been able to apply about seventy percent of what I learnt from the training in my class because the children enjoy the activity base learning. Example, using drama performed by students themselves to teach literature makes it more interesting and also the change in class arrangement for the drama excites them a lot and they wish we could have it the whole day as compared to the lecture method used in teaching the same topic.

T2 also said that

The students' readiness and zeal to learn ICT especially manipulating the computer to search for information, sending messages to friends or chatting through mail and face books, because of their interest in the ICT, they are always there to call me when my period is up and ending the lesson becomes a problem since they don't want me to end the lesson.

T9 also commented that

Pupils interest in the practical subject such as the sewing and cooking practicals encourages me to apply the knowledge and skills gained through training. Because of their desire, it makes the lesson fun which makes them to understand basic principles and techniques ... Their desire to learn makes it easier to apply the necessary knowledge acquired.

Thus, the desire of students to learn from their teachers motivated them to learn and apply what they learn.

4.1.4. Availability of teaching and learning materials

In addition to the student's interest, most of the participants responded that the availability of some teaching and learning materials in their schools makes it possible for them to apply what they learn from the training. For example, T9 commented that

The school has a well-established Home Economics lab with all the needed equipment and tools for practicals so I'm able to teach the students all the practical aspect I learnt during the training and the students also enjoy working in the Food Lab.

Similarly, interviewees added that the organizers of the workshops provided the various materials needed that facilitated the transfer of the knowledge gained from the training. For example, T15 commented that

The organizers of the training programme that I attended supplied us teacher cards, textbooks for the children and teacher textbooks so we can have the knowledge on how to develop their reading skills especially of the Ghanaian Language. These resources facilitated the transfer of what I learnt during the training session.

Thus, according to interviewees, the availability of teaching and learning resources in their schools and those provided by organizers of training programmes facilitate training transfer.

4.2. Factors hindering training transfer of teachers

In addition to the factors that support effective application of teachers' learning, interviewees recounted a number of factors that inhibit the successful application of the knowledge and skills they gain from their various training sessions. These factors include lack of time and rigid/unfavourable timetable, lack of teaching and learning materials and facilities, and heavy workload.

4.2.1. Lack of time and rigid/unfavourable timetable

The participants commented on lack of time and the rigid nature of the school timetable. Four teachers were of the view that since the new methods of teaching they learnt at the training were activity based and child centred, they needed enough time to be able to accomplish their objectives but the time for their periods was not enough. They intimated that the time allocated for each subject on the timetable is inadequate which makes it difficult to have enough practicals with the students. For instance, T6 commented that

Teaching methods for teaching an inclusive class is more involving especially when using activity base learning and the individualized approach, you need much time to attend to individual needs. I have only 70 minutes to teach and evaluate my students, but because of this there is not enough time to pay attention to each student in the class to benefit from the lesson including physically challenged students.

T7 also responded that

Time is my major challenge and hindrance. When I'm using drama to teach literature for instance, by the time we set up the stage and get the students ready, half of my time will be gone and you also need to put the class in order before the next teacher arrives, so most of the time I'm not able to finish my lesson for the period so even though it's interesting, I'm not able to apply this methods I learnt at the training.

They commented that some methods of teaching were mostly not specific to their school timetable since they would have to spend too much time. They asserted that there was no time to do that as the period on the timetable was not enough for them to fully implement some of these ideas. Moreover, teachers had a school-based curriculum or output of work with certain objectives that they had to meet hence they will not have the time to use these differentiated teaching methods.

Participants further made mention of interference from school activities. It was reported that there were instances where school programmes are organized in their schools without prior notice given to them which disrupted their planned lessons and thus made it difficult to implement what they had acquired from training. T4 commented that:

I had put pupils into groups for a discussion and I was going round facilitating. The headteacher just came to the class and asked to see me. He wanted me to end the lesson in order for the pupils to be taken to the assembly to listen to a talk by a resource person. Such interference prevented me from applying the learner centred approach I wanted to use for that lesson.

4.2.2. Lack of teaching and learning materials and facilities

Five of the teachers interviewed complained that there were no teaching and learning materials to help with the transfer of knowledge they acquire during training. They complained that they lacked access to electricity, adequate textbooks, computers, audio and music players and other teaching and learning materials such as colouring tools, manila cards, and poster colours and these make it difficult for them to apply what they learn during trainings in the classrooms. They added that in some instances they had to use their personal resources such as laptops to teach the students or use their own funds to buy some TLMs that they felt were needful for the students and will help them to transfer the knowledge they had gained from their training programmes. In her submission, T8 commented that

The school does not have enough computers for the students to learn with and I also do not have a personal laptop to practice frequent on my own before coming to class. Besides, there is no electricity to charge our laptops and lastly, we do not have internet in the school to work with. All these are hindrances in applying what I was taught at the training.

T6 further added that

I remember a time that I could not apply what I learnt in a training because resources were not available. Specifically, I had attended a training on how to use multimedia in teaching so that lesson will be less abstract and more engaging to diverse learners but I could not apply these ideas immediately because my school was yet to purchase an overhead projector and audio systems.

The participants attributed this challenge to the lack of adequate funds in their schools hence their inability to procure the right teaching and learning materials to facilitate their transfer of learning. T14 specifically said that “the school is always waiting for the government and government is also not doing anything” to denote that funds were not available in the system to provide the materials and resources needed to aid in the transfer of the knowledge acquired from the training.

4.2.3. *Teacher workload*

Interviewees complained of heavy workload as an inhibiting factor to the successful application of their learning in schools. They complained that they handle large numbers of students and this makes them easily exhausted and worn out thereby their inability to apply what they learn in their teaching. T4 reported that

I attended a training programme in my school during the vacation. The purpose was to educate us on the use of teaching and learning materials and learner centred approach of teaching. Despite the fact that I tried my possible best to put into practice all that I learnt, it was quite hectic. I teach five classes with a total of forty hours per week. There were times I could not make enough time to prepare my teaching learning materials before going to class. I sometimes had to teach without them. Also, on Tuesdays, I teach all five classes. By the time I get to the last class, I would have been so exhausted. It becomes difficult to implement the learner centred approach of teaching completely.

T13 also commented that

I attended a training workshop on differentiation in Senegal. I was so happy about the new information and skills acquired. I was eager to educate my colleagues about how differentiation can alleviate most of the students’ struggles. However, the reality was that when I came, there was no room for me to apply anything. On every single day, I had lessons from the first period to almost the last one. The workload has hampered my ability to apply the skills. Sometimes, I am so tired that I forget to practice what I have learned in my training programme.

The teachers therefore argued that if they are given a bearable workload, they will be able to attend and apply the professional development knowledge and skills they gain from their training.

5. Discussion

As teachers are the key to enhancing students learning in schools, it is imperative that they themselves have access to extensive learning opportunities (Barrera-Pedemonte, 2016; King et al., 2018). Following such learning opportunities, it is expected that the knowledge, skills, and attitudes acquired would be transferred to the classroom context in order to improve students’ learning outcomes and school improvements (Blume et al., 2010).

Research abounds that while stakeholders invest a lot of money in the professional development of teachers to update, develop and broaden the knowledge they acquired during their pre-service training, just approximately 10% to 15% of such training contents result in behavioural change in

the workplace (Ford et al., 2018; Lim & Morris, 2006). Nonetheless, when trainees fail to use their new knowledge to improve performance, resources dedicated to training are wasted and business results go unrealized (Blume et al., 2010; Velada et al., 2007). The primary objective of this study was therefore to explore the work environment factors that support or hinder successful application of teacher professional learning in Ghanaian basic schools.

Findings from the study showed that teachers perceived supervisor (headteacher) support as a key factor that facilitates the transfer for their learning and such organizational support aligns with the social cues in the transfer climate framework proposed by Rouiller and Goldstein (1993). This finding supports the numerous studies that have clearly established supervisor support as a critical work environment factor influencing the transfer process (Blume et al., 2010; Chauhan et al., 2016).

According to the participants in this study, their immediate supervisors (headteachers) supported the application of their learning by providing the required teaching and learning resources. This is consistent with studies that found that supervisor support offered through the provision of resources and the removal of operational hindrances contributed to the effectiveness of training/learning transfer (Chauhan et al., 2016).

The study also found that headteachers were open to innovation which enabled the teachers to experiment the new knowledge and skills they had learnt from training programmes. They also received little interference from their headteachers at the workplace which afforded the opportunity to transfer their learning. Aligning with self-control cues of the transfer climate framework, trainees are provided with the opportunity that permit them to try out what they have learnt during training (Rouiller & Goldstein, 1993). Research has shown that an organizational environment that is open to new ideas and supports and invests in change may facilitate the transfer process (Holton et al., 2000). Again, providing employees with an opportunity to use learned knowledge and skills is an important predictor of training transfer (Schindler & Burkholder, 2016).

Another finding that emerged from the study which aligns with social cues (Rouiller & Goldstein, 1993), was the evidence of peer support in facilitating training transfer of teachers in the selected schools. Na-Nan et al. (2017) argue that peer support could take the form of advice, discussion and/or the sharing of experiences that increase participants' skills and expertise. In addition, peer support creates an atmosphere in which knowledge and experiences are freely shared and exchanged between employees (Grossman & Salas, 2011).

Participants in this study reported that their schools had a culture of shared norms, beliefs and values which created the opportunity for them to share their success stories and provide positive and constructive feedback to each other thereby enhancing their desire to learn and transfer their learning. This supports the view that networking and information-sharing with peers enhance skill transfer (Martin, 2010).

It also emerged that teachers who had attended training programmes were given the opportunity to share their knowledge with the entire staff and build a team to implement such ideas. During school-based INSET sessions, teachers are allowed to share and teach about the new knowledge and skills they had acquired from trainings. In a study by Gilpin-Jackson and Bushe (2007) trainees revealed that observing application of skills acquired on training by others and being able to coach help in transfer of training. When teachers themselves engage in collaborative learning, which encourages active participation, it will contribute both to the quality of their learning process, and to their ability to participate in, and lead, collaborative learning in their teaching (Cockerill et al., 2018; Kalaian & Kasim, 2017).

Additionally, the study found that interest and commitment shown by students towards learning stimulated the efforts of the teachers to transfer the knowledge, behaviours and skills they had

acquired from training programmes. The study found that students' zeal, readiness and desire to learn made it easier for the teachers to apply the knowledge they had acquired. Literature on teacher motives for choosing teaching as a career suggest that teachers entering teaching for altruistic reasons generally have strong orientation towards shaping the future of their students and love to help them succeed (Heinz, 2015). Thus, it could be argued that when students demonstrate attitudes which would enable them to succeed in their academic endeavour, teachers by their altruistic nature would demonstrate strong commitment in their work which will strengthen the application of what they have acquired through training.

Moreover, the study found that the availability of the needed teaching and learning materials in their schools made it possible for them to apply what they had learnt from their training sessions. This result aligns with task cues in the transfer climate framework proposed due to the existence of the required equipment allowing trainees to use skills gained in training (Rouiller & Goldstein, 1993).

Some participants reported that their school laboratories which were stocked with the appropriate equipment and tools facilitated the teaching of practically oriented skills they acquired from training. Again, they reported that the organizers of some workshops they had attended provided the various materials such as teacher cards, textbooks for the children and teacher textbooks needed which facilitated the transfer of the knowledge gained from the training. This reinforces the view that trainees cannot transfer trained skills without the requisite resources which enable them to do so (Nelson et al., 2012).

Despite the aforementioned factors that emerged as the facilitating factors, the study also highlighted a number of job and work environment factors that were reported to impede the transfer of training in the schools selected. Two related factors that emerged to be impeding successful application of training of teachers were lack of time due to rigid or unfavourable timetable and teacher workload.

Participants in the study complained that the new methods of teaching they had learnt at the training were activity based and child centred which needed enough time to be applied in the classroom context but the time for their periods was not enough. They further intimated that the time allocated for each subject on the timetable was inadequate which made it difficult to have enough practicals with the students. Finally, participants complained of the workload as an inhibiting factor to the successful application of their learning in schools. These findings support past studies that have found the lack of time and the pressure of heavy workloads to be among the biggest barriers to applying learning (Clarke, 2002; Waller, 2012). Research therefore advocates that to make transfer possible managers should consider modifying the workload of employees in order to give them the space to practice what they have learnt (Clarke, 2002).

Finally, inadequate teaching and learning materials to stimulate transfer were highlighted as a key factor impeding successful transfer of training. Participants complained about the lack of access to electricity, adequate textbooks, computers, audio and music players and other teaching and learning materials such as colouring tools, manila cards, and poster colours and these make it difficult for them to apply what they learn during trainings in the classrooms. This result is contrary to the view that the availability of technological infrastructure that meets employees' operational requirements would contribute to enhanced training transfer and post-training performance (Na-Nan et al., 2017).

Teachers in this study reported that in some instances they had to procure their own resources to aid transfer while those that could procure their own would fail to transfer. Most of the teachers interviewed attributed this challenge to the lack of adequate funds in their schools hence their inability to procure the right teaching and learning materials to facilitate their transfer of learning. Research suggests that behavioural changes following training will be short-lived without resources to support transfer (Martin, 2010).

6. Conclusions

This study reaffirms the view that original learning in a training experience is rarely enough to render that training effective. This is in recognition that a number of work environment factors that teachers perceive as encouraging or discouraging their use of knowledge, skills, and attitudes acquired in professional development programmes they had attended were highlighted. The result confirms the relevance of social support in the form of both supervisor and peer support as important factors facilitating the application of teacher learning. In terms of training transfer in the workplace, the results suggested that both supervisor support and peer support should be emphasized to enhance transfer of learning. Moreover, existence of the required instructional resources and materials also facilitates training transfer.

7. Recommendations

Following the findings from the study, it is recommended that educational authorities and training practitioners support infrastructures that would empower headteachers to be resourceful in order to assist and provide teachers with the required facilities to facilitate their learning. School-based INSET could also be strengthened to facilitate discussions and peer learning so that teachers can engage in discussions to share training ideas and training goals, to discuss barriers to transfer, and to provide positive reinforcement to aid transfer. Teacher workloads could be lessened while school timetable can be made more flexible to afford trainees adequate time to reflect on what they have learnt and to provide them the mental space to try out the new skills.

8. Limitations and directions for future research

Although this study has illuminated key factors that facilitate or inhibit successful application of teacher learning in the Ghanaian context, the results must be interpreted in the light of the following limitations. The first limitation to the study is the small number of the sample size which would limit the generalizability of the findings across all the teachers in the selected district. That notwithstanding, the researchers employed the strategy of member checking and thick description in the study to safeguard the dependability of findings, and thus the results could be applied with trainees with similar characteristics. However, future studies should draw on a larger sample and employ quantitative research approaches to warrant generalization of its findings. Similarly, while the work environment factors that emerged from the study are more likely to influence the transfer process of teachers in the Ghanaian school context, it could not ascertain the predictive power of each of the factors in influencing transfer due to methodological limitation. Thus, future studies could investigate the causal influences of the various work environment factors highlighted in this study on training transfer through quantitative approaches to inform policy.

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