Exploring the Instructional Practices Efficacy Beliefs of Kindergarten Teachers in the Kumasi Metropolis of Ghana

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Abstract

The influence of teacher efficacy beliefs on children's cognitive achievements and success at school is accepted among educators internationally and well established in the literature. Yet, teachers' sense of efficacy beliefs in the various aspects of their work at different levels of the education system continues to be investigated by researchers. Within the context of a developing country implementing a new curriculum, this study explores the efficacy beliefs of kindergarten teachers regarding instructional practices. Using an eight-point Likert-type survey questionnaire, the efficacy beliefs of 299 public and private kindergarten teachers in the Kumasi metropolis of Ghana with respect to instructional practices are examined. Research findings indicate that kindergarten teachers in the metropolis have high efficacy beliefs in instructional practices. No statistically significant difference was found in the efficacy beliefs in instructional practices of public and private kindergarten teachers, but statistically significant difference was found in the efficacy beliefs of trained and untrained teachers. Implications for early childhood teacher education are drawn and recommendations made.

Keywords: Efficacy beliefs, instructional practices, kindergarten, social cognitive theory, teacher efficacy

1. Introduction

Globally, kindergarten education forms part of the early childhood education which begins at birth to approximately age six or eight. The development of kindergarten has been largely based on the idea that young children are significantly different from older children and, therefore, the education of young children should also be different from the education of older children and youth (Spodek & Brown, 1993). For Elkind (2000), one area of the difference is the type of learning environment created for young children. He argues that the early years produce the necessary base for later effective learning and so a congenial environment should be provided the child during this period to motivate him or her to learn as much as he or she can. Montessori cited in Bartels (2004) also notes that children pass through sensitive periods as they develop and that during those periods they learn more readily from their own "spontaneous activities", certain skills and concepts. She suggests the need to create an environment for young children to promote spontaneous learning.

The need for early childhood education has never been more felt by governments, institutions and individuals than it is today. A number of factors explain this need. First is the changing nature of family life and of the role of women. Essa (2007) indicates that mobility in family life has brought about the need for child care outside the home. Families today move more than families did in the past. Mobility takes them away from relatives who might have been available to provide child care while families work. In addition, an increasing number of women is entering the workforce. Almost 60 percent of mothers of preschoolers now work and require child care for their youngsters. Also, high rate of divorce in contemporary society has brought about significantly more single parents today than ever before. These parents need care for their children while they work (Essa, 2007).

A second factor is the increased recognition of early childhood education as the key to preparing children for a successful primary school experience which in turn improves the internal efficiency of the education system by reducing repetitions and drop-out rates (UNICEF, 2007). Early childhood education also opens up possibilities to assist in freeing older siblings, especially girls, to go to school instead of looking after younger children (UNICEF, 2007). It is further suggested that early childhood education can contribute to the achievement of the first five Millennium Development Goals which concern poverty reduction, nutrition and education (UNESCO, 2006). In view of the very important role of early childhood education in learning and education, the inability to engage with quality preschool education may act as a 'first zone of exclusion' from the goals of Education for All (Lewin, 2007).

In Ghana, preschool education had historically not been part of the formal school system. Private individuals,

institutions and communities established and managed early childhood centres, although the products of these centers were easily absorbed into the formal system when entering grade one, usually at the age of six. With time, the government of Ghana recognised the crucial role that preschool education plays in the formative years of the child, especially its potential for overcoming educational disabilities of children from less favored family background. It, therefore, decided that kindergarten education should progressively become part of the Free Compulsory Universal Basic Education (FCUBE) structure. This idea was based on the recommendations of the Education Reform Review Committee (MOEYS, 2002). The aim was to ensure that all primary school children have a basic education rooted in good kindergarten training (MOEYS, 2004). The implementation of this new thinking began with the launch in 2007 of a new education reform. The reform introduced a two-year kindergarten education, making Ghana's basic education of eleven years duration: two years kindergarten (ages 4-6), six years primary (ages 6-12) and three years junior high school (ages 13-15).

The integration of kindergarten education into the mainstream education system implies the need for teachers trained in developmentally appropriate instructional practices who would implement the new curriculum effectively in order to realize its aims and objectives. Unfortunately, these caliber of teachers were not available in the required numbers. Indeed, in Ghana the kindergarten teacher appears to be someone with the lowest academic and professional background. A National Commission on Children (NCC) report indicated that, out of about 15,000 preschool teachers in the public sector, only 38% had academic qualifications higher than the Middle School Leaving Certificate (MSLC) or the Basic Education Certificate (BEC) and only 24% were professionally trained (NCC, 1997). In another report, Oppong (1993) indicates that more than 80 percent of the teachers and attendants in nurseries and kindergartens in Ghana have received no training for the positions they occupy. Available statistics indicate that there were 29,014 teachers and attendants teaching in early childhood centers in Ghana in the 2004/ 2005 academic year. Out of this number, only 22.2% had received formal training (UNESCO, 2006).

Given the research evidence that, of all the variables that we can control, teacher quality is the one that has the greatest effect on student learning (Darling-Hammond, 2000; Goldhaber, 2002; Reeves, 2004), it is important that the quality of kindergarten teachers becomes an issue of national concern. This is because the quality of education that young children receive cannot be better than the quality of teaching that their teachers provide. And the quality of a teacher's teaching and his/her ability to make positive impact on students' learning also depends, among other variables, on the teacher's sense of efficacy. Teacher efficacy is a teacher's confidence in his or her ability to promote student learning (Hoy, 2000). Teacher efficacy has been linked to teacher effectiveness and appears to influence students in their achievement, attitude and affective growth. Researchers have shown that teacher efficacy has positive effects on teacher effort and persistence in the face of difficulties (Soodak & Podell, 1993), professional commitment (Coladarci, 1992), student motivation (Midgley, Feldlaufer & Eccles, 1989), and openness to new methods in teaching (Ghaith & Yaghi, 1997). Ultimately, teacher's sense of efficacy determines the gains in the classroom (Protheroe, 2008).

1.1 The Research Problem

For effective implementation of the kindergarten curriculum, it would be expected that kindergarten teachers would be persons who can provide learning opportunities that support the intellectual, social, emotional, and physical development of all children, and that they would have a high sense of their ability and competence to do this. Unfortunately, because many of the kindergarten teachers in Ghana are untrained, they are likely to have a sense of self-doubt in their ability and competence to facilitate the learning of the young children placed under their care. There is, therefore, the need to examine kindergarten teachers' efficacy beliefs regarding the implementation of the kindergarten curriculum in Ghana. In particular, what are kindergarten teachers' efficacy beliefs about their instructional practices in the kindergarten classroom?

Many studies on teacher efficacy have focussed on pre-service teachers (Woolfolk & Hoy, 2001), novice teachers (Ozder, 2011) as well as elementary and secondary school teachers. Not many studies have focussed on kindergarten teachers' efficacy beliefs about their instructional practices. Noticeable in the literature is the limited number of studies in the Ghanaian context. Available local studies (e.g. Mitchual, Owusu-Banahene & Donkor, 2008) focused on primary and junior high school teachers. The current study is an attempt to fill this void left by previous studies.

1.2 The Purpose of the Study

The purpose of this study was to find out kindergarten teachers' efficacy beliefs about their instructional

practices in the implementation of the kindergarten curriculum. Specifically, the study investigates the possible differences that might exist in the teachers' efficacy beliefs with respect to the type of school where they were teaching (whether public or private school) and their professional status (whether trained or untrained).

1.3 Research Questions and Hypotheses

One research question and two hypotheses were formulated to guide the study. They are:

- *Research Question*: What are kindergarten teachers' self-efficacy beliefs about their instructional practices in the kindergarten classroom?
- *Hypothesis 1*: There will be no significant difference in the efficacy beliefs of kindergarten teachers in public schools and those in private schools regarding their instructional practices.
- *Hypothesis 2*: There will be no significant difference in the efficacy beliefs of trained and untrained kindergarten teachers regarding their instructional practices.

2. Theoretical Framework for the Study

The construct of teacher efficacy has been investigated through two separate conceptual theories: Rotter's (1966) social learning theory and Bandura's (1977) social cognitive theory. In this study, kindergarten teachers' self-efficacy is examined within the rubrics of social cognitive theory.

2.1 Social Cognitive Theory

Social cognitive theory proposed by Albert Bandura (1977, 1986, 1997) is a socio-cognitive perspective that enables individuals to self-regulate cognitive processes and behaviors, rather than simply react to events. This perspective ascribes to the belief that "individuals are capable of exercising a degree of control over their thoughts, feelings, motivation and actions" (Pajares, 2003, p.7) after a self-interpretation of performance. This control impacts and has the potential to alter subsequent actions and behaviors. Bandura (1986, 1997) believed that behavior is more effectively predicted by the beliefs that individuals have regarding their capabilities rather than what they are actually capable of accomplishing. Therefore, the beliefs that determine "how well knowledge and skill are acquired" (Pajares, 2003, p. 8).

Social cognitive theory describes individuals as operating within a series of social systems. According to Bandura (1977, 1986, 1997), human agency must be explained within an interdependent causal structure in which individuals' personal characteristics, behavior, and surrounding environments interact— a model he terms "triadic reciprocal causation." In this view, people are seen as both products and producers of their environments (Bandura, 1997), and individuals' thoughts and feelings play a key role in how they view and act on the world. Humans are capable of self- reflective thought, and through this self-reflection, they evaluate their capabilities, surrounding environments, behaviour, and future actions.

2.2 Self-Efficacy Beliefs

A crucial component of social cognitive theory is self-efficacy beliefs, defined as "beliefs in one's capabilities to organize and execute the courses of action required to produce given attainments" (Bandura, 1997, p. 3) or attain designated types of performances. In defining self-efficacy expectations, Bandura (1986, 1997) stated that individuals form their self-efficacy beliefs by interpreting information primarily from four sources. First is the *mastery experience* or interpreted result of one's previous performance (Pajares, 2002). That is, individuals engage in tasks and activities, interpret the results of their actions, use the interpretations to develop beliefs about their capability to engage in subsequent tasks or activities, and act in concert with the beliefs created. Typically, outcomes interpreted as successful raise self-efficacy; those interpreted as failures lower it.

Secondly, there is the *vicarious experience* of observing others perform tasks (Bandura, 1997; Schunk, 1982). This source of information is weaker than mastery experience in helping to create self-efficacy beliefs, but when people are uncertain about their own abilities or when they have limited prior experience, they become more sensitive to it (Pajares, 2002). The effects of modeling are particularly relevant in this context, especially when the individual has little prior experience with the task. Even experienced and self-efficacious individuals will raise their self-efficacy even higher if models teach them better ways of doing things. Vicarious experience is particularly powerful when observers see similarities in some attribute and then assume that the model's performance is diagnostic of their own capability. Conversely, watching models with perceived similar attributes

fail can undermine the observers' beliefs about their own capability to succeed. When people perceive the model's attributes as highly divergent from their own, the influence of vicarious experience is greatly minimized. It bears noting that people seek out models that possess qualities they admire and capabilities to which they aspire. A significant model in one's life can help instil self-beliefs that will influence the course and direction that life will take (Pajares, 2002).

Thirdly, there is the *verbal or social persuasion* people receive from others. These persuasions can involve exposure to the verbal judgments that others provide. Persuaders play an important part in the development of an individual's self-beliefs. Effective persuaders must cultivate people's beliefs in their capabilities while at the same time ensuring that the envisioned success is attainable. And, just as positive persuasions can work to encourage and empower, negative persuasions can work to defeat and weaken self-efficacy beliefs. In fact, it is usually easier to weaken self-efficacy beliefs through negative appraisals than to strengthen such beliefs through positive encouragement.

Fourthly, we have *somatic or physiological and emotional states* such as anxiety, stress, arousal, and mood (Bandura, 2001; Pajares, 2002). People can gauge their degree of confidence by the emotional state they experience as they contemplate an action. Strong emotional reactions to a task provide clues about the anticipated success or failure of the outcome. When people experience negative thoughts and fears about their capabilities, those affective reactions can themselves lower self-efficacy perceptions and trigger additional stress and agitation that help ensure the inadequate performance they fear. Of course, judgments of self-efficacy from somatic and emotional states are not necessarily linked to task cues. Individuals in a depressed mood lower their efficacy independent of task cues. But certainly, physiological and emotional states lead one to judge capabilities and strengths which contribute to one's sense of mastery or incompetence.

Self-efficacy beliefs provide the foundation for human motivation, well-being and personal accomplishment. This is because unless people believe that their actions can produce the outcomes they desire, they have little incentive to act or to persevere in the face of difficulties. Much empirical evidence now supports Bandura's contention that self-efficacy beliefs touch virtually every aspect of people's lives—whether they think productively, pessimistically or optimistically; how well they motivate themselves and persevere in the face of adversities; their vulnerability to stress and depression, and the life choices they make (Pajares, 2002). Self-efficacy is also a critical determinant of self-regulation.

2.3 Role of Self-Efficacy Beliefs in Human Behaviour

Bandura acknowledges that the choices people make are influenced by many factors, including the success or failure that people experience as they engage in the many tasks that comprise their life and the knowledge and skills people possess. But Bandura's (1997) key contention as regards the role of self-efficacy beliefs in human behavior is that "people's level of motivation, affective states, and actions are based more on what they believe than on what is objectively true" (p. 2). For this reason, how people behave can often be better predicted by the beliefs they hold about their capabilities than by what they are actually capable of accomplishing.

Self-efficacy perceptions help determine what individuals do with the knowledge and skills they have. This helps explain why people's behaviors are sometimes disjoined from their actual capabilities.

Self-efficacy beliefs can enhance human accomplishment and well-being in many ways. They determine how much effort people will expend on an activity, how long they will persevere when confronting obstacles, and how resilient they will be in the face of adverse situations. The higher people's sense of efficacy, the greater the effort, persistence and resilience they put in what they do. People more quickly recover their sense of efficacy after failures or setbacks, and attribute failure to insufficient effort or deficient knowledge and skills that are acquirable (Pajares, 2002).

Self-efficacy beliefs also influence an individual's thought patterns and emotional reactions (Pajares, 2002). High self-efficacy helps create feelings of serenity in approaching difficult tasks and activities. Conversely, people with low self-efficacy may believe that things are tougher than they really are, a belief that fosters anxiety, stress, depression, and a narrow vision of how best to solve a problem. As a consequence, self-efficacy beliefs can powerfully influence the level of accomplishment that one ultimately achieves. This function of self-beliefs can also create the type of self-fulfilling prophecy in which one accomplishes what one believes one can accomplish. That is, the perseverance associated with high self-efficacy is likely to lead to increased performance, which, in turn, raises one's sense of efficacy and spirit, whereas the giving-in associated with low self-efficacy helps ensure the very failure that further lowers confidence and morale.

2.4 Teacher Efficacy

Bandura's seminal work on the theory of self- efficacy beliefs (1977) led to the construct of teacher efficacy belief, defined variously as:

- "the teacher's belief in his or her capability to organize and execute courses of action required to successfully accomplish a specific teaching task in a particular context" (Tschannen-Moran, Woolfolk Hoy & Hoy, 1998, p. 233);
- "the extent to which the teacher believes he or she has the capacity to affect student performance" (Berman, McLaughlin, Bass, Pauly & Zellman, 1977, p. 137);
- "teachers' belief or conviction that they can influence how well students learn, even those who may be difficult or unmotivated" (Guskey & Passaro, 1994, p. 4); and
- "the extent to which teachers believe they can affect student learning" (Dembo and Gibson (1985, p. 173).

From the definitions stated above, teacher-efficacy relates to a context-specific assessment of one's ability to instruct students in a particular curriculum area or in a particular manner. It is a "future oriented and task-specific judgment" (Woolfolk Hoy et al., 2009, p. 628).

Ashton and Webb (1982) viewed teacher efficacy as a multidimensional construct. They identified two dimensions of the construct as "general teaching efficacy" and "personal teaching efficacy." General teaching efficacy is a belief in the power of teaching to achieve results in the classroom. It represents a teacher's belief that teachers can overcome factors external to the teacher such as the background of the students. Teachers with a low sense of efficacy operate from an external locus of control, whereas teachers with a high sense of efficacy operate from an internal locus of control.

The second dimension, personal teaching efficacy, is the belief of an individual teacher in his/her own personal capacity to deliver the necessary teaching behaviors to influence student learning. It is a cognitive, self-perceived, future-oriented belief of one's teaching competence level.

Some studies (e. g., Guskey, 1998; Woolfolk & Hoy, 1990) further divide personal efficacy into a teacher's sense of personal responsibility for positive student outcomes, and his/her personal responsibility for negative outcomes. Studies conducted by Woolfolk and Hoy (1990) and Ross (1992) reported that the dimensions of teacher efficacy and personal efficacy are independent. Ross (1992), for instance, found little correlation between teacher efficacy and personal efficacy. This means that individual teachers, for example, might believe that teaching can determine what students learn, but that the individual teacher is not capable of having a positive effect on the learning of his/her own students.

Commenting on the importance of teacher efficacy, Woolfolk, Rosoff & Hoy (1990) suggested that teacher efficacy may underlie critical instructional decisions including questioning techniques and classroom management strategies. Coladarci (1992) contended that teacher efficacy is a strong predictor of commitment to teaching, and Allinder (1994) concluded that teachers with a higher sense of self-efficacy exhibit more enthusiasm about teaching. Teachers with high efficacy tend to experiment with methods of instruction, experiment with instructional materials, and seek improved teaching methods (Allinder, 1994).

2.5 The Problem of Conceptualizing and Measuring Teacher Efficacy

While there appears to be a relatively consistent and unified view of teacher efficacy, it needs noting that there still exist variations in the conceptualization and measurement of the construct. As earlier intimated in this paper, historically, the teacher efficacy construct evolved from studies conducted by the RAND foundation, and early conceptualization was influenced by Rotter's (1966) social learning theory (Armor et al., 1976). Key to Rotter's theory is the concept of *locus of control*. Advocates of this theoretical framework defined teacher efficacy as the extent to which teachers believe that influencing student outcomes is within their control (internal) or outside their control (external). Efficacious teachers, therefore, would believe that affecting student performance was internal to them and within their control. Conversely, inefficacious teachers would believe that the environment has more of an impact on student learning and that reinforcement of their teaching efforts is external to them and beyond their control.

It could be argued, however, that though the line of difference between self-efficacy and locus of control might be thin, both constructs are conceptually distinct. To illustrate, one can believe that a task outcome is determined more by one's own actions than external forces, but still feel unable to execute the actions successfully, thereby exhibiting an internal locus of control but a low sense of efficacy. Applying this distinction to teachers, a teacher can believe that influencing student outcomes is within the realm of his or her control, but feel he or she personally does not have the skills to do so successfully. Thus, any line of thought which presents teachers' sense of efficacy as synonymous with teachers' locus of control (e.g., Guskey, 1982; Rose & Medway, 1981) should be treated with circumspection.

Bearing in mind this kind of application with circumspection, Tschannen-Moran, Woolfolk Hoy, and Hoy (1998) developed a model to shed some light on the meaning and measure of teacher efficacy. Their model brings together the two competing conceptual strands from previous teacher efficacy research and provides a more comprehensive look at how self- efficacy beliefs relate to teachers. Building on Bandura's (1977) theory of self-efficacy, Tschannen-Moran and her colleagues argued that teacher efficacy is really a reflection of a teacher's analysis of the teaching task and assessment of his or her personal teaching competence. That is to say, when presented with a teaching task, teachers first give thought to what is involved in that task (i.e., duties, obstacles) and how they feel they could perform within those circumstances, given the skills they know they possess. If a teacher believes he or she can affect student performance after having reflected on what the task entails, he or she would be considered efficacious. This notion of teacher efficacy builds from Bandura's (1986) contention that self-efficacy acts as a mediator between an individual's knowledge of their own skill set and their future actions.

2.6 Teacher Efficacy in Instructional Practices

According to Tschannen-Moran and Woolfolk Hoy (2001), teachers' sense of efficacy for instructional strategies refers to their confidence that they can design and implement activities, tasks, and assessments to facilitate student learning. The beliefs that teachers hold influence their thoughts and their instructional decisions (Woolfolk Hoy, Hoy, & Davis, 2009). In turn, instructional decisions that teachers make influence the learning experiences they plan for students and hence student opportunity to learn.

Silcock (1993) argues that the chief finding of research into effective teaching is that those teachers who provide pupils with maximum opportunity to learn have high sense of efficacy. Researchers have shown that teacher efficacy has positive effects on teacher openness to and utilization of new methods in teaching (Ghaith & Yaghi, 1997). Burton (1996) reported a positive relationship between the use of constructivist instructional methods and teacher self-efficacy. That is, teachers with high self-efficacy beliefs tended to utilize more constructivist methods in their instruction than low self-efficacy teachers. Teachers with a high sense of efficacy are reported to be more likely to use student-centred teaching strategies, while low efficacious teachers tend to use teacher-directed strategies, such as didactic lectures and reading from textbooks (Czerniak, 1990).

Highly efficacious teachers feel a personal responsibility for student learning, believe they can influence student learning, spend more time on student learning, support students in their goals and reinforce intrinsic motivation (Bandura, 1993, p. 140). This is perhaps due to the conviction of high self-efficacy teachers that low achievers are "reachable, teachable and worthy of teacher attention and effort" (Ashton & Webb, 1986, p. 72). Not surprisingly, high self-efficacy teachers build warm relationships with their students. On the contrary, low self-efficacy teachers are threatened by these relationships as they perceive that such relationships challenge the teacher's authority. Low self-efficacy teachers are more willing to demonstrate to their students that they care about them and are concerned about their problems and achievements (Ashton & Webb, 1986). Such teachers do not resort to criticism when students give wrong answers, but lead them to correct answers more effectively (Gibson & Dembo, 1984). They also have high expectations for students; have strategies for achieving objectives, and a positive attitude about teaching (Ashton, 1984, p. 29).

Teachers with high self-efficacy beliefs are also more likely than teachers with a low sense of self-efficacy to use adequate teaching methods that encourage students' autonomy and reduce custodial control (Gusky, 1988), and to keep students on task (Podell & Soodak, 1993). Teachers' self-efficacy may also contribute to promote students' sense of efficacy, and foster their involvement in class activities (Ross, 1998; Ross, Hogaboam-Gray, & Hannay, 2001).

Undoubtedly, the relationship between teacher efficacy and instructional practices is established in the literature. However, much remains to be known regarding this relationship in the specific context of the kindergarten classroom in a developing country such as Ghana, where official recognition of kindergarten as part of formal education is less than a decade old. The pertinent question for this study is: what are the instructional practices efficacy levels of trained and untrained kindergarten teachers who teach in public and private schools?

Drawing from Bandura's social cognitive theory (1986) and self-efficacy theory (1977, 1997), the current study defined teacher efficacy as a teacher's belief in his or her personal ability to use appropriate pedagogical

practices to address requisite learning, and positively affect student performance. The main focus of the study is teachers' personal beliefs concerning their own teaching abilities—not their beliefs concerning whether teaching can alter student performance. The study aims to make a contribution to teacher efficacy research in the context of a major curriculum change in Ghana – the implementation of a kindergarten curriculum. The Teacher Self-Efficacy Scale (TSES—Tschannen-Moran & Woolfolk Hoy, 2001) was used to measure teachers' sense of efficacy in instructional practices.

3. The Method

3.1 Research Design

The study aimed to present a single time description of kindergarten teachers' efficacy beliefs regarding their instructional practices through posing questions to a carefully selected sample (Babbie, 1990). Hence, the cross-sectional descriptive survey design was used. Survey research designs are capable of obtaining information from large samples of the population. They are also well suited to gathering demographic data that describe the composition of the sample (McIntyre, 1999). Surveys are inclusive in the type and number of variables that can be studied, require minimal investment to develop and administer, and are relatively easy for making generalizations (Bell, 1996). These considerations further influenced the choice of the descriptive survey design for the study.

3.2 Population and Sample Selection

The target population for the study was all kindergarten teachers (trained or untrained) who were working in the Kumasi Metropolis of Ghana during the 2012/2013 academic year. A list obtained from the Metropolitan Education Directorate indicated that there were 972 kindergarten schools in the metropolis with an estimated number of 1156 teachers. The sample for the study was 299 teachers.

A multi-phase sampling technique was used to select the sample. According to Cohen, Manion and Morrison (2007), in multi-phase sampling, the purpose and population of sampling change at each phase of the sampling process. In this study the first stage of sampling consisted of stratifying the schools into public (202 schools) and private (770 schools), and purposively sampling schools which had operated for five years or more, and were recognized by the Ghana Education Service (GES) and the Social Welfare Department (SWD) in the metropolis. The main purpose of stratification is to arrange the population into homogenous subsets and to choose adequate number of elements from each subset. In that sense, the choice of stratification variables depends on the variables used in a study (Babbie, 1990). The variables of interest in this study are type of school (i. e. public or private school) and teacher professional status (i. e. trained or untrained). However, the basis for stratification was type of school. This method yielded 75 public schools and 125 private schools.

The criterion of five years was based on the suggestion by educational evaluators (e.g. Fullan, 2007) that 5 years is sufficient enough a period to assess any aspect of a school's instructional program. Recognition of the schools by the GES and SWD ensured that those schools operated under nationally accepted conditions in terms of physical infrastructure and instructional resources, among other criteria. In view of the relatively small number of public schools compared to the private schools, all the 75 public schools and an equal number of private schools selected randomly were chosen to participate in the study. In the second phase of sampling, all kindergarten 1 and 2 teachers from the public and private schools that had been sampled during the first stage were included. The total number of teachers was 350.

3.3 Research Instrument and its Reliability

The Ohio State Teacher Efficacy Scale (OSTES) developed by Tschannen-Moran and Woolf Hoy (2001) based on Bandura's teacher self-efficacy scale was adapted and used as survey instrument for the study. It consisted of two parts. The first part included 6 items measuring teachers' demographic characteristics such as age, educational background, length of teaching experience, gender, teacher status as well as type of school where they taught. The second section of the instrument had 8 items on a 5-point Likert scale (1-nothing, 2-very little, 3-little, 4-quite a bit, and 5-a great deal of influence) measuring teachers' efficacy beliefs for instructional strategies.

Though the reliability of the OSTES had been established, the instrument was pretested to re-establish its reliability in the Ghanaian context. The pretesting was conducted with 45 kindergarten teachers (26 from public

schools and 19 from private schools) in the Atwima Nwabiagya district. The participants were asked to respond to the items and also make comments related to the statements for clarity.

The Alpha reliability coefficient was calculated to measure the internal consistency of the questionnaire items, that is, whether the questionnaire was measuring a single idea and all the items focused on that idea. The reliability coefficient of the teachers' efficacy beliefs for instructional practices was found to be .82. This means the internal consistency of the items was good (George & Mallery (2003) or high (Gliem & Gliem, 2003) and, therefore, the instrument as a whole was acceptable.

3.4 Data Collection Procedure

The questionnaire was administered personally to the respondents in their respective schools with the help of five trained research assistants from February to April, 2014. Entry to each school was obtained by presenting an approval letter from the Metropolitan Director of Education to the head teachers who gave permission to engage the kindergarten teachers. In each school the purpose of the study was explained to the teachers with an assurance of absolute anonymity and confidentiality. In all, 350 questionnaires were administered and a total of 299, representing 85.43% were properly completed and returned.

The distribution of the teachers who responded to the questionnaire is presented in Table 1 below.

Type of School	No. of sch. Selected	Estimated Respondents	Actual Respondents
Public	75	175	171
Private	75	175	128
Total	150	350	299

Table 1: Number of Teacher Respondents from Public and Private Schools

3.5 Data Analysis

The data collected for the study were coded, entered and analyzed using Statistical Package for Social Sciences (SPSS). The analysis employed both descriptive and inferential statistical tools. The resultant data from the descriptive analysis were organized into tables of frequency and simple percentages. A t-test for independent samples was conducted to investigate the possible differences in teachers' efficacy beliefs about their instructional practices in respect of type of school and professional status. The 0.05 alpha level was used as a criterion of statistical significance for all the statistical procedures performed. The results of the data analysis are presented in the next section.

4. The Results

4.1 Teachers' Self-Efficacy about their Instructional Practices

Eight items on a 5-point Likert scale were used to measure kindergarten teachers' efficacy beliefs regarding their instructional practices. Teachers' responses to each item were scored as follows: 1 = 'nothing', 2 = 'very little', 3 = 'little', 4 = 'quite a bit' and 5 = 'a great deal'. In the interpretation of the scores, the mean and standard deviation were used and interpreted as follows: 1-2.5 indicates low efficacy; 2.6-3.5 indicates moderate efficacy and 3.6 and above indicates high efficacy. Table 2 presents the results.

Table 2: Efficacy Beliefs about Instructional Practices

Instructional Practices	Mean	SD
How well can you craft good questions for your pupils?	3.98	1.016
How well can you provide alternative explanation or example when pupils are confused?	3.91	.996
How well can you respond to difficult questions from your pupils?	3.89	1.038
How well can you gauge pupils' comprehension of what you have taught?	3.82	.991
How well can you implement alternative instructional strategies in your classroom?	3.82	.939
How well can you use a variety of assessment strategies?	3.78	1.030
How much can you do to adjust your lessons to the proper level for individual pupils?	3.76	.989
How well can you provide appropriate challenges for every capable pupil?	3.75	1.021
Overall Mean	3.83	1.003

Table 2 reveals that kindergarten teachers' efficacy ratings of their instructional practices was high (M=3.83, SD=1.003). This signifies that they have high sense of efficacy in instructional practices. These high ratings imply that the kindergarten teachers have high confidence in their ability to implement appropriate instructional practices in their attempt to implement the kindergarten curriculum. Interestingly, the kindergarten teachers gave higher ratings to their ability to 'craft good questions for their pupils' (M= 3.98, SD = 1.016), to 'provide alternative explanation or examples when pupils are confused' (M= 3.91, SD= .996) and to 'respond to difficult questions from their pupils' (M=3.89, SD= 1.038). However, they did not give similar high ratings for their ability to 'adjust their lessons to the proper level for individual pupils' (M=3.76, SD= .998), and to 'provide appropriate challenges for every capable pupil' (M=3.75, SD=1.021). This relatively low rating implies that the kindergarten teachers are more confident in providing instruction to the pupils as a group than tailoring their instruction to meet the distinctive learning needs of individual pupils in their classrooms, probably due to large class size or possibly because the teachers regard their pupils as generic templates.

4.2 Hypotheses Testing

A key assumption in this study is that the type of school where kindergarten teachers teach, and their professional status have influence on the efficacy of their instructional practices. This assumption is tested in this section with two research hypotheses formulated at the beginning of the study. Both hypotheses were tested using the independent samples t-test statistical technique at a p-value of 0.05.

4.2.1 Type of School and Efficacy Beliefs

<u>Hypothesis 1</u>: There will be no significant difference in the efficacy beliefs of kindergarten teachers in public schools and those in private schools regarding their instructional practices.

The results of the statistical test for this hypothesis are presented in Table 3. The data show the results of the independent sample t-test on efficacy beliefs in instructional practices among public and private kindergarten teachers. From Table 3, it could be seen that only 'How well respondents can implement alternative instructional strategies in their classroom' was significant at 0.05 level of significance (t= -2.99; df=293; p=0.003). There was no significant difference in the efficacy beliefs of teachers in all the other instructional practices (p>0.05). Overall, therefore, the evidence (t= -1.716; df=295; p=0.315) shows that public and private kindergarten teachers did not differ in efficacy beliefs in instructional practices. The null hypothesis is thus confirmed. The meaning of this is that the type of school where kindergarten teachers teach does not affect their efficacy beliefs with respect to instructional practices

Table 3: Independent Sample T-test on Efficacy Beliefs in Instructional Practices of Public and Private Kindergarten Teachers

Instructional practices	DF	MD	t	p-value
How much can you do to adjust your lessons to the proper level for individual pupils?		.479	-1.70	.090
How well can you implement alternative instructional strategies in your classroom?		.445	-2.99	*.003
How well can you provide appropriate challenges for every capable pupil?	296	.315	-1.78	.076
How well can you provide alternative explanation or example when pupils are confused?	296	.243	-1.71	.088
How well can you respond to difficult questions from your pupils?	294	.297	-1.41	.161
How well can you use a variety of assessment strategies?	292	.272	-1.59	.113
How well can you gauge pupils' comprehension of what you have taught?		.186	82	.412
How well can you craft good questions for your pupils?	296	.212	-1.73	.084
Overall	295		-1.716	.315

*p < 0.05 (2-tailed)

4.2.2 Professional Status and Efficacy Beliefs

<u>Hypothesis 2</u>: There will be no significant difference in the efficacy beliefs of trained and untrained kindergarten teachers regarding their instructional practices.

The results of the statistical test for this hypothesis are presented in Table 4.

 Table 4: Independent Sample T-test on Efficacy Beliefs in Instructional Practices of Trained and Untrained

 Kindergarten Teachers

Instructional practices	DF	MD	t	p-value
	DI		·	p vulue
How much can you do to adjust your lessons to the proper level for individual pupils?		.479	4.117	.000
How well can you implement alternative strategies in your classroom?		.443	3.994	.000
How well can you provide appropriate challenges for every capable pupil?	296	.315	2.575	.011
How can you provide alternative explanation or example when pupils are confused?	296	.243	2.035	.043
How well can you respond to difficult questions from your pupils?	294	.297	2.383	.018
How well can you use a variety of assessment strategies?	292	.272	2.189	.029
How well can you gauge pupils' comprehension of what you have taught?		.186	1.556	*.121
How well can you craft good questions for your pupils?	296	.212	1.730	*.085
Overall	295		2.522	.038

*p-value > 0.05 (2-tailed)

The data show that there are significant differences in efficacy beliefs among trained and untrained kindergarten teachers in all the instructional practices (p<0.05) except 'How well can you gauge pupils' comprehension of what you have taught' (t=1.556, df=295, p=.121) and 'How well can you craft good questions for your pupils' (t=1.730, df=296, p=.085). Because there is statistical evidence (t=2.522; df=295; p=0.038) to show that, overall, efficacy beliefs in instructional practices differ significantly among trained and untrained kindergarten teachers, the null hypothesis is thus rejected. The meaning of this is that teachers' professional status influences their efficacy beliefs in instructional practices to a greater extent.

5. Discussion

The results of the study show that kindergarten teachers in the Kumasi metropolis have high efficacy beliefs in instructional practices. There appears to be no previous studies in the Ghanaian context to confirm or disconfirm this finding of the study. The originality of this study in the Ghanaian context is one of its contributions to early childhood education research in the country. The finding of this study is slightly consistent with a study by Kotaman (2010) conducted in Turkey to determine the level of teacher efficacy beliefs in instructional strategies among pre-service and in-service early childhood teachers. The study found a moderately high sense of teacher efficacy among both groups of teachers. The high teacher efficacy beliefs in instructional practices found in the current study was also reported in Tschannen-Moran and Woolfolk Hoy's (2002) study conducted in United States of America among preschool teachers.

It would be interesting to probe into the similarity of findings in the two studies conducted in developed countries and the current study conducted in a developing country. In the current Ghanaian study, majority of the respondents had no formal training for the job they were doing whereas the Turkish and American studies involved teachers who were either graduates in early childhood education or training to be one. This implies that the participants from Turkey and America had mastery experiences which are considered to be the most effective source of self-efficacy (Bandura, 1977, 1986). One would also expect that other contextual factors such as teacher professional autonomy, the nature of the early childhood classroom environment and remuneration, among others, would result in noticeable differences in teacher efficacy beliefs in the two groups of studies. For instance, in Turkey and the USA, the belief or agency to effectively shape one's life and to undertake tasks would be more salient than in Ghana, where cognition is more communal or holistic than analytical, and belief in the self and individual potential is low. Also, early childhood education has advanced in Turkey and the USA, with the early childhood classroom environment being less formal and more flexible (Kotaman, 2010) than in Ghana. In Ghana, the early childhood classroom environment is cognitive-oriented, mostly due to parental expectations, inadequate knowledge of child development on the part of teachers and service providers, poor working environment, large class size, meagre salary and limited continuous professional development opportunities. Given the above dynamics, one would have expected that early childhood teachers in Ghana would feel less control over their jobs which in turn may cause low teacher efficacy (Goddard, Hoy & Hoy, 2004).

It is also worth noting, that the kindergarten teachers in the current study felt more confident (high efficacy beliefs) in providing instruction to pupils as a group than tailoring their instruction to meet the distinctive learning needs of individual pupils in their classrooms. This could be partly due to large class size, or could it be that the teachers regard their pupils as generic templates?

The results of the independent sample t-test on efficacy beliefs in instructional practices among public and private kindergarten teachers show that the two groups of kindergarten teachers did not differ significantly in efficacy beliefs in instructional practices. This finding is surprising because, given the number of professionally trained public school teachers in the study (50.3% of public school teacers compared with 16.41% of private school teachers) and their expected level of professionalism one would have thought that they would report higher efficacy beliefs in instructional practices than their private school counterparts. Perhaps, the focus of basic teacher training in Ghana explains the lack of difference. Until 2007 the colleges of education in Ghana which train teachers for basic schools did not prepare teachers specifically for the early childhood stage. Even with the current training of early childhood teachers in some colleges of education, there is concern that the trainees are not adequately prepared for the various challenges and obstacles that confront early childhood teachers (NAEYC & NAECS/SDE, 2003). For this reason, though public kindergarten teachers have professional training, their efficacy beliefs in instructional practices may not be significantly different from their counterparts in the private schools.

The results of the independent sample t-test on efficacy beliefs in instructional practices among trained and

untrained kindergarten teachers showed significant differences (t=2.572; df=295; p=0.0384) in all the instructional practices. On the one hand, this result could be expected because trained kindergarten teachers had background in instructional methods as part of their pre-service training. Prior research shows that teacher training may be associated with increases in teachers' sense of efficacy (Fritz, Miller-Heyl, Kreutzer, & MacPhee, 2001; Yost, 2002). Another possible explanation could be the teachers' on-the-job experiences and training. Research indicates that, improving teachers' skills through direct training opportunities could serve to increase their self-efficacy in all areas of teaching (Bandura, 1997; Labone, 2004). On the other hand, this study also found that teacher efficacy beliefs in instructional practices did not differ significantly among public school kindergarten teachers and private school kindergarten teachers, despite the relatively large number of the former in the study sample. Thus, the two findings seem to contradict each other.

6. Conclusion and Recommendations

Results of the present study indicate high teacher efficacy beliefs in instructional practices among kindergarten teachers in the study area. Whereas type of school (i.e., public or private) did not seem to influence efficacy beliefs in instructional practices, the professional status of a teacher (i.e., trained or untrained) seems to be an important factor. This information points to a need for the Ghana Education Service to intensify the professional training of kindergarten teachers using both pre-service and in-service modes. This training should emphasize knowledge of developmental growth of children, and developmentally appropriate methods, techniques and strategies of teaching kindergarten children.

Early childhood education is a broad field with many issues and dimensions. However, the present study was limited to kindergarten teachers' efficacy beliefs regarding instructional practices. The study was also confined to teachers working in selected public and private kindergarten schools within the Kumasi Metropolis. Future studies could consider kindergarten teachers' concerns and perceptions about the kindergarten curriculum, and cover a wider population, including teachers in rural and suburban areas. Until studies of such magnitude confirm the findings of the present study, generalization of the findings should only be extended to teacher populations with similar characteristics as the teachers in this study.

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