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LEVELS OF TEACHER SELF-EFFICACY AMONG PRE-SCHOOL TEACHERS IN NAIROBI AND KIAMBU COUNTIES, KENYA

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Abstract:
Given the importance of teacher beliefs in shaping classroom behavior, this study set out to examine the levels of Teacher-Self-Efficacy among pre-school teachers in Nairobi and Kiambu counties Kenya. It was grounded on the self-efficacy theory by Bandura which focuses on teacher self-beliefs. The study adopted a descriptive survey method for data collection. The target population was 8211 pre-school teachers in Nairobi and Kiambu counties. The sampling frame was the 2751 pre-schools in Nairobi and Kiambu counties which were clustered into sub counties and stratified random sampling was used to get ten sub counties. From each sub county, twenty pre-schools were randomly sampled with proportionate allocation from both public and private pre-schools. From each pre-school, one teacher was randomly sampled for inclusion in the study. Data was collected using a modified Ohio State Teacher Efficacy Scale (OSTES) developed by Tschannen-Moran and Woolfolk-Hoy in 2001. One hundred and ninety-four pre-school teachers filled a questionnaire which had been piloted on three pre-school teachers not used in the study. The data was analyzed using descriptive statistics. The findings reveal high self-efficacy levels among pre-school teachers in Nairobi and Kiambu counties. It is envisaged that the findings from this study may inform policy at National Centre for Early Childhood Education (NACECE) and District Centres for Early Childhood Education (DICECE) in order to increase the levels of Teacher Self-Efficacy. The researcher recommends TSE scores should be used as a basis for hiring preschool teachers.

Keywords: pre-school, pre-school teachers, self-efficacy, teacher effectiveness, teacher self-efficacy, teacher training

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1. Introduction

Without doubt, all children need education (Kocabas & Ozeke, 2012). The responsibility for learning should ideally be shared between the parents, the society and the school. But, due to social and economic changes in the recent past, many parents now place their children in preschool education programs (Daniels, 1992). Consequently, some of the developmental responsibility for these children has shifted to preschool teachers (Okongo, 2007). Thus, kindergarten and preschool classrooms actually develop the basic and essential skills of a child (http://www.preschoolcurriculum.in/early-childhood-curriculum-development.htm) and educators have no choice but to address themselves to those attributes that make preschool teachers effective.

1.1 Teacher effectiveness

Walls, Nardi, Minden & Hoffman (2002) report that effective teachers have five characteristic in common: create a good emotional environment, display skill in their work, allow student participation, are enthusiastic and have good classroom control. The findings complement those by Walker (2008) who found out those successful teachers are always prepared, are positive about teaching, have high expectations for learners, are creative and fair, are compassionate, have a sense of humor and respect students. All these are observable behaviors, so what underlies and triggers these behaviors? Vannatta-Hall (2010) agrees that effective teaching is shaped by many complex factors, but of critical importance among them is attitude. Teacher attitudes are constructed of such components as beliefs about the subject area, beliefs about their ability to teach effectively in that area and beliefs about the effectiveness of teaching having any impact on children's learning (Vannatta-Hall, 2010). This makes teacher beliefs a major focus for those concerned with education because beliefs are "*the heart of teaching*" (Vartuli, 2005, p.76). Indeed, research on teachers' beliefs is critical in teacher education because beliefs are closely related to the process of making decisions and to behavior (Fang, 1996b).

1.2 Teacher efficacy

Bandura (1977) explains the role of beliefs in what he calls self- efficacy, defined as "*beliefs in one's capabilities to organize and execute the courses of action required to produce given attainments*". When self-efficacy is applied to the teaching/learning situations, researchers come up with Teacher Self – Efficacy (TSE), an important construct which shapes the thought patterns and emotions that enable classroom actions (Bandura 1997).

1.3 Teacher Self-efficacy

Teacher self-efficacy beliefs determine the level to which the teacher will teach in the classroom (Garvis, 2013). Teachers with high TSE believe that intelligence is malleable;

that all children can learn and that they can help them learn (Deemer, 2004). They are more likely than those with low TSE to implement instructional innovations in the classroom and to use classroom management approaches and adequate teaching methods that encourage students' autonomy (Guskey, 1988), to manage classroom problems (Chacon, 2005), and to keep students engaged on the task (Podell & Soodak, 1993). They try various teaching strategies with students. They are less critical when students make mistakes, are more likely to implement positive classroom management strategies and maintain a positive attitude when teaching difficult students (Scharlach, 2008). Hugh TSE has been linked to elementary and secondary school teachers' instructional experimentation, including willingness and readiness to try a variety of materials and approaches, the desire to find better teaching strategies, implementing alternative methods and a willingness to improve teaching practice. Teachers with a higher sense of efficacy exhibit greater enthusiasm for teaching (Allinder, 1994), have greater commitment to teaching (Coladarci, 1992), use more music activities in the course of instruction (Muya, 2016) and believe that it is up to them to provide a wealth of strategies to reach students. They are also more likely to stay longer in the teaching profession (Glickman & Tamashiro, 2006). Thus, we can conclude confidently that high TSE is a desirable characteristic for teachers, especially those in preschools. Kindergarten and preschool classrooms actually develop the basic and essential skills of children and teachers have to shoulder the developmental responsibility for children in their classes (Okongo, 2007).

1.4 Measurement of Teacher Self Efficacy

Tschannen-Moran and Woolfolk-Hoy (2001) developed a measure of teacher efficacy at Ohio State University, known as the Ohio Sense of Teacher Efficacy Scale (OSTES). The OSTES was validated through three investigative studies by participants in a seminar on self-efficacy in teaching and learning in the College of Education at the Ohio State University. The results of these analyses indicate that the OSTES is reasonably valid and reliable. It is better than previous measures of teacher efficacy in that it has an integrated and stable factor structure and assesses a broad range of important teaching tasks without being so specific that it cannot be used to compare across subjects, levels, or school contexts (Tschannen moran & Hoy, 2001). The OSTES was customized for use with the preschool teachers in Nairobi and Kiambu counties, Kenya.

2. Research Questions

This research sought answers to the following questions:

i. What are the levels of TSE among pre-school teachers in Nairobi County?
ii. What are the levels of TSE among pre-school teachers in Kiambu County?

iii. Is there a significant difference in the levels of TSE among pre-school teachers in Nairobi and Kiambu counties?
iv. What are the combined TSE scores for pre-school teachers in Nairobi and Kiambu counties?

2.1 Rationale

The findings of this study may be beneficial to personnel at the National Centre for Early Childhood Education (NACECE) and may inform teacher preparation centers on the need to restructure their programs to focus on increasing levels of TSE. From this study, issues and challenges may be raised which could ignite some interest in future researchers in the area of teacher self-efficacy.

2.2 Theoretical basis

This study was based on the self-efficacy component of the social cognitive theory by Bandura (1997). Self-efficacy (SE) is a motivational construct characterized as the extent to which individuals believe they can organize and accomplish actions necessary to bring about a desired outcome. These beliefs are a key factor in a generative system of human competence, guiding and influencing what teachers do in the classroom. Teachers' plans and actions are generally filtered through their belief system, which can affect their practice and daily activities in their classrooms. TSE shapes the thought patterns and emotions that enable classroom actions and therefore directly influences outcomes in the classroom (Bandura, 1997). TSE is founded on four pillars: Vicarious experiences, Mastery experiences, Verbal persuasion and Physiological states, all of which can be specifically targeted in the teacher training programmes.

2.4 Participants

The study was carried out in Nairobi and Kiambu counties in Kenya. These two counties have a mix of rural and urban characteristics, mixed and single language pre-schools, private and public pre-schools, high and low socio-economic status schools, and local and international systems of education. The study targeted all the pre-school teachers in both Nairobi and Kiambu counties, whether teaching in private or public pre-schools. According to Nairobi and Kiambu counties Education Office and Program Officer Kiambu County, there were 844 pre-schools with 2506 teachers in Nairobi and Kiambu counties and 1907 pre-schools with 5705 teachers in Kiambu County, making a total of 2751 pre-schools with 8211 teachers. The pre-schools in Nairobi and Kiambu counties were clustered into sub counties. Then proportionate stratified random sampling was used to get approximately 50% of the sub counties. The pre-schools in the sampled sub counties were then stratified into public and private. Random sampling with proportionate allocation from both public and private pre-schools was used to get

20 pre-schools from each sub county based on the premise that each sub county had unique contribution to the understanding of the research problem. This made a total of 200 preschool preschools. From each of the two hundred pre-schools, one teacher was randomly sampled for inclusion in the study, and was therefore required to fill the OSTES questionnaire.

3. Teacher Self Efficacy Scores

The first task for this study was to examine the levels of teacher self-efficacy (TSE) among pre-school teachers in Nairobi County. To get the overall teacher self efficacy scores, the scores on the 24 items on the modified OSTES were added up. The highest achievable score was (24x5) = 120 and the minimum score that could be obtained was (24x1) 24.

The TSE scores for preschool teachers in Nairobi County are shown in Table 1.

Number of teachers	Number of teachers	Total score	Average score
Nairobi private	50	4699	78.3
Nairobi public	27	2517	77.7

Table 1: TSE scores for Preschool teachers in Nairobi County

From Table 1, the average TSE score for Preschool teachers in Nairobi County was 78.09. There was very little difference between teachers in private and public preschools in Nairobi County.

The second task for this study was to examine the levels of teacher self-efficacy (TSE) among pre-school teachers in Kiambu County. The findings are tabulated below.

	Number of teachers	Total score	Average score
Kiambu private	83	7754	77.9
Kiambu public	34	3160	77.5

Table 2: TSE scores for Preschool teachers in Kiambu County

From Table 2, the average TSE score for Preschool teachers in Kiambu County was 77.73, with little difference between teachers in private and public preschools in Kiambu County.

The third task was to find out whether there was a significant difference in the TSE scores between teachers in Nairobi and Kiambu counties. When a t-test was performed, the difference between the TSE scores for teachers in Nairobi and Kiambu counties was not statistically significant at .5 alpha level.

Next, the scores for the two counties were combined together; the mean was calculated at 93.47 with a standard deviation of 11.17. Teachers' overall TSE belief was

at the level of 3.89 ((93.4/120) x5). If converted to a scale out of 9, this value equals 7.01((3.89/5) x 9), equivalent to 77.89 % ((93.45/120) x100), which is fairly high.

4. Interpretations and Conclusions

This score is higher than the total TSES scores of Tschannen-Moran & Hoy (2007) (X = 6.87 (76%)) and Hoy & Spero (2005) (X=5.03(55.9%)). Noticeably, the score is lower than in the study by Pendergast, Garvis and Keogh in 2011, which found (X=7.50 (83.3%)). It could be stated, based on this finding, that pre-school teachers in the two counties exhibit the qualities associated with high TSE: greater planning, being more enthusiastic in their teaching endeavors, greater levels of innovativeness, creativity and experimentation and even using more music activities in their classrooms (Muya, 2016). Research has informed us that effective teachers generally have a strong sense of teacher efficacy (Schunk, Pintrich, & Meece, 2008). This is the case with pre-school teachers in Nairobi and Kiambu counties. We can equally conclude that the interactions in the preschool classrooms are meaningful and the teachers expend a lot of effort in reaching even the weakest of the learners. These qualities are desirable, and therefore TSE scores should be one of the factors used as a basis for hiring new preschool teachers.

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