Teacher efficacy and classroom management in Africa: A meta-analysis[1]

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ABSTRACT

Teachers exert a potent influence over the achievement of all students, more specifically, low-income culturally diverse students in most African countries. Although recent research has confirmed that teacher involvement is critical for promoting academic engagement of low-income and ethnically diverse students, there has been limited research in Africa. The purpose of this article is to synthesise the literature that examines the effect of teacher efficacy and classroom management on academic and behavioural outcomes of students, especially from low social economic status in Africa. A meta-analysis was conducted and reported according to the preferred reporting items for meta-analyses (PRISMA). The sample was drawn from the database search performed between January and March 2015 on PsychINFO, Google Scholar and Sabinet. The results of this meta-analysis support the findings of the studies that have been done elsewhere out of Africa that suggest a significant correlation between teacher self-efficacy and increased students' achievement, by influencing teachers' instructional practices, enthusiasm, commitment, and teaching behaviour. Apart from imparting knowledge and skills, teachers' efficacy also helps students to define who they are and ultimately influence their motivation and performance.

INTRODUCTION

There has been increased demand for the realisation of universal and sustainable access to basic education for all in the United Nations post-2015 development agenda. Nevertheless, this access has been met with several challenges in the areas of quality, equality, and learning outcomes. The rapidly changing educational environment as witnessed by the development of Information and Communication Technologies (ICTs) has meant that the quality of education and learning outcomes have become important determinates of the well-being of individuals and society. These developments have also created a gap in the learning outcomes between those with access to the ICTs and those who do not, the rich and the poor – within and between countries (Dibapile, 2012a; Durowoju & Onuka, 2015). This has resulted in several graduates who feel that their education did not adequately prepare them for the world of work (UNESCO, 2014).

In response to these challenges, UNESCO developed a robust strategy to guide and focus its priorities in education from 2014 to 2021. The focus of the UNSECO 2014-2021 strategic plan is (i) to develop

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educational systems to foster quality and inclusive lifelong learning for all, (ii) empowering learners to be creative and responsible global citizens and (iii) shaping the future educational agenda.

On the backdrop of the UNESCO 2014-2021 strategic plan, the Sub-Saharan Africa ministers of education met in Kigali, Rwanda in 2015 to assess the achievements, challenges and implementation of the Education for All (EFA) initiative. In what is now famously known as the Kigali Statement (2015), the ministers agreed that there is need to revisit the priorities, strategies and targets for the post-2015 education agenda within the context of the new perspectives and emerging challenges noted in the UNESCO 2014-2021 strategic plan. Key among the challenges for Africa are: equitable and inclusive access to education for all; inclusion, equity, and gender equality; quality of teachers on equity and learners' outcomes; educational quality and learning outcomes, and lastly, the development of ICTs. For these challenges to be overcome, the ministers agreed that governments should strengthen research in teaching and learning, focus on quality and regional cooperation towards joint programmes, and to develop mechanisms for quality assurance and benchmarking progress at national and regional level. Thus, the ministers acknowledged the importance of teachers' quality on learners' outcomes (Durowoju & Onuka, 2015).

Teachers exert a potent influence over the achievement of all students, more specifically, low-income culturally diverse students in most African countries (Adedoyin, 2010). Although recent research has confirmed that teacher involvement is critical for promoting academic engagement of low-income and ethnically diverse students (Evertson & Poole, 2008; Shaukat & Iqbal, 2012), other literature suggests that teachers have lower expectations for, and fewer interactions with, these children (Tschannen-Moran & Hoy 2001; Tschannen-Moran, Hoy & Hoy, 1998). These findings have prompted calls for promoting teacher self-efficacy for working with children from diverse backgrounds.

Aim

The purpose of this article is to synthesise studies that examines the effect of teacher efficacy and classroom management on academic and behavioural outcomes of students, especially from low social economic status in Africa.

Research question

To what extent do African studies show the relationship between teacher efficacy (i.e. student engagement, instructional strategies, and classroom management), and students' motivation and achievements?

METHODOLOGY

A meta-analysis was conducted and reported according to the preferred reporting items for meta-analyses (PRISMA) guidelines (Weed, 2008).

Search strategy

A search of the following databases was performed between January and March 2015: PsychINFO, Google Scholar and Sabinet for studies done from 2010 to 2014.

Eligibility criteria

Studies included described teacher efficacy and classroom management and were based on Bandura's (1997) theory of self-efficacy. The studies focused mainly on the three key indicators of teacher efficacy, which are student engagement, instructional strategy and classroom management. The participants in the studies involved and its evaluation could either be qualified teachers, teaching a specific subject, or

trainee teacher or qualified teachers with bachelors or masters' degree and several years of experience teaching any subject. Studies were included only if they were conducted in a country in the Africa.

The analysis excluded studies if they did not describe all of the following elements of teacher efficacy; student engagement, instructional strategy and classroom management. Studies that did not include Bandura's theory on self-efficacy were not included. As this meta-analysis is exploratory and there is relatively little research on this issue, only studies using quantitative evaluation were included. Only original research studies published in a peer-reviewed journal and studies in English were included.

Study selection process

The two researchers conducted the search and removed any duplicates. They then screened the studies for eligibility. At each stage, they compared their selected studies and reconciled any difference through discussion.

Analysis strategy

From the 10 studies included in the meta-analysis, seven involved in-service teachers at their various stages of experience and both genders, two involved in-service teacher teaching students with disabilities, one was for in-service teachers for a specific subject and the last one involved trainee teachers rating themselves. A brief analysis of the studies is provided on Table 1.

Table 1:
Methodological quality assessment

Authors	Country	Sample size	Student engagement	Instructional strategies	Classroom management
Dibapile (2012a)	Botswana	1006	Yes	Yes	Yes
Henning & Chi (2012)	Zambia	720	Yes	Yes	Yes
Adedoyin (2010)	Botswana	150	Yes	Yes	Yes
Malinen et al. (2013)	South Africa	590	Yes	Yes	Yes
Wang'eri & Otanga (2014)	Kenya	80	Yes	Yes	Yes
Hofman & Kilimo (2014)	Tanzania	100	Yes	Yes	Yes
Durowoju & Onuka (2015)	Nigeria	60	Yes	Yes	Yes
Moalosi & Forcheh (2015)	Botswana	598	Yes	Yes	Yes
Adu, Tadu & Eze (2012)	Nigeria	1612	Yes	Yes	Yes
Sridhar & Javan (2017)	Rwanda	150	Yes	Yes	Yes

Theoretical framework

Studies on teacher self-efficacy have largely been conceptualised within Bandura's (1994, 2002) notion of self-efficacy. Teacher self-efficacy has been defined as the extent to which a teacher is confident enough

of his or her ability to promote students' learning (Bandura, 1994). According to Bandura (1994), human behaviour is motivated by the interaction of two kinds of expectations: self-efficacy and outcome expectancy; the former referring to peoples' judgements of their capability to undertake and execute successfully a specific task in a specific context, and the latter including judgements about the likely consequences that this performance would bring about (Bandura, 1994).

LITERATURE REVIEW

According to Mojavezi and Tamiz (2012) highly efficacious teachers tend to be more organised, display greater skills of instruction, questioning, explaining, and providing feedback to students having difficulties, and maintaining students on task. Low efficacy teachers, on the other hand, display a more custodial than humanistic approach to classroom management, spend significantly more time in group work as opposed to whole group instruction, feel angered and threatened by misbehaviour, and have trouble in maintaining students on task.

Teachers with high self-efficacy are much more likely to provide opportunities for student communication by using a variety of models to meet the needs of all learners (working individually, in pairs, and in groups) (Rushton, Morgan & Richard, 2007). Research has also substantiated that teachers with high level of self-efficacy are more likely to divide the class into small groups rather than teaching the class, thereby allowing the opportunity for more individualised instruction (Tschannen-Moran & Hoy, 2001).

On the other hand, motivation has been defined by Pintrich and Schunk (2002: 5) as 'a process for goal-directed activity that is instigated and sustained'. According to Gardner's (1985) motivation theory, students are motivated to learn and achieve when they perceive their teachers care about them. Teachers who care for students were described as demonstrating democratic interaction styles, developing expectations for student behaviour considering individual differences, modelling a 'caring' attitude toward their own work, and providing constructive feedback.

Moreover, high efficacy teachers encourage students for understanding. They treat students' misunderstandings in a subject and they utilise different visual aids to make the subject more enticing and meaningful. Additionally, they give students opportunities to engage in conversations and give substantive feedback rather than scores on assignments. Additionally, there is some evidence that teachers' affect, like enthusiasm for learning and their sensitivity concerning students' treatment, might affect students' emotions related to the objectives (Guo, Laura, Justice & Kaderavek, 2010).

The relationships between teachers and students also influences classroom climate; teachers are responsible for regulating the classroom environment, including regulating classroom discipline, implementation of approaches and methods to learning, interacting with the students in the classroom. Friedman and Kass (2002) found that students' perceptions of positive affinity with their teachers were related to their pursuit of pro-social classroom goals such as getting along with others and being socially responsible and were more strongly correlated to student interest in school than perceived support from parents and peers.

Perceived support from teachers also has been a positive predictor of effort in schools and the pursuit of social responsibility goals, including acting in pro-social ways that encourage peer cooperation (Evertson & Poole, 2008; Friedman & Kass, 2002). Conversely, students who perceive teachers as harsh and cold are found to consistently display poor social behaviour and low social goals as well as to achieve lower academically, in comparison with their peers (Friedman & Kass, 2002).

Students care about their relationships with their teachers and respond with greater engagement and effort when they believe that their teachers care about them and are supportive. One way that teachers convey

these qualities is through their discourse with their students in the classroom. Classroom discourse structure concerns the way teachers engage student participation in learning, promote intrinsic motivation, and balance appropriate challenges with skill levels (Evertson & Poole, 2008).

A number of studies have elaborated about the influence of teacher self-efficacy beliefs on children's achievement and success in school (Evertson & Poole, 2008; Tournaki & Podell, 2005). Teacher's self-efficacy beliefs may influence a student's achievement in several ways. For example, teachers with high self-efficacy beliefs are more likely than teachers with a low sense of self-efficacy to implement didactic innovations in the classroom, to use classroom management approaches and adequate teaching methods and encourage students' autonomy, and to take responsibility for students with special learning needs (Reinders, 2010), to manage classroom problems (Chacon, 2005), and to keep students on task (Pintrich, 2003).

Tournaki and Podell (2005) gathered data from 384 general education teachers to examine how the interaction between student and teacher characteristics affects teachers' predictions of students' academic and social success. The participants responded to one of 32 possible case studies describing a student, in which gender, reading achievement, social behaviour, and attentiveness were manipulated experimentally, and to a 16-item teacher-efficacy scale. Their findings indicated that teachers with high efficacy made fewer negative predictions about students and seemed to adjust their predictions when student characteristics changed, while low efficacy teachers seemed to be paying attention to a single characteristic when making their predictions. In addition, all teachers responded similarly to students who exhibited a combination of aggressive and inattentive behaviours, that is, if students were friendly, inattentiveness was tolerated more than, if they were aggressive. Furthermore, all teachers made higher predictions of academic success for students reading on grade level even when they were aggressive, than for students reading below grade level even when they were friendly.

To this end, no meta-analysis has been performed to explore the characteristics and outcomes of teacher efficacy and classroom management on African studies. Most existing studies have been conducted in a single country or with a single type of category of teacher, and a meta-analysis will facilitate examination of overall trends and development of best practices. An Africa-specific meta-analysis is necessary because Africa is a developing continent with a myriad of competing demands on its financial and human resources. The results are that most African schools are overcrowded and under resourced, and in some cases lacking necessities such as water and electricity. Accordingly, this study used a meta-analysis approach on teacher efficacy programmes for schools in Africa and evaluated the effectiveness of these initiatives. The results of this analysis will inform the process of scaling up the UNESCO strategic objectives 2014-2021.

The necessarily brief review of studies has indicated the paucity of practical work on investigating the impact of teacher self-efficacy on the students' motivation and achievement in African classrooms. This provides a good justification for more studies in the areas. To this end, this research sought to analyse the studies done in Africa.

FINDINGS

The findings of this meta-analysis support the findings of the studies that have been done elsewhere out of Africa that suggests a significant correlation between teacher self-efficacy and increased students' achievement, by influencing teachers' instructional practices, enthusiasm, commitment, and teaching behaviour (Tschannen-Moran & Hoy, 2001; Tournaki & Podell, 2005; Wolters & Daugherty, 2007). The results are also in line with Bandura's observation (1994) that teachers who have a strong sense of efficacy about their capabilities can motivate their students and improve their cognitive development.

However, those who have a low sense of efficacy favour a custodial orientation that relies heavily on negative sanctions to get students to study.

Student engagement

Teachers with degrees and/or post-graduate diploma in education qualifications have reported higher mean scores in efficacy in student engagement. This is an indication that higher qualifications play a role in enhancing student engagement (Adedoyin, 2010; Wang'eri & Otanga, 2014). Student engagement is viewed as the teacher's ability to encourage students to learn. Thus, the teachers who influence students to learn show commitment to their work. Additionally, it shows that teachers who engage students in learning are aware of their self-efficacy beliefs that influence thinking, and emotions that assist them with classroom activities.

The number of years teachers spend in their work can increase their efficacious beliefs because they gain experience when teaching. However, this is not true for all because teacher efficacy research (Hofman & Kilimo, 2014) shows that teachers have high and low teacher efficacy beliefs. Therefore, teaching experience may not be the best factor to influence teacher efficacy. Some researchers, for example Cheung (2008), have reported teaching experience having an impact on teacher efficacy and other researchers have reported contrary results.

Instructional strategies

The studies (Dibapile, 2012a; Moalosi & Forcheh, 2015; Wang'eri & Otanga, 2014) have consistently reported no significant differences on gender and instructional strategies, although the differences in means suggest the need for further study. Females in most of the studies employed instructional methods of teaching more than males. This may be due to the concept that is generally known globally that teaching is a female job because of more females in the teaching profession than males.

Classroom management

The studies show the differences in how teachers manage classroom behaviours of students because of their teaching experiences. These results show an increase in motivation and commitment of teachers in their job as described by Huberman and Miles' (2002) that career cycles from 8-23 years of teaching experiences add to commitment and increased motivation in classroom management due to experience. Tschannen-Moran and Hoy, (2001) have reported classroom management self-efficacy associated with teaching experience, as well as classroom self-efficacy increasing from 0- 23 years of teaching experience.

DISCUSSION

The research was in response to the question on the extent to which teacher self-efficacy influences student motivation and achievements. The findings show that teacher self-efficacy is constructed from four main sources: mastery experiences, vicarious experiences, social persuasion, and somatic and emotional states. The studies also show that teacher self-efficacy is reflected through student engagement, instructional strategies and classroom management (Bandura, 1977; Tschannen-Moran & Hoy, 2001). However, the findings reflect that merely receiving information from these sources is not adequate for transforming efficacy beliefs. The information from different sources affects perceived self-efficacy only when it involves cognitive processing and reflective thinking (Bandura, 1997). This understanding is reflected in all the studies in this meta-analysis as they were measured using the teacher efficacy scale. Malinen et al.'s (2013) study focused on teacher efficacy for teachers working with students with disabilities and the results show that experience in teaching students with disabilities, teaching experience, interaction with people with disabilities and the amount of training related to inclusive education, all contribute towards teacher efficacy regardless of gender.

Moalosi and Forcheh (2015) just like Malinen et al. (2013) also reported that experience in teaching students with disabilities explained teacher efficacy evaluations in most studies and it has the strongest explanatory variable in each country study. This cross-culturally shared finding is in unison with the theory of self-efficacy (Bandura, 1997) in which mastery experiences are assumed to be the strongest source of efficacy evaluations.

Malinen et al. (2013) as well as Wang'eri & Otanga (2014) found that teacher efficacy in collaboration was a relatively stronger predictor of teachers' attitudes towards inclusive education while the other dimensions of self-efficacy did not have such effect. In a self-reporting study on teachers attending a graduate programme at the Kenyatta University, Wang'eri & Otanga (2014) found that teacher efficacy is a sum total of efficacy in instruction, efficacy in collaboration and efficacy in managing classroom behaviour as they all showed significant levels.

From the studies it can be reported that high-efficacy teachers have learned and experienced that behaviour problems are relatively rare in classrooms where children are actively involved and interested, and in which they are appreciated for *who* they are, *where* they come from and *what* they are able to contribute. Efficacious teachers have also learned that they need to know their students' backgrounds to be able to understand non-academic factors such as environment and social economic status, that may influence their behaviour, participation and learning (Dibapile, 2012b; Malinen et al. 2013; Hofman & Kilimo, 2014; Adu, Tadu & Eze, 2012).

It is obvious that not all children learn at the same pace or in the same way (Adedoyin, 2010; Duroweju & Onuka, 2015; Wang'eri & Otanga, 2014). Schools and teachers may have to consider the extent to which education policies and practices lead to the labelling of children or to promoting the view that learning capacities are either limited or fixed. Educating the whole person is an important goal of education in itself and teachers play their part in this process, by taking into account and responding to individual differences in development and learning needs in each classroom (Hofman & Kilimo, 2014; Adu, Tadu & Eze, 2012).

A teacher must care for many different students, including those from poor, disadvantaged families, students who may have to work before or after school, children from different ethnic, religious or language minority groups and those with a variety of learning difficulties or disabilities (Adu, Tadu & Eze, 2012; Moalosi & Forcheh, 2015). Children may come to school hungry or tired; they may not have been able to do homework because of lack of electricity or parents who are illiterate and not able to help them with their school assignments. It is important for a teacher to know a child's socio-economic and family background to be able to understand these *non-academic* or *social* factors that influence learning and behaviour (Adedoyin, 2010; Duroweju & Onuka, 2015; Sirdhar & Javan, 2017). While these factors cannot directly be altered, understanding them will enable a teacher to place a student's 'learning failure' or 'misbehaviour' in perspective and create learning environments that reduce rather than increase the effects of such. Children may be at risk of negative and meaningless school experiences if a teacher does not understand the whole child and his/her background, and is not ready with responsive, effective instruction and classroom strategies (Wang'eri & Otanga, 2014).

When seeking explanations for lack of achievement or for behaviour problems, a teacher needs to be prepared to consider inadequacies in the learning content, process and environment rather than inadequacies in the child (Dibapile, 2012a; Malinen et al., 2013; Hofman & Kilimo, 2014; Adu, Tadu & Eze, 2012). The teacher needs to reflect on *what* he/she teaches and *how* he/she teaches. What does he/she *say* and *does* in the classroom to develop understanding? How does he introduce new topics? Does he/she spend enough time explaining purpose and relationship to previously taught information and skills to enhance developmental learning?

Another key finding in most of the studies is that a teacher must not only look at social backgrounds, but also at what happens inside the classroom (Dibapile, 2012a; Malinen et al., 2013; Hofman & Kilimo, 2014; Adu, Tadu & Eze, 2012; Wang'eri & Otanga, 2014). How students behave is often a reaction to factors within the school. A teacher needs to reflect on the learning environment he has created and whether this *engages* all children actively and meaningfully.

CONCLUSION

The studies that have been analysed show that there is a strong relationship between teacher efficacy and student motivation. Apart from imparting knowledge and skills, teacher's efficacy also helps children to define who they are and ultimately influence their motivation and performance. From daily interactions with teachers, children learn whether they are important or insignificant, bright or slow, liked or disliked. Teachers transmit these messages by the way they speak to children, their facial expressions and gestures, and by the amount of time, they devote to each individual student. Often teachers point out students' deficiencies more than praising them for their efforts and (small) improvements. For many children this is very discouraging and may result in feelings of inferiority and failure.

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