An Investigation into the Factors Affecting Teacher Performance - A Study Across Six Secondary Schools in Jamaica

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ABSTRACT

Introduction

The Problem Necessitating the Research

Student enrolment in Jamaican secondary schools have increased significantly since the 1970’s (52.8 in 1974 to 77.80 in 2013), yet more students are leaving school with nothing to show for their years of schooling. (UNESCO, UNESCO Institute for Statistics, 2014). Education is the social instrument through which we can guide nation’s destiny and shape its future (Panda, 1988). The purpose of education is not merely to contribute to the continuity of culture but also change peacefully and rationally the material foundations of civilization (Pervaiz et al., 1994).

PURPOSE OF THE STUDY

The focus of this research will be on the people in schools, specifically the teachers. The NEI Report indicates that leadership and management of schools and teacher support is in need of immediate attention (NEI, 2013). The major purpose of this research is to determine the factors that affect teacher performance in secondary schools in Jamaica. A second concern will be to determine the factors having the greatest influence on performance. Research shows that the factors affecting teacher performance are varied. Years of experience and qualification are considered as the best predictors of teachers job performance (Rockoff, 2004; Rivkin, Hanushek, and Kain 2005). Other factors that have had an impact on teacher performance are school climate and culture ( (Adeyemi, 2008; Rafferty, 2003) , leadership style and Behaviour (Cheng, 2013), teachers self and collective efficacy (Calik, Sezgin, Hasan, & Kilinc, 2012), teacher engagement (Markos & Sridevi, 2010), level and type of training (Jami, Malik, Ali, Baloch, & Ayaz, 2011) , supervision and teacher professional development (Tesfaw & Hofman, 2014; Nolan & Hoover, 2008, p.6; Zepeda (2007) among others. It is expected that the factors affecting teacher performance in Jamaican secondary schools are:

* *Employee moral*
* *Employee engagement*
* Leadership behavior
* Teacher quality,
* self efficacy
* school climate and culture
* resources
* level and type of supervision

*What is the composite effect of the performance determinants and teacher performance? Which performance indicator has the greatest impact on teacher performance.*

Rationale

This research is important to bridge the gap in the literature on the factors affecting teacher performance. While several research conducted in developed countries have identified factors such as education, training, years of experience and so on very little research is coming out of developing economies such as Jamaica on the topic; giving cultural specificity. Additionally (Tehseen & UI Hadi, 2015, p. 240) suggest that “different cultures of countries impact on individual behaviors and their intentions differently, thus it may not necessary that factors impacting teachers’ performance in one country might impact on teachers’ performance in other countries as well.” Therefore while there is a reasonable amount of literature available on factors affecting teacher performance in the USA, Canada, The United Kingdom and Africa, much research has not been seen on teacher performance determinants within the Jamaican educational context both at the primary and secondary school. This makes the available literature; which provides empirical evidence; lacking in cultural specificity. Abadzi points out that some factors affecting student and teacher performance are more applicable to developing countries than to developed countries where these studies were done (Abadzi, 2009). It is therefore important that research be done within the Jamaican and Caribbean context so that evidence based changes can be made.

I intend to become an Education Officer because I am passionate about teaching and learning and I think that I can be more impacting working directly with teachers in the field. *This research should contribute to my professional career development as an Education Officer.* The question of what factors determine teacher performance is one which has plagued me for the last 15 years of my teaching career. Personally I have always been fascinated with what accounts for the variation in performance among teachers. I have been a teacher for over twenty years and I have seen dedicated teachers who stay late, work on the weekend, all without compensation. I have seen a teacher cut a food box in two to share her lunch in half with a student; teachers who have gone above and beyond the call of duty time and time again in order to ensure the success of students. So while I do not expect a definite answer from this research I am expecting to cut some of the shrubs to start clearing a path towards understanding this phenomenon. While employed in the secondary school system I have noticed that some teachers are very engaged with their job and the institution that they are employed in however you have those who just do not have the passion and drive. I have always believed that teachers are born not made and so I suspect that even though an individual have gone through formal teacher training it does not necessarily mean that that person is a teacher.

Finally this research is important to assist in finding solutions to some of the chronic and recurring problems inherent in the Jamaican Education system such as teacher retention, student academic performance, student engagement, teacher performance and others.

The National Education Inspectorate ( NEI) Report (2012) indicates that, fifty five percent (55%) of schools inspected were rated as ineffective with student attainment in 79 percent of the schools performing below average. Forty one (41%) percent of leadership and management within the schools rated as unsatisfactory and 49 percent of schools in need of teacher support. The report also indicated that principals failed to address teaching and learning as an important issue stemming from the Davis report as well as attribute non performance on lack of resource while for the most part resources were adequate ( NEI, 2012).

Also the Davis Report(2004) points out that secondary students’ performance in CXC over the years 1990-2003 was below expectation and recommend a performance target of 60 per cent of students in the age cohort passing at least five subjects in the CSEC exams; inclusive of mathematics and English by 2015 (Taskforce Report, 2004). A review of the Caribbean Examination Council (CXC) results for the year 2003 to 2013 indicates that performance has still not improved to an acceptable level. The results show that performance in Mathematics and English Language continue to lag behind other subject areas which themselves are not good (Overseas Examination, 2003-2013).

OPERATIONAL DEFINITION OF TERMS AND VARIABLES

***Performance***is behavior. It is what employees do (Aquinis*, 2013).* Performance

is the level at which an organization or person achieves their objectives, the outcome of a particular action, attribute or environment. (Dessler, 2013). Teacher performance is usually measured by students results in final

2. *Effectiveness* is the extent to which the objective of the individual is achieved.

The terms performance and effectiveness are related and are for the most part used interchangeably because of the difficulty in making a distinction between the two and because to a large and acceptable extent there is not much if any difference between the two (Henri, 2004). Berk, (2005) identified 12 sources of teacher effectiveness (a) student ratings, (b) peer ratings, (c) self-evaluation, (d) videos, (e) student interviews, (f) alumni ratings, (g) employer ratings, (h) administrator ratings, (i) teaching scholarship, (j) teaching awards, (k) learning outcome measures, and (l) teaching portfolio. He outlined that measuring teacher effectiveness serves both a summative and formative purpose. For the purpose of this research teacher performance will be evaluated based on the performance score from the teachers last performance appraisal assessed by the ministry of education performance appraisal document.

*3. Teacher* is any individual employed in an educational institution for the sole purpose of teaching or delivering the specified curriculum to students. Teacher quality refers to the knowledge, skills abilities and other characteristics that predispose the teacher to perform on the job. Teacher quality can be measured by qualification, experience, level of professional training, personality traits etc. Teacher qualification refers to the academic achievement of teachers as well as credentials and professional training, while years of experience entails all the years the teacher has been employed to teach in any institution.

4. Participants are male and female teachers randomly drawn from purposely selected institutions/ high schools in Jamaica.

CHAPTER SUMMARY

CHAPTER 2

REVIEW OF LITERATURE

This review of literature will look at some of the factors which impact teacher performance. The review of literature will be centered on the research variables. Therefore I will present the literature relevant to the research variable representing the performance determinants or “teacher quality” (years of experience and level of academic qualification, training and supervision). This will be followed by literature on the research variable of teacher performance or “teacher effectiveness”. The chapter will conclude with the main points from the review.

While there is almost total agreement that teacher quality significantly impacts student performance there is no consensus on constituents teacher quality (Hanushek, 2002; Rice, 2003; Xu & Gulosino, 2006; Goe, 2007, Strong, 2011). As teacher quality refers to the knowledge ,skills, abilities and characteristics that teachers should possess , the perspectives from which teacher quality can be assessed is varied ranging from paper qualification, to personality traits and everything in between (Rice, 2003). Strong (2011) like Goe (2007) describes teacher quality from a systems perspective which includes input, process and output. Goe contends that Teacher quality consists of teacher characteristic, qualification, certification, experience etc; which are related to but exist independently of student achievement. Strong includes in his analysis personal characteristics of the teacher and qualifications as teacher quality input, while teaching styles and pedagogical traits as processes and student success as output. Both Goe and Strong’s research synthesis provides a useful operationalization of the concept teacher quality. Goe’s work does not provide a definition of teacher quality as the author chose to accept, within certain boundaries, various explanation of teacher quality. Goe however provides an explanation of the variation in interpretation as well as a means by which the variable can be measured. Strong adds that personal attributes while widely used is subjective and therefore the use of teacher quality in terms of competency (qualification, credentials, experience, etc) is a more valid measure of teacher quality due to its objectivity.

Teacher qualification refers to the academic achievement of teachers as well as credentials and professional training. A successful teacher is required to be equipped with certain characteristics like mastery of subject matter, professional training, sound physical and mental health, devotion and dedication to his profession (Hanushek, 2004). Goe, (2007) describe teacher qualification as personal assets of the teacher which provides evidence of competency and provides a basis on which administrative decisions such as selection for employment can be made. She points out however, that qualification on paper does not suggest that a teacher is competent.

Several studies such as (Darling, Hammond and Young’s ,2005; Rice 2003; Wayne and Young,2003 and khurshid,2008) study of teaching qualification and student achievement suggest that qualification matters more at some grade levels (secondary) than others and more so depending on whether the qualification is in an area of specialization. These findings are consistent with an earlier study conducted by Goldhaber and Brewer, (1999), cited in Rice, (2007) Research Synthesis. Goldhaber and Brewer (1999) found that students of teachers with a degree in the content area performed better than those with degrees in content area other than the one they were currently employed to teach.

Despite the findings of positive relationship researchers such as Monk, (1994) study showed that teacher degree level was not significantly related to student achievement, with the exception of higher degrees such as Master’s and PHD degree; which showed a negative relationship to student achievement. The findings Hanushek, Obrien and Rivkin, (2005) also indicate that higher degrees were unrelated to student achievement and that when taught by teachers of their own race student performance was positively co-related. Hanushek, O’Brien and Rivkin’s results were also similar to Khurshid (2008). His research on the relationship between professional qualification of the teacher and students academic performance showed that teachers with higher degree performed no better than those who were not trained or who possess higher degree. Similarly Abduliahi and Onasanya (2010) explored the effects of teacher effectiveness on Kwara State secondary School students’ achievement in mathematics. They used an ex post facto causal comparative research design. Their sample consists of 750 senior secondary school students, using a stratified random sampling technique. The findings indicate that there is no significant relationship between student achievement and teachers qualification. The author however theorize that this could be because of the overall low qualification of the teachers in the state; as more qualified teachers are usually given administrative positions or non teaching positions.

Research conducted by (Betts, Zau and Rice, 2003) on the San Diego Unified School district found that teachers’ qualification, especially higher qualification and qualification in content area was a good predictor of student achievement. The study which used linked student and teacher data from elementary to high school had a sample population of 123 elementary schools, 24 middle schools and 17 high schools consisting of both teachers and students. The authors used teachers’ academic qualification and years of experience as a measure of teacher quality. The purpose of the research was to examine the nature of school resource inequalities, to explore trends in student achievement with a focus on the achievement gap among schools and demographic groups, and, most important, to provide detailed statistical estimates of which school and classroom factors have the most influence on the rate at which student achievement increases. The main assumption that can be drawn from this study is that qualification does matter in student achievement but matters more so based on subject and grade.

A similar study done by Boyd, Grossman, Lankford, Loeb and Wyckoff, (2008) examined the effects of features of teachers' preparation on teachers' value-added to student test score performance in math and English Language Arts in New York City. The study used linked data for teachers and students in grade 3-5. The main findings from their research indicate variation across preparation programs in the average effectiveness of the teachers they are supplying to New York City schools as well as preparation directly linked to practice appears to benefit teachers in their first year. The variation between the studies is concentrated on the quality of preparation. Boyd, Grossman, Lankford, Loeb and Wyckoff, (2008) research strongly suggest that not only does qualification matter across subject and grade level as is the case with Betts, Zau and rice’s study but that the teacher preparation in terms of the institution attended to acquire the qualification. Making the case that teacher preparation in terms of institution attended may also determine student achievement.

The quality of teachers is not only focused on qualification as there are other attributes of a teacher that impact students’ performance. Teachers’ commitment, teachers’ physical’ psychological, emotional and interpersonal support influences student’s engagement in school significantly (Connell &Klem 2004). According to Akbari & Allvar(2010) efficacious teachers produce higher achievement because they are more confident about their teaching ability and will provide more opportunity for parental involvement and also include reflective teaching which influences academic performance; because the practice is centered on students’ learning and commitment to help them learn. Different components of teaching style impact differently to academic performance

A study done by Akinsolu (2010), on academic performance in Nigerian secondary schools reveals that teacher qualification and experience impact students’ academic performance significantly. Lassa (2000) and Guga (1998) claimed that if students are achieve the proper training, education can not be provided by just anybody, it requires a teacher who plans and delivers the lessons or instruction in such a way that objectives can be achieved. In their opinion uncertified teacher cannot prepare students for certain examinations. Another study by Aduwa (2004), on determinants of students’ academic success, reported that factors such as; home environment, cognitive abilities, self-esteem, self concept, study habits and motivation affect academic achievement. Also Ehrenberg and Brewer (1995) and Ferguson (1991) asserted that students learn more from teachers with strong academic qualification. Students especially from middle schools through territory levels achieve more from experienced teachers who hold Bachelor’s or Master‘s degrees in the subjects they teach and from(Darling- Hammond, 2000).

According to Betts, Ruben and Danenberg (2000) teacher qualification, along a number of dimensions tend to be much lower in schools in relatively disadvantaged areas than in affluent areas. In addition Crews (2002) and Holloway (2002) state that these rural schools have difficulties attracting and retaining certified teachers. They went on to explain that, low-income and small rural schools have higher rates of teacher turnover and often must have teachers teach in fields of which they did not aquire any training (Hammer et al., 2005).

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In 2005 Hanushek, Obrien and Rivkin published their research findings on the links between teacher certification exam score, educational attainment, years of experience and student achievement in mathematics. Their research, conducted on middle school students using archival records from 1989-2002, showed that experience was a positive predictor of student achievement, but only for the first few years of teaching. Harris and Sass, 2007 also found a positive relationship between experience and student achievement. Their research which was conducted on all public schools teachers and students in the state of Florida showed that teachers’ years of experience was correlated to student achievement in middle and elementary schools.

Consistent with other studies, Rockoff (2004) and Kane, Rockoff, and Staiger (2006) using an educational production function approach demonstrated those teachers’ years of experience is a good predictor of students’ performance. Their research however show that the effectiveness of the research variable of experience is not sustained as the results reduced after a few years on the job. These findings are consistent with Rowan, Correnti and Miller’s (2002) findings which point out that teacher experience mattered to student learning

Marzano, Frontier and Livingston emphasized that supervision is an important component of teacher development…...and as professionals, teachers should have a say in their professional development (2011). Instructional supervision is an important tool in building effective teachers’ professional development. Instructional supervision is “an organizational function concerned with teacher growth, leading to improvement in teaching performance and greater student learning” (Nolan & Hoover, 2008, p. 6). According to Zepeda (2007), there must be a clear connection between instructional supervision and professional development. This involvement of the teacher not just as an observer in the process but an active participant describes the collegial relationship where teachers are actively engaged in learning and sharing; where important knowledge is passed on and where there is continuous dialogue on pedagogy.

Peer supervision encapsulates a collegial working relationship within schools as pedagogical experience and knowledge is internalized and becomes a source for future learning by new members (Marzano, Frontier, & Livingston, 2011). A collegial relationship describes a situation where teachers do not just acquire knowledge for personal growth and development but to share with colleagues and increase the overall performance of the school. The school then becomes a learning organization (Simonin, 1997) where the drive to learn and change becomes embedded in the culture and climate of the school improving not just teacher quality but also the students’ performance (Hargreaves & Dawe, 2002; Sergiovanni & Starratt, 2007; Susan & Jeffery, 2000).

Peer supervision is the process by which small groups of teachers use the essential component of clinical supervision to help each other grow professionally (Susan & Jeffery, 2000, p.215). Peer Supervision is a derivative of Peer coaching; an umbrella term for the many different configurations of teachers-helping-teachers that have emerged primarily since the 1980s. Bernard and Goodyear proposed the use of Peer consultation as they highlight that peer consultation describes a process in which critical and supportive feedback is emphasized while evaluation is deemphasized (Bernard & Goodyear, 1992, p. 103). They (Bernard and Goodyear) point out that in peer consultation peers are free to accept or reject the suggestions without fear of reprisals (1992). As peers are similar in age and status the power differential is reduced thus making the teacher more conducive to suggestions. Peer coaching a form of peer supervision is a process of supervision in which teachers work collaboratively in pairs and small teams to observe each other’s’ teaching and to improve instruction.

Nguyen, ( 2013) points out that teacher peers, when assigned to work with each other provided the emotional support needed to build confidence in self and their profession. This he attributes to the new teacher seeing the peer as an equal who share the same problems and concerns. This emotional support reduces burn out and stress level. (Sergiovanni & Starratt, 2007) opined that when teachers learn in groups as part of their professional development they develop into a learning community that promotes the entire school as a centre of learning and promotes a culture of learning and sharing. Within the Caribbean context Bissessar, (2013) Citing Reichstetter (2006) suggest that learning community would enable teacher collaboration across regions and provide the framework and support needed to collectively reform education in the Caribbean.

McCallum, 2013 opined that in a lot of situations teachers do not get any opportunities to engage in leadership practices as a result of limited positions on the hierarchical structure of schools. Shared leadership through peer supervision can foster professional growth and development of teachers. She suggested that “teacher Mentor” as is practiced in countries such as the United States and Canada may be the solution to provide the needed practice. Teacher leaders as defined by McCallum refers to experienced and expert teachers who function in a supportive and nurturing role as they assist novice teachers to make the transition from preparation to practice ( 2013, p. 107). McCallum, (2013) contends that there are several teacher leadership roles that teachers can perform both in a formal and informal capacity. In peer supervision mentors perform the role of aclimatizing new teachers to the school as well as provide instructions on curriculum, procedure practices and politics (McCallum, 2013, p. 107).

Many employees are uncomfortable with their supervisors and may not be comfortable asking questions in fear that they may be perceived as incompetent (Tefsaw and Hofman, 2014; citing Oliva, 1976) consequently they do not receive the corrective behavior necessary for optimum performance. Some writers (Robbins, 1991; Earley, 2010; dessler , 2011 ),suggest that using peers who acts as familiar to the new employees may alleviate this fear and anxiety and may increase employee performance.

Professional development is a major component of ongoing teacher education concerned with improving teachers’ instructional methods, their ability to adapt instruction to meet students’ needs, and their classroom management skills, leading to the professional growth of the teacher( (Tesfaw & Hofman, 2014; Earley, 2010). Bissessar, (2013, p. 126) defines teacher professional development as the improvement of the teacher’s professional’s life. While Glatthorn, (1995) concluded that “… it is the professional growth a teacher achieves as a result of gaining increased experience and examining his or her teaching systematically ( Bissessar, 2013,p. 126). In relation to the importance of staff development Bissessar stated that it is necessary to bring about change as well as improve teachers’ delivery and methodology (2013). Additionally (Earley, 2010) points out that “*The ongoing or continuing professional development (CPD) of teachers is crucial for organizational growth and school improvement”.* Bissessar, (2013) citing Butler (1992) identified three desired outcomes of staff development being information transfer, skill acquisition and behaviour change. She also indicated that teacher development should be individually guided, assessed by observation, involve the teacher in its development and implementation, involve training and enquiry.

Akhtar, Hayat, & Naseer, (2011) asserts that not all teachers naturally posess the qualities that will ensure effectiveness in the classroom therefore some teachers will need additional training to equip them with the skills necessary for effective performance. In -service training can be conducted to improve performance in assessment, classroom management, behaviour management, instructional methodology, communication etc. Additionally from a developmental perspective, in-service training can be used to expose participants to leadership training, supervisory training or to teach interpersonal skills such as communication. It can also be used in a cross cultural exchange program where participants are exposed to strategies and methodologies used in other countries as well as forge network with teachers from other countries. Studies such as show that in –service training can positively impact teacher performance (Angrist & Victor, 2001; Gianoumis, Seiverling, & Sturmey, 2012).

In- service training cannot replace formal training in colleges and universities but rather complements it by providing work specific skills which assist the teacher to perform better on the job. Moreover studies on training as opposed to education shows that teachers who are trained perform better than those who have not been trained even with higher levels of education (Khurshid, 2008). Therefore training teachers to teach may be more effective and efficient than encouraging teachers to increase their academic achievement through formal education. The implication for the Education System will be increased contact time and reduction in expenditure. Training will have the effect of reducing the need for study leave to acquire higher education as teachers will be taught the necessary skills on the job. Also if the government align compensation on competency and not qualification the expenditure on paid leave should reduce as more teachers opt not to study as a means of increasing their salary but for personal and professional development. This should also have the effect of reducing absence and increasing contact time.

In service training is specific to a particular area of work, unlike general education; the teacher therefore acquires skill in the specific area. Some teachers start their teaching careers qualified and with good intentions of becoming effective teachers , however the reality of the situation in the school ( students behaviour, limlited resources, colleagues, class size and learning level etc.) can result in some of these teachers not performning as they should. In these cases in-service training could be conducted to better enable the teacher to perform. An example of how this could be implemented is where a teacher is not fitting in with the culture of the school or where there is frequent conflict over resources. In –service training on conflict management, interpersonal skills etc. could be conducted to reduce or eliminate these problems. The implication for the school and system in gereral is a more cohesive staff with conflict management skills that can be used even with the students.

The multiple roles and associated task that teaching demands, makes it difficult for teachers to acquire all the skills necessary to perform effectively in the classroom Polk, 2006). During the six to seven hours that teachers spend with their students their roles vary from instructor to friend and everything in between researchers such as Polk, 2006; Jami, Malik, Ali, Baloch, & Ayaz, 2011) believe that teachers should be equiped with interpersonal skills as their job revolve around people. Now some amount of the interpersonal skills can and is taught in formal schooling such as communication and psychology. However communication with teachers will point out that what is taught and the reality on the ground are two different things. First what is formally taught is general and applicable to a non specific group; what is encountered on the job is specific. Therefore success on the job demands skill that will allow for specific application. Strategies to deal with on the job situations cannot all be taught in the classroom. Some must be taught on the job where the content can be modified to the specificity of the job.

The concept of in-service training is not a new phenomenon, as a matter fact in service training precedes formal classroom training for teachers. The concept is also not unique to any particular country. Currently several countries are conducting in service training whether as an annual event as in the EU's Comenius program, the Num code project in Nigeria and the curriculum project in Burma. The programs are designed to include whatever is the focus for education in a particular year or period as well as around generic topics such as classroom management, teaching specific subjects etc. In Jamaican education system training and specifically in-service training is necessary if the country is to realize the 2030 vision. The benefits are numerous and outweigh the cost as teachers can be trained in groups; either as a school or by subject content or grade level. The major drawback to training is where it is not conducted properly and or employee acceptance is not achieved. It is important to conduct a needs analysis prior to engaging in training so that the need for training can be established. Additionally communication of benefits must be relayed to participants from an individual, school and a system wide level. In conducting training care must be taken in the design, materials and equipment, venue, time and trainer used. Finally training must be evaluated to ensure that the presenting problem has been solved by evaluating at every level of training.

CHAPTER 111

METHODOLOGY

Research Method and Design

The study will employ a mixed method design utilizing what (Leech & Onwuegbuzie, 2007) as well as (Hanson, Creswel, Creswell, Clark Plano, & Petska, 2005) describe as fully mixed concurrent equal status design. This is to allow for genaralizablity as well as to allow for the participants voice which (Leech & Onwuegbuzie, 2007) points out adds more credibility to the field of education. The end result should create a theory explaining the factors influencing teacher performance. A fully mixed concurrent equal status design will be used in this research because it allows for a balance to be created between the need for genaralizablity and specifity. “A fully mixed concurrent equal status design involves conducting a study that mixes qualitative and quantitative research within one or more of, or across the aforementioned three components in a single research study (Leech & Onwuegbuzie, 2007, p.271).

The quantitative aspect of this research method will involve the administration of three questionnaires to the participants; The Pritchard motivation symptoms questionnaire, the Spritzer motivation assessment, as well as the Teacher Performance Determinant Questionnaire (TPDA). These will be will be administered to teachers to determine teachers motivation problems ( Pritchard) as well as the working condition that best motivates them (Spritzer) and finally the TPDA to identify the factors which influence their performance. The findings will then be statistical analyzed using SPSS. The qualitative aspect will be done using interview and analysed using content analysis.

This research will employ the use of correlational research. Several researchers have posited that Correlational methods of inquiry have been popular in educational and psychological research for quite some time in part because they are foundational in nature in terms of their ability to examine the relations among a number of variables (Lomax, 2013; Hanson, Creswel, Creswell, Clark Plano, & Petska, 2005). This study will involve collecting data on the factors affecting teacher performance and then determine whether and to what degree a relationship exists between these factors and teacher performance. Lomax (2013), states that correlation research investigates a range of factors, including the nature of the relationship between two or more variables and the theoretical model that might be developed and tested to explain these resultant correlations. The purpose of correlation research as advanced by Lomax is to determine the nature of relations among variables or to use these relations to make predictions. However he opines that when consuming or conducting correlational research, there are a number of issues to consider such as the future use of correlational research outcomes in causal comparative and or experimental research.

One limitation on the use of correlational research is that a bivariate correlation coefficient gives information about the nature of the relations between two variables, but not why they are related Mills & Gay, (2012). Therefore the study should provide evidence of relationship between the factors affecting teacher performance and also the strength but will not say why the performance determinants are related. However as the theoretical model of teacher performance determinants involve more than two variables the analysis of data coming out of the quantitative phase of the model will require more sophisticated correlational methods, such as factor analysis, path analysis, or structural equation modeling to examine the underlying relations among these variables and can, therefore, be used as a basis to argue for causal inference Mills & Gay, (2012).

Another limitation of correlational methods is that the variables are linearly related to one another (Lomax, 2013). For example, variables teacher performance determinants and teacher performance can be shown to have a linear relationship if the data can be nicely fitted by a straight line. It is wise for researchers to examine their data to see if (a) variables are linearly related (e.g., by the use of scatterplots), and (b) there are any influential observations (i.e., outliers), (Lomax, 2013; Bastick & Matalon, 2007).

A final limitation of correlational research as advanced by Lomax occurs when a researcher seeks to consider the relations among every possible variable they will find some variables that are significantly related by chance alone. In this case, the more sophisticated multivariate correlational methods can be useful in that fewer tests of significance tend to be done than in the bivariate case(Lomax, 2013)..

POPULATION AND SAMPLE

As is customary with survey, a sample will be chosen to administer the questionnaire Bastik and Matalon, (2004)**.** This is necessary, as it would not be practical to collect data on the entire teaching population. There are over 20,000 teachers in Jamaica with approximately 10000 teaching in secondary schools. Secondary schools in Jamaica are stratified into the nomenclature of single sex, co educational, high, junior high technical and secondary. Informally the categorization is traditional, nontraditional, new and failing.

The school will be purposively chosen however the teachers will be chosen randomly from the register of teachers currently on staff. The sample will be chosen from six government secondary schools namely: Marcus Garvey Technical High (Non- traditional, failing), York Castle High (Traditional, co- educational), Ascot High (new, non-traditional), Cedar Grove High (non-traditional co-educational and new experimental) and Kingston college (traditional, single sex). The sample size will consist of 30 teachers as is required for correlational studies (Mills & Gay, (2012). The teachers sample will consist of 30 male and female teachers from each school who are permanently employed for no less than two consecutive years at the current institution teaching at any level from grades 7-13.

The teachers will be randomly selected by placing the names of all teachers currently on role in each school in a bag, and randomly drawing 12 names from each school bag.

Data Collection

The data collection methods that will be used are survey (questionnaires) and interview. The interview will be conducted as phase one of the study and will be conducted between September and October 2016. Six teachers will be interviewed; one from each school. The responses from the interview will help to inform the construction of the questionnaire for phase two which will be done February 2017. The second phase will see the administration of the questionnaire. One questionnaire will be administered to each participant assessing the factors that affect their performance..

2.3. Instrumentation

The instrument will examine each factor under separate headings motivation, employee morale, level of engagement, leadership, supervision, training, teacher quality, efficacy, resources, school culture and climate.

## The instrument that will be used to collect the data will be a survey designed by the researcher to represent the research variable. The instrument will be created by the researcher; however the researcher will consult with validated instruments and adapt items to create the final instrument.

The, Spritzer’s motivation assessment and the Pritchard motivation symptoms questionnaire will be used to create items for assessing whether or not a participant had motivation problems.

## The survey instrument (questionnaire) will be used to collect the necessary data because as Bastik and Matalon (2004) contends, it is suitable for collecting quantitative data, which is more objective in analysis. If the information collected is to be used to make policy decisions then it is necessary for the information have genaralizablity.

The researcher chose to create the instrument because the ones that were available were deemed unsuitable (by the researcher), for the purpose of the study based on the differences in context created and used( United States) as opposed to the Jamaican context where for example teachers are not licensed by state and also there are no state board examination for students and or teachers well as the cultural context of the study. Other situational variables that are different and which would warrant the creation of a new instrument include but are not limited to the type of examinations that the students do, the mixed race of the teachers (some questionnaires ask questions on the teachers race), the laws, regulations and policies, certification boards, student progression through the school system, teacher requirements for employment, tenure agreement etc. All of the aforementioned and more are either explicitly or implicitly stated on the instruments.

Informed Consent and Confidentiality

To ensure that participants are aware of the nature and scope of the research and the confidentiality of the information provided and in keeping with the University of the West Indies ethical research standard, participants will be:

1) Informed that they are being asked to participate in this research. This will be done by interview with the principals and teachers as well as formal introductory letter from the University addressed to the Ministry of Education and copied to each school. Additionally the Researcher will provide a letter to the principal outlining the research, issues of confidentiality and use.

2) Provided with an explanation of the purpose of the research and its duration. This will be explained in the letter and in the interview.

3) Provided with a description of the procedures to be followed as well as any possible risk and or benefits to themselves or others related to them. This also will be in the letter and explained at the interview.

4) provided with information on the treatment and maintenance of confidential material. This will be explained at the interview and in the letter. Additionally at the beginning of data collection participants will be reminded of this orally.

5) provided with the name, address and telephone number of a contact person as well as a statement stating that participation is voluntary, that they may discontinue at anytime and therefore refusal to participate will not prejudice any decision pertaining to them or benefits that would accrue to them. This information will be in the letter, and told to the participants at the onset of data collection.

PROCEDURE FOR DATA COLLECTION

Step 1- The Interview schedule will be created validated and administered to six teachers ( ten percent of the sample). This will be done in

Step 2- The questionnaire will be designed and will be validated by consultation with subject expert and research lecturers, colleagues.

Step 2 The through pilot testing with a representative sample of the population. The consultation will take place in the lecturers’ office at the School of Education, University of The West Indies, . The lecturers who will be consulted are Dr. Gentles, Dr. Cook and Dr. Thompson. This will be done between November and December 2017; date and time are to be scheduled.

STEP 2 - Administer the Questionnaire

Once the questionnaire has been validated and adjustments if any made then the collection process moves on to step 2. This will involve administration of the questionnaire to the teachers.

The teachers will be given the questionnaire on the Monday of the relevant week and the researcher will collect them on the Wednesday. The questionnaire is short and so should not require a lot of the teachers’ time.

STEP 3 -

ANALYSIS OF DATA

The data will be analyzed using the IBM SPSS statistic 20 software version 12. A correlation study requires the data to be analyzed using specific statistics. Consequently descriptive statistics as well as Linear regression, chi square, ANOVA, T-Test and factor analysis will be used.

The data will be first analyzed using descriptive statistics. Descriptive statistics provides information on the characteristics of the sample as well as information on the distribution of scores on continuous variables such as age or total value of education. Additionally the output from the descriptive statistics provides basis for satisfaction of assumptions such as normality of distribution of data, as well as for other statistical test such as t-test and analysis of variance (Pallant, 2005, p. 51).

As this type of study is correlational and requires the prediction of one outcome from multiple predictor variables the multiple regression statistical technique will be used. Linear regression is used to predict the value of a variable based on the value of another variable. The variable being predicted is the dependent variable (teacher performance) , the variable that is used to predict the other variable's value is called the independent variable (performance determinants).

The major advantage of using multiple regression analysis is that predictions can be made without conducting an experimental research. This is particularly important as in this research the predictor variable qualification and experience cannot be manipulated. In addition to the multiple regressions the other statistical tests that will be conducted include ANOVA, T-Test, and chi square.

The researcher is interested in determining if a relationship exists between the variables and the strength of such relationship; consequently a chi square test will be done to determine if there is a relationship between teacher performance determinants and teacher performance as measured by the performance of their students in final examinations. The External final examinationwas used for both primary and secondary schools as it is posited to be more objective than the end of year examination which would have been created by the school. The External examination would not have been subjected to an input by the teacher or anyone else at that institution would have had no input in its creation. Chi square is a good way to make this determination as

Teacher’s years of experience and students examination results are already interval or ratio variables. However while they are quantifiable they would still need to be coded for SPSS. Teacher qualification is a nominal or naming variable and therefore cannot be quantified unless it is coded. Therefore the variable qualification will be coded as follows associate degree/ teaching diploma will be coded as 1, bachelor degree as 2, post graduate diploma in education3, master’s degree as 4 and PhD as 5. These would be coded and entered into SPSS to perform the statistical test.

Factor analysis will be used to create themes or categories from the items on the questionnaire. Factor analysis allows you to condense a large amount of data into more mangeable size. It allows for the development of scales and measures to identify the the underlying structure (Bastick & Matalon, 2007; Pallant, 2005). The following scales were subsequently developed

Analysis of Variance (ANOVA) will also be used in the analysis of data. The two way and three way analysis of variance (ANOVA) allows for testing the impact of two or more independent variables on one dependent variable. The advantage of using the ANOVA is that it allows you to test for an interaction effect or where you suspect that one or more variable has an effect on another variable. The assumption in this research is that teacher performance isaffected by the performance determinants of teacher qualification, years of experience, supervision, training, leadership behavior as well as teacher efficacy.

Future Work

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