IMPACT OF INITIAL TRAINING PROGRAM ON TEACHERS' LEVELS OF
SATISFACTION AND EFFECTIVENESS AT PRIMARY SCHOOLS IN SAINT LUCIA

Dissertation Manuscript

Submitted to Unicaf University

in partial fulfillment of the requirements

for the degree of

Doctor of Education (EdD)

By Angelina Phera Polius

August 2022

Approval of the Thesis

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Doctor of Education (EdD)

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Abstract

IMPACT OF INITIAL TRAINING PROGRAM ON TEACHERS' LEVELS OF SATISFACTION AND EFFECTIVENESS AT PRIMARY SCHOOLS IN SAINT LUCIA

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The need to evaluate teacher preparation programs to identify gaps and improve program quality has been well established in the literature. Notwithstanding, the two-year initial training program in Saint Lucia has not undergone any rigorous appraisal. In light of this, the current study adopted a mixed method concurrent triangulation design to evaluate the initial training program to determine its impact on graduates' perceived level of satisfaction and effectiveness in the classroom. Driven by a systems, stakeholder and social cognitive theory, this study was guided by five research questions. An adapted questionnaire was used to purposively survey 112 primary school teachers while open-ended questions and interviews were utilized with a sub sample of survey participants, 16 principals, six district education officers and two curriculum officers. Obtaining data from multiple sources and methods enabled data triangulation and contributed to the study's trustworthiness. Results revealed a high perceived level of satisfaction with training (M=104.98 or 84%; Std = 14.070) and high perceived level of classroom effectiveness (M=78.87 or 83%; Std =8.065). Bivariate correlation statistical analysis shows positive relationships between initial training and respondents' level of satisfaction (r=0.540; p<.001) and effectiveness in the classroom (r=0.687; p<.001). Findings also show that insufficient practical teaching opportunities; inadequate mentoring; lack of classroom and cultural relevance in some courses; and teacher educators' failure to practice what they preach are some major challenges encountered during initial training. The findings further reveal that participation in PLCs, the provision of resource

materials and pedagogical support are some ways by which teachers are supported to enhance their classroom effectiveness. Factors such as examination pressures, teachers' limited classroom management skills and student misbehavior negatively affect teachers' classroom practice. Based on the findings, it is recommended that where gaps exist, program components be redesigned to prepare teachers more effectively for the realities of schools. Current findings can assist in the cultivation of systems of partnerships among key stakeholders, policy development and implementation to overcome program deficiencies and contribute to teacher efficacy. Further research can investigate the existing mentoring approach and teachers' practice post initial training to determine its impact on students' learning outcomes and overall effectiveness.

**Keywords**: initial teacher training, satisfaction, effectiveness, teacher educator

## Declaration

I declare that this thesis has been composed solely by myself and that it has not been submitted, in whole or in part, in any previous application for a degree. Except where states otherwise by reference or acknowledgment, the work presented is entirely my own

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Dedication

It is with immense pleasure that I dedicate this doctoral dissertation to all the teachers in Saint Lucia and across the Caribbean region with whom I have interacted, and whose professional and personal lives I have positively impacted over the years.

Acknowledgments

Table of Contents

List Of Tables

## List Of Figures

# List Of Abbreviations

Chapter 1: Introduction

## 1.1 Introduction to the Section

Teacher quality has for a very long time been considered a critical dimension in students' academic performance and a major indicator of the quality of a country's education system. It is for this reason that schools and education districts continue to implement a myriad of reform initiatives to build teachers' instructional capacities. More recently, the effectiveness of teacher preparation programs to produce high-quality educators for effective functioning in today's increasingly diverse classroom has become a primary focus. Across states and ministries of education around the world, there is widespread agreement regarding the importance of evaluating the methods used by institutions in the recruitment, selection, and preparation of potential teachers for practice (Alsalmah & Callinan, 2021; Darling-Hammond, 2017; Feuer et al., 2013; KinkeadClarke, 2015; Ronfeldt & Campbell, 2016; Warrican, 2015). Scholars (Brownlee, 2020; Capello, 2020; Ronfeldt & Campbell, 2016) have also made a clarion call for programs to be examined to determine their overall impact and to identify gaps in the teacher education process. This shared recognition to appraise program components, teacher preparation pathways as well as examine the experiences of program completers and stakeholders in the teacher preparation process, stems to a large extent from the responsibility that teacher education programs have in producing effective teachers for classroom practice.

In light of the foregoing, this study primarily sought to evaluate an initial teacher training program to examine its impact on program graduates' levels of satisfaction and effectiveness in primary schools across the eight education districts in Saint Lucia. A second objective of this research was to determine a relationship between participants' level of satisfaction with the training received and their perceived effectiveness in the classroom. Challenges associated with the initial training program as well as suggestions for addressing those challenges were explored.

It was also important to glean data on the kinds of support that teachers receive on the job and other factors that may positively or negatively impact their classroom practice. The voices of school principals, district education officers and subject curriculum specialists as key stakeholders in the teacher education process were captured to gain an insight into the deficiencies of the program and suggestions for improving overall program quality.

In this chapter, it is incumbent upon the researcher to introduce the problem with a general overview in order to establish a context to the problem under investigation. The researcher then proceeds to discuss some of the criticisms that have been levelled at teacher education programs, concerns held regarding their impact, as well as educational trends and factors that have fueled the need f o r program evaluation. Furthermore, the researcher describes what has been done both locally and globally in the field to help build adequate b a c k g r o u n d that is necessary to understand the larger setting and need for the investigation. Next, the researcher states the problem, the overarching purpose of the study, and identifies the theoretical perspectives upon which the current study is hinged. This is followed by an outline of the research aims, objectives, research questions and hypotheses. The methodology and design employed in conducting the research project are then briefly described. The chapter continues with a discussion on the study significance, an explanation of the importance of this investigation and how the findings will contribute to both theory and knowledge in teacher education program evaluation. The chapter concludes with some important assumptions and study delimitations.

## 1.2 Background to the Study

The quality of a country's education system to a large extent depends on the quality of its teachers and ultimately the quality of its training programs (Feuer et al., 2013; Darling- Hammond,

2017; Kinkead-Clarke, 2015; OECD, 2017a,b). For this reason, programs that prepare and train teachers for classroom practice should not only be at the nucleus of reform initiatives aimed at improving quality education but should also undergo systematic evaluation to judge their overall worth and impact.

Over the past two decades, there have been innumerable attacks, inquires, reviews, reports, and empirical studies on various aspects of teacher education (Bahr & Mellar, 2016; Darling-Hammond, 2017; Feuer et al., 2013; Kinkead-Clark, 2015; Jones & Ryan, 2014; Knott & Cook, 2015; Rowan et al., 2015). For instance, Darling-Hammond (2006) cautions schools of education and teacher training institutions in America against the propensity to "water down" teacher preparation   as the quality of teacher training and reputation of training institutions can be undermined.  In support, Knott and Cook (2015) expressed public disapproval of the many teaching degrees in the United States that lack practical training, and which do not equip teachers with the requisite skills and competencies to teach students in today's burgeoning multicultural and demanding classroom environments. Louden 2008, (as cited in Jones and Ryan, 2014) coined the 101 damnations of Teacher Education as a result of the persistent critiques levelled at teacher education in Australia.   In Louden's view, investigations into the effectiveness of teacher education in Australia must be carried out using cohorts of trainees during initial teacher preparation and followed through into their first five years in the classroom.  Vethamani's (2011) study examined the level of preparation that English Language teacher educators have at the time of appointment, and to identify the kinds of training received prior to their entry into

teacher education and while in the system. The findings revealed that although all 20 participating teacher educators possessed some teaching experience, none of them had received any formal training in teacher education prior to their appointment. It is not surprising that teacher candidates have complained about the failure of faculty to model complex teaching practices that they need to first observe and understand prior to implementing in their classroom settings (Baskan & Karasel-Ayda, 2018), despite the numerous calls in the literature urging teacher educators to adopt more constructivist pedagogies in the preparation of teacher candidates (Morgan & Pytash, 2014). Without formal orientation to teacher education, it is very unlikely that teacher trainers will meet those expectations. Hence, researchers make an urgent call for aspiring teacher educators to be equipped with the appropriate competencies and andragogical skills to perform their role more efficaciously as teacher educators through formal training.

A recent trend in the evaluation of teacher training programs is the increasing shift in focus to program quality and its influence on the performance of program graduates. Erisen and Katmer-Bayraki's (2016) qualitative study which evaluated the quality of a primary school mathematics teacher training program in Turkey found that graduates perceived the program curriculum quite theoretical and deficient in the opportunities for teachers to apply their knowledge and skills in the teaching of mathematics at the primary level. The findings of Ragno's (2013) study which evaluated the effectiveness of an early childhood program as perceived by program stakeholders, call for more robust program evaluation to determine program impact particularly on students' learning outcomes.

Furthermore, new accreditation standards have been developed in response to the increasing demands for better quality education. Australia's new accreditation standards, for

example, mirror high expectations of initial teacher education and to ensure that programs are preparing future teachers with the competencies needed to positively support student learning in K-6 classrooms (Australian Institute for Teaching and School Leadership -AITSL, 2015). According to the standards, teacher preparation programs must collect data within and following completion of a training program to determine its impact on candidates' teaching performance. In a Malaysian context, the introduction of new standards for elementary teachers and teacher educators in 2009 is in keeping with the thrust to accelerate the quality and outcomes of education in the country by improving teacher quality (Goh, 2012). In the United States, the recently revised standards for teacher education represent benchmarks which speak to the definition, role and expectations of teacher educators (The Association of Teacher Education, 2019).

From a regional standpoint, the introduction of learning standards for primary grades in the areas of Mathematics, Social Studies, Language Arts and Science is an effort to improve the quality of teaching and learning toward the realization of the overarching goal of education across all members of the Organization of Eastern Caribbean States (OECS, 2018a). Based on these regional standards, it is the expectation that primary school teachers will be retooled to equip students with essential competences to accelerate their achievement as they progress through the grades and to enhance their chances of success at the secondary level (OECS, 2018c).

It is purported that teacher training programs do not equip new teachers with all the competencies and pedagogies and would thus require ongoing support (Harju & Niemi, 2016; OECD, 2019; Suleiman, et al., 2017).  For example, the findings of Harju and Niemi's (2016) survey which investigated the professional development needs of three hundred fourteen (314)

newly-trained teachers in Finland, the United Kingdom, Portugal and Belgium do confirm this need for support in several areas of the teachers' practice particularly in the areas of problem solving and differentiated instruction.  This implication is consistent with one policy direction of the OECD countries which ensures that teachers, following their initial training, remain competent throughout their teaching career through their engagement in ongoing professional development (Evagorou, et al., 2015; Livingston, 2014).

Critiques and inquiries into teacher preparation in the Caribbean region, albeit mostly undocumented, are no different from those emanating internationally. Many stakeholders have criticized the teacher education programs currently being offered in the region by claiming that the programs fail to prepare teachers for the realities and demands of today's classrooms. It is further contended that some graduates lack the pedagogical skills to provide effective instruction to their charges when appointed.   Additionally, teacher candidates themselves have voiced their apprehensions regarding the theoretical nature of the training program  and teacher educators' failure to practice within the walls of teacher education, the pedagogical practices advocated in their respective disciplines (Clifford, 2010, MindBloom Consulting, 2017; Simon, 2014). Moreover, informal conversations held with several teacher educators both locally and regionally have echoed similar sentiments.

Although there is very little empirical data to substantiate those claims, a few researchers have attempted to offer, through surveys and observations of' practices, a glimpse of what really happens within the walls of teacher education or as Darling-Hammond (2006) dubs it the 'black box' of the program. One such research is George and Quamina-Aiyejina's (2003) mixed methodological study which examined the perspectives and practices of 70 teacher trainees in a Trinbagonian context. The authors found that trainees expressed discontent with the quality of

mentoring and pedagogical support provided by their co-operating teachers and complained about the stressful nature of the teaching practicum even though they value it as an important component of their training. Additionally, the authors observed that large class sizes, syllabus density and heavy workload made it difficult for teacher educators to model interactive and cooperative learning strategies during course delivery.

Superville (2017) surveyed the characteristics of an effective teacher as perceived by major stakeholders in Trinidad and Tobago and found that the ability to demonstrate strong pedagogical skills, care, commitment, and good communication skills are valued traits of effective teachers. The author appeals to teacher training institutions to provide more opportunities for trainees to transfer theory into practice and to engage in ongoing evaluation to determine teacher effectiveness.

In a case study Michell and Kent (2017) examined whether the skills teacher candidates acquired as part of their initial teacher education in the Diploma in Education (Dip Ed) program in Jamaica are transferred to the classroom setting. This was done to identify possible program gaps and to point to areas that need strengthening. Data obtained from 6 program graduates

revealed that while the program provided most of the candidates the requisite skills in lesson planning and technology use, as observed in their classroom teaching, candidates expressed difficulty in applying classroom management and assessment to their classroom teaching. Previously, Onyefulu (2001) as part of a doctoral dissertation found that the overall quality and support for the B.Ed. Business Education Programs in Jamaica left much to be desired and that program graduates did not possess the attributes and competencies as expected by the principals of schools where they taught.

Shifting the focus from teacher candidates to what really happens within the classrooms of teacher preparation, some researchers including Ranjbari et al. (2020) have made a request for research which investigates the teaching and learning practices of teacher educators. Joseph and Mitchell (2019) examined the perceptions that university-based teacher educators (N=112) at one educational institution in Trinidad and Tobago hold of themselves as part of a professional group. While the majority of teacher educators expressed no feelings of isolation or difficulty forming an identity as teacher educators, they identified several barriers to the effective implementation of their role as teacher trainers. According to the teacher educators, the extremely high level of fatigue and stress associated with their work emanates from large classes, lack of teaching resources, heavy workload and the constraints of time. They further reported that due to these challenges it becomes extremely difficult to provide individualized feedback and mentoring opportunities for trainees or engage in collaborative planning and educational research.

In a St Lucian context, several key players in education (Clifford, 2010; Simon, 2014) including the former Minister of Education and school principals have expressed numerous

concerns regarding the effectiveness of and impact of the teacher preparation programs, claiming that the programs do not prepare teachers for the realities and demands of today's classrooms. It is further contended that some graduates lack the pedagogical skills to provide effective instruction to their charges when appointed. Additionally, teacher candidates themselves have voiced their apprehensions regarding the theoretical nature of the training program and teacher educators' failure to practice within the walls of teacher education, the pedagogical practices advocated in their respective disciplines (Clifford, 2010; Simon, 2014). Moreover, the numerous calls in the literature have urged teacher educators to adopt more

constructivist pedagogies in the preparation of teacher candidates (Morgan & Pytash 2014). Empirically, few studies (Clifford, 2010; Simon, 2014) have captured the views of teacher trainees and course instructors on various aspects of the Associate Degree in Education program components.

As part of her doctoral dissertation, Simon (2014) adopted a qualitative research paradigm to capture the voices of a group of certified teachers and teacher trainers on how the Department of Teacher Education and Education Leadership (DTEEL) prepared trainees for using the national curriculum. There was consensus between the two groups that teacher training was deficient in terms of providing curriculum training to teacher candidates. Teachers reported challenges navigating, interpreting and implementing the Language Arts curriculum in the classroom post training. Due to this lack of attention in developing trainees' familiarity with the curriculum they were required to implement upon their return to the classroom, teachers expressed a lack of confidence in manipulating the curriculum document and applying Language

Arts strategies acquired during training to their classroom settings. Furthermore, inconsistencies in approaches being used in the teaching of Language Arts as prescribed by the national curriculum and the teacher education curriculum exist. Other constraints which according to teacher trainers hindered their ability to prepare teacher candidates more successfully to implement best practices include the highly theoretical and exam-driven nature of the program. From the perspective of the teacher trainers, the absence of collegiality, lack of collaboration and disconnectedness among stakeholders in the education system explain some of the gaps in teacher training particularly in regard to curriculum training and teaching practice.

In an attempt to equip teacher candidates with new literacies, deliver instruction that is mediated by new technologies and ensure her own professional development through action

research, the researcher decided to incorporate web-based formats (discussion boards and blogs) into a semester-long content area methods course. A qualitative case study was adopted to explore the new literacies experience of a group of seven secondary school teacher trainees who completed the course. Participants felt that the discussion board created a safe environment which allowed for the clarification and sharing of ideas, understandings, learning, and content area strategies in ways that were not possible in a traditional face-to face classroom setting. The results further reveal that the weblog's facility to upload or embed their recorded micro teaching lessons enabled repeated viewing of themselves in the teaching act. Multiple viewings of their own lessons and those of their peers according to the participants, fostered collaborative and deeper reflection of their teaching performance (Polius, 2015). Based on the results, the researcher called for a restructuring of the teacher education program to reflect preparation of future teachers using a range of web-based formats.

In other studies (Clifford, 2010; MindBloom Consulting, 2017) teacher trainees expressed a need for more opportunities to practice in real classroom settings and for teacher educators to model quality pedagogies. The call by teacher candidates for additional practical teaching opportunities stems from observations made regarding the highly theoretical nature of the program to which participants in Simon's (2014) research alluded. Evidently, the deficiencies in the teacher education programs outlined in the limited research in the local context suggest a need for review in terms of program curriculum, modes of delivery and program links to the realities of Caribbean classrooms.

Admittedly, some attempt has been made to review the program that offers initial teacher training to both primary and secondary school teachers in recent years. For instance, workshops held with teacher educators and other stakeholders have focused on the examination of program

documents with a view to identifying gaps in the professional training of future teachers. While the results of document analyses and reviews of course outlines can give an insight into the quality and content of courses, as well as the prerequisite knowledge and skills new trainees should bring to the teacher preparation experience, this approach on its own, is limited and does not provide sufficient evidence to determine program effectiveness.

Furthermore, educators recognize that the magic of teacher preparation in the application of trained teachers' theoretical knowledge into desirable student learning outcomes, happens in the classroom either during field placements or on the job as full-time teachers. This magical experience will be unveiled however, only when it is investigated, and teacher educators become aware of the impact of program components on student teachers' preparation. With an increase in policies that hold teacher preparation programs accountable for their performance, Jareno et al. (2021) recommend that institutions assess the quality of their programs through student evaluation and satisfaction survey. The results should be used by teacher educators, according to Jarena and colleagues (2021), to make changes to instruction and improve overall program quality.

Notwithstanding all initiatives that have been undertaken either to glean the perspectives of various stakeholders in the teacher training process, or respond to calls through modification made to instructional practice as was done by Polius (2015), no one study has focused exclusively on evaluating the Associate Degree in Education (ADE) program to determine its impact, identify challenges associated with various program components and measures that can be taken to

address those perceived challenges from the perspectives of key stakeholders. It is against this background that the researcher sought to evaluate the initial or pre-service training program offered to primary school teachers in Saint Lucia.

### 1.3 Statement of the Problem

Reform efforts aimed at redesigning existing teacher education programs to better prepare new teachers, have been gaining considerable momentum globally. Part of the reason lies in the fact that teacher effectiveness is seen as the chief cause of student achievement and that teacher preparation and continuous teacher professional development are perceived as the primary determinants of quality instruction (Darling-Hammond, 2006; Feuer et al., 2013: Kinkead-Clarke, 2015; OECD, 2017b; Warrican, 2015). Moreover, the persistent criticisms and nature of public inquiries into teacher education suggest interminable concerns of all stakeholders regarding the quality and effectiveness of teacher preparation programs and their impact on teachers' classroom practices (Franco, 2017; Meyer, et al., 2014; Michell & Kent, 2017; Morgan, 2014; Niemi, 2013) and students' learning outcomes. Additionally, recent educational reforms and discourse in teacher preparation programs, increased school accountability, and the introduction of standards for both elementary teachers and teacher educators are all critical forces that have precipitated the need for program review and evaluation.

Empirical evidence has clearly shown that teacher education evaluation is pivotal to improving teacher preparation and quality teaching. A review of the scholarly literature yields a

paucity of documented research on pre-service program evaluation and its influence on teacher performance particularly during program graduates' first five years in the profession at the elementary level.  For instance, Nazar and Nordin's (2020) cross sectional quantitative study examined the impact of an in-service teacher training program on English Language teachers' performance. Although narrow in the sense that the training program was discipline-specific, the findings are significant and noteworthy in this research.  The results of the study indicate a

positive correlation between the teacher training program and teachers' job performance. Furthermore, differences exist in the instructional practices of trained in-service teachers as opposed to untrained in-service teachers. Trained teachers were reported to demonstrate effectiveness in their ability to explain key concepts, manage student indiscipline, implement contemporary teaching ideas and strategies and create friendly classroom environments for their pupils compared to untrained teachers.

Abdul and Awan (2019) in their study found that teachers use their pedagogical content knowledge and teaching skills to positively influence students' performance following their training.

In Saint Lucia,  there exists no empirical evidence  which speaks specifically to teachers' levels of satisfaction  with the initial training received  or how teachers  perceive their effectiveness in the classroom post initial training.  However, reports generated from  research highlight  the integration of information and communication technology (ICT) in education (Millar, 2017) and  inclusive education (Hodge, 2017; Lubin, 2020) as two focal areas  about which educators as well as students themselves have expressed satisfaction, apprehension  and the need for additional training.  In a survey which examined the status of ICT in education following a government's intervention of 'one laptop per child' program  Millar (2017) found that participating  teachers and principals  expressed  some degree of satisfaction  and apprehension

with the program. Secondary school teachers and principals expressed a greater awareness of the use of ICT in education and acknowledged anecdotally its positive impact on student learning outcomes. According to the teachers and school principals, teaching with ICT facilitates student retention, fosters the development of higher order thinking skills; promotes active student engagement and collaborative work; and encourages student autonomous learning.

14

Students too expressed certainty about the potential that learning with technological tools have for their academic life. According to Millar (2017) students strongly believe that technology mediated instruction will develop their digital skills, make learning fun and concepts easier to understand, as well as prepare them for the world of work. Notwithstanding, teachers and principals voiced anxieties and mixed views about the program's effectiveness. According to the survey, both teachers and principals identified several gaps in their ICT competence, citing the lack of pedagogical knowledge on how to best integrate new technology in education as the major drawback. Evidently, as part of initial teacher preparation, it is important that teachers are first taught how to plan for and deliver instruction with new technologies. This would be most effective if future teachers are explicitly taught how to use a wide range of technological tools across all subjects rather than taking 'a stand-alone' ICT course as is practised in the Associate Degree Program. Unquestionably, pedagogical support and training are needed post initial training through teachers' engagement in ongoing professional development workshops in order to realize the full potential that ICT has for education in the 21$^{st}$ century.

During field-based school placements and upon completion of their initial training, teachers are expected to work in diverse classroom settings with children of mixed abilities, learning styles and needs.   It is therefore reasonable to assume that part of the training of future classroom teachers would include preparation on how to work with diverse groups and implement some inclusionary practices  in an effort to make quality education more accessible to all learners. However, if teachers do not understand the concept of inclusive education and lack related knowledge and skills, it then becomes very difficult to work with all children in inclusive classroom environments. This view is supported by Hodge (2017) and Lubin (2020) in their

investigations involving primary and secondary school special education teachers in Saint Lucia. In both studies, some teachers indicated that while they obtained a general overview of  and exposure to special education  as part of their initial training,   they were not trained to implement inclusive practices and  instructional provisions for children with disabilities or special needs. Nearly half (49%) of the teachers who  work with children with disabilities  in both primary and secondary schools had no training in special education (Lubin, 2020).  The findings of both studies make an urgent appeal for inclusive education courses to become a core curricular priority for pre-service  teachers in Saint Lucia and the wider Eastern Caribbean if teachers are to be effective on the job.

Despite the call  to evaluate programs that offer professional development and training, the 2-year Associate Degree in Primary Education program in Saint Lucia has not been evaluated. Yet, the Ministry of Education mandated that the Teachers' Training College develop a new program to better meet the diverse professional and training needs of future teachers. Admittedly, some courses have been reviewed and a few teacher educators have adopted a more constructivist approach to course delivery.  Still, the kind of robust program evaluation that is needed to determine program impact and whether specific program components are meeting their

intended purpose is either non-existent or deficient. In light of the aforementioned gaps, it is imperative that the current program be evaluated as data gleaned from the evaluation will be used to improve program quality; inform teacher education policy and practice as well as give direction to the new Bachelor in Primary Education degree program that is currently being offered.

There are several gaps in the literature that this mixed methodological study attempts to bridge. The study sought to evaluate more rigorously the Associate Degree in Primary Teacher

16

Education Program in Saint Lucia to determine its impact on program graduates' perceived level of satisfaction and classroom effectiveness  post training.   Identifying   challenges faced  by teachers during their initial training  and suggestions for improving overall program quality also formed part of the study's focus.  The researcher was also interested in  finding out the various forms of support provided to newly trained teachers to enhance their classroom effectiveness and to identify possible factors, if any, that may negatively impact their classroom practice. Moreover, the dearth of research evidence to confirm the relationship between training and teachers' perceived level of satisfaction and effectiveness in the classroom is another reason for conducting this investigation.

## 1.4 Research Aims and Objectives

The overarching aim of this research was to determine the impact and effectiveness of the initial training on primary school teachers in Saint Lucia using Guskey's (2016) first four critical

levels of evaluation. To achieve the intended research, aim and purpose, the study set out to accomplish the following objectives.

1.  (a) To determine teachers' perceived level of satisfaction with the training they received

    (b) To determine teachers' perceived level of effectiveness in the classroom following their initial training

2.  To establish a relationship between teachers' level of satisfaction with training received and their effectiveness in the classroom

3.  To identify challenges associated with the initial teacher training program

4.  To explore possible measures for improving the initial teacher training program

17

5.  (a) To identify various forms of support provided to newly trained teachers to enhance their effectiveness in the classroom

    (b) To identify possible factors that negatively impact teachers' classroom practice following initial training

**1.5 Research Questions and Research Hypotheses**

**Research Questions**

The following research questions are formulated to glean data to achieve the intended research aim and purpose.

1.  (a) What are teachers' perceived level of satisfaction with the training received ?

    (b) What are teachers' perceived level of effectiveness in the classroom following their initial teacher training?

2. What is the relationship between teachers' level of satisfaction with the initial training received and their effectiveness in the classroom?

3. What challenges are associated with the initial teacher training program?

4. What measures can be taken to address the challenges associated with the initial teacher training program?

5. (a) What forms of support are provided to newly-trained teachers to enhance their level of effectiveness in the classroom?

   (b) What possible factors negatively impact teachers' classroom practice following initial training?

**Research Hypotheses**

Of interest to the researcher was the relationship between initial training and program teachers' perceived level of satisfaction and their level of effectiveness in the classroom. Hence, the null hypotheses related to the second research question are:

1. **Ho$_1$** There is no relationship between initial training and teachers' level of satisfaction.

2. **Ho$_2$** There is no relationship between initial training and teachers' level of effectiveness in the classroom.

**1.6 Nature and Significance of the Study**

Nature of the Study

A mixed method approach is considered the most appropriate for conducting the proposed study due to its triangulation and corroboration facility; ability to enhance, illustrate or clarify the results obtained as opposed to a single method; and finally, the capability afforded to extend the scope of the research (Creswell & Creswell, 2018). Combining the strengths and shortcomings of both quantitative and qualitative data collection and analysis procedures allows for the enhancement and validity of the data.

The proposed study is situated in strong theoretical framework which drew theoretical principles and tenets from several theories. Firstly, Bandura's Social Cognitive Theory posits that individuals' interaction with their environment, the behavior of others and their own cognitive abilities act as key determinants to their development (Miles, 2012). The theory emphasizes learning through observation and persons' beliefs about their capabilities or self- efficacy to use their knowledge and skills effectively to perform a task. Bandura's Social Cognitive Theory is quite relevant in the teacher training and development process particularly in terms of teacher educators' modeling of important pedagogical skills and strategies as well as nascent teaching behaviors during course delivery and field-based practical assignments.

Another theory upon which the current study is hinged is Stakeholder Theory. According to stakeholder theory advocates (Freeman et al., 2018; Langrafe et al., 2020), there is need for frequent consultative sessions or meetings with key stakeholders and obtain their input in order to contribute more holistically to the overall success of the organization. For teacher education, it means that the perceptions of various stakeholders must be garnered as their contribution is significant to shaping and bolstering the efficacy of training programs for future teachers.

Additionally, the study drew upon ideas from two evaluation models namely Guskey's criteria for evaluating professional development programs (Guskey, 2016) and the New World Kirkpatrick Model 4-level (Kirkpatrick & Kirkpatrick, 2016) evaluation model. According to Guskey, five critical levels of data must be collected and analyzed to determine the overall impact more adequately and to improve the quality of programs. The model proposed by the New World Kirkpatrick Model, although represents 4 levels, is very similar to Guskey's five critical levels and captures the very same sources of data to evaluate professional development programs. Bandura's Social Cognitive Theory, Stakeholder Theory, Guskey's Evaluation Model and New World Kirkpatrick Model all have their roots in a Systems Theory (Mele et al., 2010; Skyttner, 2005). According to a systems theoretical perspective, teacher preparation cannot be fully understood and examined in isolation. Instead, teacher training institutions are viewed as an essential element of the larger education system of the country, and to achieve the common purpose of teacher effectiveness and improved student learning outcomes, they must interact with multiple environments and stakeholders.

An adapted version of a questionnaire survey developed by Uysal (2012), a semi-structured interview and open-ended questionnaire were the three main protocols employed to glean data from program graduates who work as full-time primary school teachers. Both a systems and stakeholder theoretical approach warrant the participation of several stakeholders in this research. Hence, semi-structured interviews and open-ended questionnaire were employed

to glean data from principals of primary schools, education officers and curriculum officers to corroborate data from program graduates. Quantitative data was collated and analyzed using SPSS software. A correlation coefficient was calculated to determine the

relationship between initial training and teachers' levels of satisfaction and effectiveness in the classroom. Qualitative data were analyzed using both deductive and inductive approaches.

Significance of the Study

Increasing focus on teacher quality and accountability has led scholars, ministries and schools of education to take a closer look at the efficacy of teacher preparation programs in producing teachers who possess strong pedagogical skills and can make a difference in the academic lives of their students. Moreover, the clarion call in the scholarly literature for programs to evaluate the methods used in preparing future teachers make this research and other similar studies quite valuable. As a direct response to the innumerable calls to evaluate programs that offer professional training and preparation, the findings of this study will contribute to the existing body of knowledge on program evaluation in a teacher education context.

Also, the Associate Degree in Education (ADE) Program has been the main entry level certification for candidates who aspire to gain teaching positions at the primary and secondary school level in Saint Lucia and across other OECS states. This program which provides initial teacher training has not been appraised. Admittedly, periodic course reviews have been conducted at the Joint Board of Teacher Education (JBTE) level, however, the rigorous evaluation needed to determine program impact and overall worth had not happened prior to this investigation. Given that this is the very first research study to empirically appraise the initial teacher training program in Saint Lucia, the findings will help bridge the existing research gap

and provide several stakeholders including the Ministry of Education and the Department of Teacher Education and Education Leadership (DTEEL) a lens through which they can approach

the training of future teachers to ensure better teacher quality and improved student performance at the primary level and beyond.

To gain an in-depth understanding of the overall impact of initial training on program graduates' level of satisfaction and classroom effectiveness as well as the challenges associated with the training, required the application of a multiple theoretical approach and perspectives of various key stakeholders who play a quintessential role in the teacher preparation process. Not only do the findings add to the limited studies that have applied a stakeholder and systems theory to program evaluation in a teacher education context, but more significantly, the research findings provide valuable insights on the effectiveness of program components from the perspectives of program graduates as well as principals, district education officers and curriculum officers who work closely with teachers in their respective schools and districts with a view to improving their classroom practice. Obtaining such a comprehensive understanding of the impact of the initial training program will no doubt contribute to the trustworthiness and replicability of the research.

Furthermore, the results will certainly provide valuable information that will assist in (re)shaping and reimagining the content, structure and delivery of existing programs or inform the development of new ones. An awareness of the deficiencies inherent in the Associate Degree in primary education program will add value to the new Bachelor in Primary Education degree program particularly in terms of curriculum; program delivery methods; nature and structure of

the practicum; the approach to be taken to prepare mentors for the practical teaching period; and the kinds of partnerships to be built with key stakeholders to ensure effective teacher preparation. In other words, the study's findings can serve as a catalyst for effecting necessary

changes to program components in a bid to prepare teachers more adequately for effective classroom practice.

Teacher educators - both college and school-based - need to be cognizant of the influential power of their characteristics, attitudes and instructional practice on the learning and future development of teachers whom they prepare or mentor while in training. The guidance and support or lack thereof provided to new teacher candidates during teacher preparation can help to determine their motivation to teach as well as their future classroom practice. When course instructors for example are aware of the impact that their teaching methods and styles have on future teachers, they will augment their practices to better meet the professional and learning needs of the teachers. Thus, the findings of this study will serve as valuable feedback to inform the teacher education process.

The findings of this mixed method research are also significant to the program graduates and other stakeholders in the teacher preparation process. Very little is known about how teachers perceive their initial training and the extent to which they think that the program has met their professional training needs as well as prepared them for the classroom. Moreover, an examination of possible gaps in initial training will inform teachers, school principals and other school officials of possible target areas for professional development of new teachers post initial training. The findings also contribute to the body of knowledge regarding the possible school-related factors that make it difficult for teachers to transfer to practice student-centred pedagogies to which they were exposed during their initial training. New teachers need ongoing

support to  positively impact students' learning outcomes and grow professionally.  In this regard, the findings of this study have implications for the development and or revision of

induction and professional development programs to support newly trained teachers particularly during their first few years in the profession.

Feuer et al. (2013) and Jareno and colleagues (2021) reiterate the need to evaluate programs that prepare teachers by purporting that the process provides pertinent information for the enhancement of training preparation policy and practice.  An important significance of the findings of this study speaks to the revision of existing teacher education policies and the development of new guidelines related to partnership building, induction for beginning teachers, and professional development of new teachers. These policies will inform the establishment of more structured programs geared towards developing the pedagogical and professional skills of new teachers and to ensure their continuous learning and development in the teaching profession.

Educational researchers might find the study results and implications  as a springboard upon which they can conduct further investigation.  For instance, the study sets the stage for evaluation of other programs that are being offered locally such as the Associate Degree in Secondary Education and the Diploma in Education program.

To sum up, the findings of this study can potentially provide pertinent data to  teacher training programs, school and education districts,  teacher educators, policy makers and educational researchers  as they plan and implement interventions aimed at improving the quality of teachers that schools receive.

## 1.7 Assumptions and Delimitations

Like every other research, there are some important assumptions and delimitations related to this mixed method study that necessitate highlighting.

Assumptions

In this study, the researcher made certain assumptions about various elements in the research including sampling, data collection, and statistical analysis technique. One main assumption that would inevitably impact the validity and trustworthiness of the research results speaks to the data collected from research participants. The researcher assumed that as program graduates reflected on their two-year initial training experience, they would respond to items in the questionnaire truthfully and honestly. Also, qualitative data obtained through semi-structured interviews and open-ended questionnaire items conducted with teachers, school principals, district education and curriculum officers represented a true reflection of teachers' professional practice and what obtained at schools and education districts.

Selecting an appropriate sample size was necessary given the fact that the research was concerned with hypotheses testing.  Hence, the researcher assumed that the *a priori* analysis conducted using GPower software would have yielded a sample size that was representative of the population of program graduates.

A third assumption made related to the statistical hypothesis technique used to determine a relationship between the independent variable (initial training) and dependent variables (teachers' levels of satisfaction and effectiveness).  The researcher ensured that all assumptions related to Pearson moment of correlation coefficient were met prior to using the statistical technique to analyze the quantitative data.

26

Delimitations

Study delimitations are those boundaries that the researcher deliberately sets for the research in terms of what to include and exclude. The following criteria were considered in setting the parameters for the research: program type or target population, period of completion, and school of practice.

The sample selected for the study represents only teachers who successfully completed the Associate Degree in Primary Education Program within the period 2012-2019 and at the time of data collection taught a full-time class at primary schools in Saint Lucia. I purposely excluded program graduates who specialize in the teaching of French or Music at the Primary level for which initial training was not provided as well as those who are appointed at a secondary school. The decision to exclude these two groups of teachers was based on two reasons. First, it was unethical to determine the teachers' perceptions on a subject or program for which they either received no formal training or did not pursue. Second, while these two groups could have provided some data for the research, for the most part, they would not be able to respond as expected to the items on the questionnaire that required them to speak to their practice in the core areas of Language Arts, Science, Math and Social Studies taught at the primary level.

Evidently, the need to better manage the data and ensure that the purpose of the research was achieved, served as another reason for the exclusion.

27

**1.8 Definition of Key Terms**

Some terms and constructs have multiple meanings and can be interpreted in different ways by different people. Therefore, the terms defined in this section  and used throughout the study help to ensure common understanding  and interpretation.

1.  Associate Degree in Primary Education:  This is a program designed  to provide initial or preservice training to teacher candidates in subject content, pedagogy, and practical teaching.   Candidates who pursue the primary program are prepared to provide instruction to children at the primary level in the four core areas of Mathematics, Language Arts, Science and Social Studies.

2.  Initial Teacher Training :  a process that is designed to prepare teachers for  classroom responsibilities including but not limited to lesson planning and delivery; designing learning experiences for students; creating positive learning environments; managing classroom; assessing and monitoring student learning; and working with families . This process of preparation is meant to equip teacher candidates with the competencies and skills  needed to function successfully at the beginning or entry level of their teaching career.

3.  Teacher Educator:  a university faculty, trained classroom-based educator or other professional involved in the training and development of teachers during their teaching career.  Teacher educators are classified as classroom-based (such as mentors or co-operating teachers in schools of placements) and university or college-based (such as those involved in the teaching and delivery of the program at the initial teacher training institution)

28

4.  Teacher Education:  all activities that either  prepare, support, or provide ongoing professional development to enhance teacher effectiveness throughout teachers' career

5. Teacher Candidate: a pre-service teacher who is enrolled in a teacher preparation or an initial training program. A teacher candidate is also referred to as a student teacher or teacher in training.

6. Program Graduate: a newly-trained teacher who has successfully completed initial teacher training and functions as a full-time classroom teacher.

7. Teachers' Level of Satisfaction:  the extent  to which teachers are pleased or satisfied with the 2-year initial training they received in terms of  the program's content, the methods used in  the delivery of courses; opportunities for developing their practical teaching skills;  how their learning and performance are assessed;  program structure and overall program quality.

8. Teachers' Level of Effectiveness:  a measure of the quality of the initial training program in terms of how program components have contributed to the teachers' level of effectiveness or success in the classroom.  The ability of the classroom teacher to design and implement interesting materials and activities; plan and teach lessons; maintain positive learning environments; and use a myriad of instructional approaches and strategies to produce desirable student learning outcomes. These outcomes may be improvements in attitude toward school, subject area, academic performance, reading or writing skills.

9. Input: the substance and processes of teacher preparation programs such as program content and curriculum, instructional and administrative support, instructional material

and resources as well as the attributes and characteristics of teacher candidates such as their academic knowledge, beliefs, and attitudes towards the teaching profession.

10. Process: the operations of teacher education including the teaching learning environment created, program delivery methods utilized, assessment procedures, practical teaching opportunities, micro teaching and mentoring; all of which interact with the input to influence the quality of the output.

11. Output: The product exported into the environment, that is, the quality of teachers; graduates' teaching performance; pedagogic competence; teaching dispositions and values following initial training that teachers enact and or exhibit in the classroom.

## 1.9 Summary

The literature makes a clarion call for teacher education institutions to evaluate the methods used in preparing future teachers as well as various program components. While many teacher education programs in the international and to some extent regional context have responded to this call, there are still others that are slow to undertake thorough examination of their training programs. The Department of Teacher Education in Saint Lucia is among the several institutions that has not undertaken any rigorous evaluation of its programs besides the previous course reviews conducted. In response, this study was undertaken to evaluate the initial teacher training program in Saint Lucia to determine its impact and effectiveness, identify major deficiencies and suggestions for improving overall program quality. This was done from the perspectives of program graduates and other key stakeholders in the teacher education process. Not only does the current study set the stage for the evaluation of other programs but it also adds

to the limited literature on teacher preparation program evaluation particularly from the broad theoretical perspectives adopted.

The introductory section of the first chapter gives an overview of the research topic to establish a context and orient readers to the specific field of the study, that being, teacher education and the impact of its programs in preparing future teachers. To further build knowledge and facilitate an understanding of the larger context of the research problem, and to provide pertinent information with which to create a foundation for the study, the researcher drew from the work of scholars obtained from current and seminal-peer reviewed articles, research papers and reports to substantiate claims and arguments.

In this chapter, it was incumbent upon the researcher to introduce the problem with a general overview in order to establish a context to the problem under investigation. The researcher then proceeded to discuss some of the criticisms that have been levelled at teacher education programs, concerns held regarding their impact, as well as educational trends and factors that have fueled the need for program evaluation. Furthermore, what has been done both locally and globally in the field was described to help build adequate background that is necessary to understand the larger setting and need for the investigation. Next, the researcher stated the problem, the overarching purpose of the study, and identified the theoretical perspectives on which the current study is hinged.

The study is underpinned by key tenets and concepts related to a stakeholder theory, social cognitive theory and systems theoretical perspectives. The main propositions, constructs and

principles of these theories were used together to create a robust theoretical foundation for the

research study.  The mixed methods approach and concurrent triangulation design employed in

conducting the study were briefly discussed and justified.  Five research questions guided the

study, and these were outlined as well as the two null hypotheses which the study sought to test.

The study's significance was explained followed by a discussion of the assumptions and

delimitations associated with the research.  Definition of some key terms as used in the context

of this research ends the chapter.

The researcher now segues to the next chapter which provides a critical review of

literature related to the topic and research questions.

Chapter 2: Literature Review

## 2.1 Introduction to the Chapter

In this mixed-methodological study the researcher sought to evaluate the initial training program offered to primary school teachers in one Caribbean country, Saint Lucia and to determine its overall impact. The importance of program evaluation in the professional development of teachers and more specifically teacher education has been well established. The researcher's primary purpose in this chapter is to provide a critical analysis and synthesis of the literature related to the research topic through various themes, trends and teacher education practices. The chapter begins with a description of the various theories upon which this research is grounded, which allowed the researcher a framework to explain, interpret and generalize the research findings. The main principles, constructs and tenets of these theories are examined as well as justifications for their application in the current investigation. Examples of studies that show how the theories and their related constructs have been previously applied are summarized. Next, the chapter examines the historical development of teacher education in the English- speaking Caribbean with specific attention paid to Saint Lucia. It is necessary to demystify the concept of teacher education and training to facilitate accurate interpretation and understanding of the study results and conclusions drawn from the findings. Subsequently, the researcher critically evaluates teacher education programs using key concepts identified in the theoretical framework as a guide. A penultimate section of the chapter critically reviews various ways that new teachers are supported following

pre-service training and the challenges they face during the early teaching years. Finally, the chapter focuses on some best practices for re-engineering or

revolutionizing teacher education in an effort to produce better quality teachers for practice in today's classroom and beyond.

Pertinent and credible literature on the seminal work of founders of systems thinking, stakeholders theory, pragmatism and social cognitive theory as well as current peer-reviewed articles which document the various applications of these perspectives were accessed.

## 2.2 Theoretical Framework

A theoretical framework is derived from a theory or theories that have been tested and validated by others and considered acceptable in the scholarly literature (Grant & Osanloo, 2014). It is a guide that researchers borrow from established theories to build their research investigations (Adom & Hussein, 2018) and establish a foundation for the investigation.

According to some scholars (Adom & Hussein, 2018; Grant & Osanloo, 2014), the theoretical framework is analogous to a house blueprint with the researcher being the primary architect who consciously decides and selects from a myriad of established theories, the most appropriate theory and its related principles, propositions and concepts that will inform and guide all aspects of the research process. Epigrammatically put, the theoretical framework is the means by which a research problem is understood and investigated. Identifying and including a theory or theories to guide every aspect of the research process provides a theoretical base from which researchers can explain, interpret and generalize the results of their empirical investigation and to justify the significance of the research. A review of literature on the importance of a theoretical framework

highlights several benefits including guiding the choice of research approach and design (Adom & Hussein, 2018; Nowell et al., 2017), and enhancing the various dimensions of a good research thus adding to its trustworthiness.

For all theses or dissertations, candidates are mandated to use a framework to guide their research. This study is by no means an exception. This mixed method study interweaves multiple theoretical perspectives to build a strong theoretical foundation. They are stakeholder theory, social cognitive theory and systems theory. A description of each theoretical perspective, its major propositions and a justification for its appropriateness in conducting the current study follow.

Stakeholder Theory

The pioneer of the stakeholder theory, Edward Freeman, defined stakeholders broadly as individuals, groups, organizations or institutions that have a vested interest in the activities and outcomes of an organization and upon whom the organization depends to achieve its overarching goals and objectives (Freeman et al., 2018; Huemann et al., 2016; Miles, 2017). One of the major propositions of a stakeholder theory emphasizes the interconnectedness between a business and its stakeholders, that is, customers, suppliers, employers and others who have a stake in the organization (Freeman et al., 2018). From a stakeholder perspective, teacher education can be understood as a set of relationships and groups that have a stake in the activities and operations of institutions that prepare prospective teachers. An important principle of this theory advises that teacher education institutions endeavor to understand the needs and concerns of key stakeholders in order to design programs that more adequately respond to these needs. From this perspective, it becomes clear that strategies for enhancing teacher preparation must integrate the perspectives of

several stakeholders in reform efforts to ensure that teacher education programs achieve their intended objectives.

Moreover, from a stakeholder perspective teacher education institutions are encouraged to invest in relationships with those who have a stake (Freeman et al., 2018) in teacher quality. Periodic engagement with and support provided to school administrators, co-operating teachers, faculty, clinical supervisors, and other school officials will enable the sharing of information related to graduate attributes, the philosophy of teacher education programs and clear expectations of stakeholders' roles. Furthermore, frequent engagement will not only confirm stakeholders' commitment towards the cause, but it will also help to sustain deep professional relationships that are critical to the long-term overall effectiveness of teacher preparation programs.

Teacher education stakeholders can be categorized as primary and secondary. Primary stakeholders present a more direct relationship with the initial teacher training institution as their activities are more closely connected to the purpose and objectives of the training institution (Langrafe et al., 2020) particularly during practical teaching. Deans of Teachers' Colleges, clinical supervisors, faculty, adjunct staff, schools, co-operating teachers, students and school principals are some examples of primary stakeholders because they contribute most to the quality of teachers produced (Freeman et al., 2018). On the other hand, secondary stakeholders, albeit significant, do not contribute as directly to the value-adding process of the teacher training institution. Some secondary stakeholders include curriculum specialists, district education officers, Ministry of Education and Teachers Union. It is important to note however, that teacher education institutions influence and are influenced by both categories of stakeholders either directly or indirectly.

The stakeholder theory has been applied in a multiplicity of ways predominantly in the business world. Recently, there has been an effort to apply a stakeholder perspective to

education (Etienne, 2020; Ferrero-Ferrero et al., 2018; Karimi et al., 2020; Seipel, 2018; Wang, 2020). For instance, the results of Karimi et al's. (2020) mixed method study showed that stakeholder engagement for monitoring and evaluation strongly influenced the performance of literacy and numeracy educational programs in public primary schools in Kenya. The authors call upon policy makers to make a concerted effort to engage all stakeholders in the implementation stages of educational programs in an effort to positively influence students' literacy and numeracy performance. Wang's (2020) mixed method study explored the involvement and collaboration of stakeholders in the development of policy in teacher education in six states in the United States of America. Stakeholders' perceptions of their engagement experiences and their collaboration with other key investors in the policy network analysis varied significantly.

Etienne (2020) employed a multiple theoretical framework to explore the potential of HipHop pedagogy in influencing the learning and academic achievement of students in disadvantaged school communities on the eastern coast of the United States. The perceptions of classroom teachers, school leaders and high school graduates (alumnus) were obtained. The findings of the study confirmed the need for educators to capitalize on students' cultural capital and find ways to incorporate elements of hip-hop pedagogy such as rap music, videos, art, and rap lyrics to promote active student engagement in the classroom, develop their critical thinking skills and enhance their academic achievement.

In a higher education context, Shouba (2017) used a stakeholder theoretical viewpoint among other theories, to describe varied stakeholder-driven definitions of academic quality. The author found that the theory holds promise in helping colleges broaden their perspective about the impact of their operations of both internal and external community members.

Likewise, Langrafe et al. (2020) conducted a quantitative study to survey 88 directors of higher education institutions in a Brazilian context to ascertain whether the development of improved relationships between higher education institutions create more value. Notwithstanding the limitation with respect to the use of only one group of internal stakeholders (directors), the findings reveal that relationships are based on knowledge and information sharing, mutual trust, and involvement of stakeholders in the decision-making process.

Quite surprisingly, an extensive review of the literature revealed that very few studies have actually applied a stakeholder perspective to teacher education and those that have, simply focused on stakeholder engagement or harvesting the views of key stakeholders on program components. Through a qualitative research design for example, Cheng et al. (2018) explored student-teachers' (N=18) perceptions of the roles played by different stakeholders in their field experiences.  It must be noted that the authors did not identify the stakeholder theory as the theoretical framework which set the foundation for the study, however some of the major principles of the theory can be inferred from the study's focus. The findings revealed that student teachers are of the view that all five stakeholders (co-operating teachers, institute supervisors, trainees, school principals, learners) played various roles in supporting and helping candidates transition from an apprentice teacher to a real classroom teacher. Recognizing the key role that these individuals play in the teacher education process, Ranjbari et al. (2020) in their mixed method research, make an appeal to policy

and decision makers in teacher education  to solicit the views and opinions of its various stakeholders on different program components such as content, teaching practice, and methods of delivery. Ranjbari and colleagues contend that the results can be used to inform the design of new professional development programs or the revision of existing  preparation programs.

Despite its pervasive use in business management, the stakeholder theory has attracted much debate with critics arguing that the theory is found to be quite confusing and ambiguous. For instance, Miles (2017) confirms the theory's complexity through an analysis of stakeholder theory definitions which showed 885 definitions  and interpretations of the construct, suggestive of the theory's lack of specificity.  Other scholars like Phillips and Reichart (2000) and Fassin (2008) perceive the issue of stakeholder identity as perhaps one of the theory's notable drawbacks. The researchers contend that the theory  does not adequately identify and differentiate individuals or groups that are considered stakeholders from non-stakeholders.   This inability to distinguish stakeholders from those who are not adds to the ambiguity of the construct to which Miles (2017) alludes.   Furthermore, the stakeholder theory which contends that all parties that influence the organization's performance are perceived as important to the overall success of the firm, fails to adequately explain how impactful or influential these stakeholders are to the success of the organization (Fassin, 2008).  An important question that can signal yet another limitation of the stakeholder theory is whether the roles played by all stakeholders are given the same level of prominence, priority or carry the same weight.  In teacher education, it is obvious that some stakeholders contribute more significantly to the trainees' professional development and pedagogical competence than others. Freeman's stakeholder theory has also been criticized for failing to address the dynamics which connect the organization  to the stakeholders (Fassin, 2008) and does not pay sufficient attention to the myriad of social and cultural factors among the key

stakeholders that can either foster or hinder their co-operation and effective participation (Min et al., 2018).

It is well established that teacher training is an indispensable ingredient in the quality of an education system and a principal contributing factor to teacher quality.   Institutions that

provide training to prospective teachers have been called upon to evaluate the methods used during training to determine program effectiveness. While many training colleges, mostly those in the international teacher education landscape, have taken the bold step to evaluate their programs, very few in the Caribbean region including the Department of Teacher Education and Education Leadership in Saint Lucia have undertaken any kind of robust appraisal of their programs.   The paucity of empirical research carried out locally has highlighted several deficiencies in program components, concerns and challenges faced by trainees, certified teachers and teacher educators or course instructors during and post formal training. These challenges do not only undermine the quality of the training and the teacher education program in its entirety, but more importantly affect the quality of teachers that schools receive.

Additionally, the training needs and concerns of the key players who have a stake in the teacher education process must be gleaned as the data will help to identify program components that are deficient and to minimize challenges.   Teacher education programs depend on   various stakeholders and the roles they play in ensuring the effective functioning and operation of the institution. It is pivotal therefore to identify and understand the influence these stakeholders have on the organization as this data is critical for policy decision making (Xanthopoulou, 2020). The current study captured the voices and perspectives of two groups of primary stakeholders (program graduates, school principals) and two groups of secondary stakeholders (curriculum

officers, district educator officers). This was done to understand the impact of initial teacher training on program graduates' level of satisfaction and effectiveness in the classroom as well as the challenges associated with the training more holistically from multiple sources.

Without the input and perspectives of these stakeholders, it is very possible that the perennial challenges associated with teacher preparation in Saint Lucia will persist and this may have far-

reaching consequences for schools, education districts and the entire education system. Therefore, a stakeholder theory, despite its weaknesses, was quite fitting in conducting this study to fill the existing research gap in its application in a teacher education context.

Social Cognitive Theory

Albert Bandura's ground-breaking work in social cognitive theory in the 70's has revolutionized the way in which learning, personality, motivation, and human behavior are perceived and understood (Gonzalez-DeHass & Willems, 2012; Rosenthal & Zimmerman, 1978). To put it more succinctly, the theory seeks to examine and understand human behavior. A social cognitive theory espouses that much of human learning occurs in social environments and that changes in human behavior are influenced by an interaction among three critical factors: personal, environmental, behavioral (Gonzalez-DeHass & Willems, 2012; Rosenthal & Zimmerman, 1978). This continuous reciprocal interaction (Rosenthal & Zimmerman, 1978) is perhaps one of the most influential assumptions of the social cognitive theory as espoused by Albert Bandura.

According to Bandura, personal factors refer to our thoughts or cognitions, perceptions, expectations and how we attribute and explain our successes and failures (Gonzalez-DeHass & Willems, 2012). An important concept in a social cognitive theory that is pertinent to the teaching profession is self-efficacy, the confidence that teacher candidates or trainees hold for succeeding

at a specific pedagogical task.  From a social cognitive standpoint,  teachers' efficacy beliefs are perceived to  influence not only their motivation to teach or teaching performance but also student achievement (Morris et al., 2017); student motivation, the learning environment (Ghaffar et al., 2019) and their overall pedagogical success (Eghtesadi & Jeddi, 2019). Personal

factors related to teacher candidates include their academic knowledge; teaching experience; beliefs and attitudes about teaching and the profession; expectations they hold regarding the program and teacher educators; and teaching efficacy.  Behavioral factors are understood to refer to various responses, behaviors, and activities in which individuals might choose to participate. In teacher preparation, behavioral factors include volunteering, reading about and observing the practices of other teachers either synchronously or non-synchronously, and designing lesson plans. Factors related to the environment include various aspects of the environment like the advice and feedback offered to individuals, the classroom environment created by teachers, and the rules and norms of the society in which persons live. The instructional activities created by teacher educators; evaluative and supportive feedback given to candidates based on assignments; lesson planning and delivery; mentor-mentee interactions and relationships during school placements exemplify environmental factors in a teacher education context. These environmental factors according to a social cognitive theoretical perspective influence and shape teacher candidates' beliefs and perceptions about teaching; their ability to apply various teaching strategies and approaches; their general teacher efficacy; as well as the choices they make regarding dispositions and behavior that are appropriate to the teaching profession.

The social cognitive theory provides a useful theoretical framework for investigations into the methodologies employed in the preparation of future teachers. For example, teacher candidates' reflective accounts and reactions based on their observations of the strategies and

best practices used by their course instructors as well as the instructional support provided by their mentors (school-based teacher educators) are appropriate in understanding the impact of initial training in preparing candidates for their role as classroom practitioners.

The academic literature is replete with studies that have shown the applicability of the social cognitive theory in several fields and contexts to understand behavioral changes. For instance, researchers have adopted a social cognitive theoretical perspective to examine the selection of YouTube as a learning resource (Zhon et al., 2020); student achievement relationships (Gultekin & Doughtery, 2021); teacher and student motivation (Ghaffar et al., 2019; Morris et al., 2017); teachers' pedagogical success (Eghtesadi & Jeddi, 2019); employee security behaviors (Harath et al., 2018); association between self-efficacy and job satisfaction levels (Kalkan, 2020). In evaluation studies, Leong et al., (2021) applied a social cognitive theory to evaluate the impact of gender differences in learning satisfaction using five e-learning predictors. The findings show that learner-learner interaction and learner-instructor interaction were significantly associated with satisfaction. Underpinned by an interpretivist paradigm, Mpofu and Nthontho (2017) adopted a qualitative approach to explore the dispositions that are required by preservice teachers to be effective classroom teachers. The results revealed that in order for teachers to be excellent classroom practitioners, they need three classifications of dispositions. They must demonstrate teaching dispositions that are (1) learner-related (committed, emphatic, purpose-driven, organized, humorous); (2) self-related (positive view of self, reflective, caring, encouraging, enthusiastic); and (3) profession-related (sensitive to learner diversity, energetic, passionate, excited about teaching). These teaching dispositions or personal attributes will interact with environmental and behavior factors like some of those being modeled to influence the quality of teaching and learning that takes place in the classroom and within the walls of teacher education.

In light of the inherent principles of a social cognitive theory and its application in previous studies, the current study sought to determine the impact of training on program

graduates' perceived level of satisfaction and effectiveness in the classroom. Of interest to the researcher was the usefulness of the environmental factors such as the methods of course delivery, teacher educators' andragogical practices as well as the mentoring process in equipping teacher candidates with the appropriate competencies, pedagogical skills and teaching dispositions needed to teach and cope in today's diverse classroom.

Systems Theory

A third and final theoretical perspective within which this study is situated is a systems theory. Systems thinking stems from the work of pioneers like Ludwig von Bertalanffy (1972), Niklas Luhmann (1971) and Banathy (1988) who explored and developed a framework through which systems could be more comprehensively analyzed and understood instead of the fragmented approach, often resulting in disconnected data (von Bertalanffy, 1972; Frank et al., 2016; Gerim, 2017; Hammond, 2003; Oyebade, 2014; Skyttner, 2005). In its broadest sense, systems thinking is viewed as a group of elements that interact among themselves and with the environment (von Bertalanffy, 1972). Building on that conceptualization, George Klir (as cited in Hammond 2003 pp.27) defines a systems theory as "a new way of looking at the world in which individual phenomena are viewed as interrelated rather than isolated". Perceived as an important approach for understanding and addressing global situations, a systems theoretical orientation facilitates an enhancement of researchers and practitioners' personal and professional effectiveness (Kordova et al., 2018) which ultimately results in transformation within an organization (Frank et al., 2016). Following a review of several definitions espoused by previous authors, Leischow and Milstein (2006) describe systems theory as a "paradigm or perspective that considers connections among different components, plans for implications of their interactions, and require interdisciplinary thinking as well as active engagement of those who have a stake in the outcome to govern the course of change" (p.403).                                                     Not only does Leischow and Milstein's (2005) description of systems theory proffer a more comprehensive perspective, but it also encompasses four critical attributes that characterize systems thinking. It is:

1. is goal oriented

2. acknowledges inputs from the system's environment

3. produces outputs to ensure goal attainment and

4. receives feedback regarding the quality of its output

Furthermore, it can be deduced from the foregoing explanations, that a systems theoretical perspective recognizes the similarities in the interactions of the individual parts of a system; the interrelatedness of these parts and how their distinct behaviors and operations evolve overtime because of that interaction. Adopting a systems theoretical stance is important as it sheds light on the entire system outside its boundaries; recognizes and demystifies the significance of distinct components as an integral part of the whole; views the mutually beneficial relationships among system components and beyond (Banathy & Jenlink, 1991; Kordova et al., 2018; Leischow & Milstein, 2005; Mizikaci, 2006; Skyttner, 2005). Despite its tremendous potential and influence over the decades, systems theory has been criticized for its deficiencies in applications to several disciplines primarily due to its sophistication and abstractness (Gerim, 2017; Hudson, 2000), superficial nature and incapacity to inform practice (Hammond, 2003; Skyttner, 2005).

Notwithstanding critics' claims, a systems theoretical perspective continues to gain prominence as one of the most popular paradigms employed by researchers and practitioners in systems study and analysis. The literature chronicles numerous applications of systems thinking to scientific inquiries or the development of models in a wide range of disciplines in recent years. For instance, Friedman and Allen (2014) used systems thinking concepts and principles to demonstrate different clinical information-gathering tools that social workers can utilize in their clinical practice to assess their clients and develop appropriate intervention strategies for

improving their overall social functioning. The findings of Kearney et al.'s (2016) study demonstrated the promise of systems thinking in the evaluation of a gender-based violence prevention program.  Oyebade's (2001) application of a general systems theory was crucial in locating the sources of students' conflict and in developing a campus peace model for conflict management in a Nigerian tertiary institution. In nursing education, Simon (2009) applied systems thinking in the designing, implementation, and evaluation of programs to produce more successful and professional nursing practitioners who can meet the varied health needs of society.

In education, La Paro et al., (2018) describe the various elements of early childhood teacher education and highlight the interactions and interrelationships between cooperating teachers and trainees during the practicum experience through a system's thinking lens. Influenced by systems perspective, Mizikaci (2006) developed an evaluation model for quality program implementation in higher education.  Potts and Hagan (2000) to better understand the way in which different elements interact and influence the operations of a distance education program and to improve student learning, employed concepts related to a systems theory approach.

As an extension of Maccia and Maccia's educational model, Frick (2004) proposed an educational systems theory to describe, explain and predict the educational systems and their transactions with various environments of which they are an integral part. An exemplification of the proposed theory is the Predicting Education System Outcomes (PESO), a scientific, logic-based software which basically uses existing conditions of educational systems to make predictions. Despite the paucity of documented research to highlight its effective application in actual schools, the authors contend that reform efforts aimed at raising students' academic

achievement must be systemic if they are to be successful in enhancing the quality of outputs and the education system (Frick, 2004; Frick et al., 2014). As such, the role of teacher education institutions in training quality teachers for classroom practice becomes a pivotal part of this reform.

In teacher preparation, König and Mulder (2014) propose an organizational model of teacher education as a new alternative perspective on teacher education practice. It is believed that this model, couched in systems thinking, will allow researchers to investigate the relations between teacher education and its context; the interaction between different systemic levels as well as the interplay between the system and the teacher candidates and their co-operating teachers, as a framework to better understand the effectiveness of teacher education programs. While such a model holds much promise in shaping policies that aim at enhancing the effectiveness of teacher candidates and the system, evidence to confirm its application is non-existent.

The use of a systems perspective by La Paro and colleagues (2018) was valuable in understanding interactions between early childhood practitioners and their mentors as well as the kinds of support and guidance received.. To glean a more in-depth understanding of the impact of these practical teaching experiences on practitioners' teaching practice overtime, and to obtain a deeper insight into the most influential aspects of the practicum on teachers' level of readiness to teach, would necessitate longitudinal investigations.

A system-level approach is increasingly being adopted by many countries globally to develop policy documents regarding teacher education. These policy documents view teacher education as a continuum of teachers' professional growth and development (OECD, 2019).

Such an approach allows teacher training institutions to think of themselves, the different environments, the groups, and organizations in which they exist, operate and function in a systemic way. This systems mindset offers a more comprehensive conceptual approach for understanding the relationships and interactions of key stakeholders in the teacher preparation process (La Paro et al., 2018; Mark et al., 2005; OECD, 2019) as well as the mutual interdependencies of these environments. Additionally, a systems perspective allows teacher education institutions, perceived as an open educational system (Banathy & Jenlink, 1991; König & Mulder, 2014; OECD, 2019), to better understand and describe the purposes, goals and boundaries of teacher education; the institutional, administrative and instructional levels and how these levels influence the learning experiences of teacher candidates as well as the information exchanges between the system and their components (Skyttner, 2005). Acquiring a systems view of teacher education implies that we must embrace teacher education as a system and not an institution which functions in isolation. Once this systems view is adopted, there is a greater assurance that reform in teacher education will mirror a systemic orientation. It is only then that teacher education institutions should find it most prudent to engage in periodic review and transformation of its program components to produce a cadre of teachers who are more efficacious and better equipped to meet the increasing demands and challenges of the teaching profession, thus responding to the needs of the system. Moreover, the overarching purpose of a systems theory according to its founders, is to examine the interaction of a system from multiple perspectives (Skyttner, 2005).

As has already been established in a previous section of this chapter, it was important for the researcher to identify key concepts inherent in the three theoretical perspectives to provide a visual representation of how those concepts and ideas are connected to each other within the

theoretical framework.  The principles and key concepts associated with a stakeholder, social cognitive and systems theory offer an invaluable tool for organizing the literature review and evaluating teacher education programs more comprehensively. As such, views and perspectives of several stakeholders and environments as evidenced by the research participants and an investigation into the input, process and output as captured by the five research questions, more holistically provided an understanding of the impact of the initial training program in preparing future teachers.  Figure 1 below was developed by examining and analyzing key concepts and constructs related to all three theoretical perspectives to show their interrelatedness and interdependence in understanding and evaluating an initial teacher preparation program.
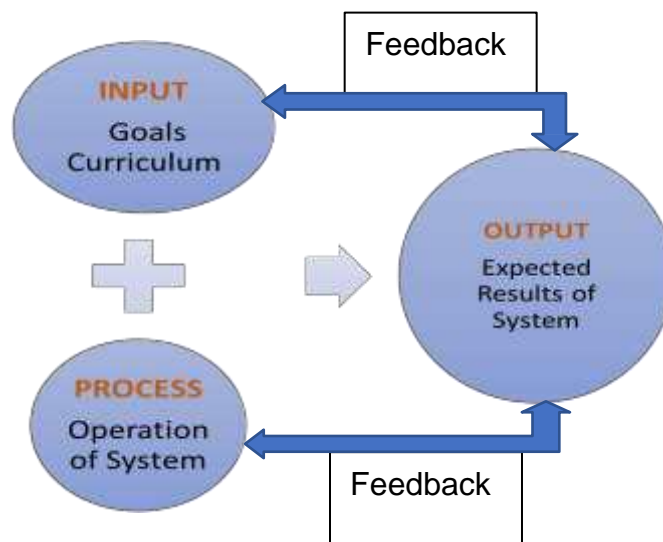


*Figure 1* Concept Map of Major Theoretical Concepts

The success of  teacher preparation  or the expected outcome of the teacher education process (quality teachers or output) is the result of the interaction between and among the curriculum, faculty, teacher candidate and institutional input coupled with the processes or operations of the institution such as program delivery methods. This success is most effectively

realized following modifications made to strengthen various program components in light of periodic feedback received from key stakeholders.

In the ensuing section, the researcher provides a historical account of teacher education in the Caribbean and Saint Lucia; demystifies teacher education and teacher educator; describes, and critically evaluates models of teacher education. The researcher then proceeds to examine program evaluation models as a feedback mechanism of a systems theory to determine the impact of teacher education and its overall worth.  All of this will be critically discussed in terms of essential concepts and principles that undergird the theoretical perspectives applied in this research study.

## 2.3 Teacher Education in the Caribbean: A Historical Perspective

As has been explained, teacher education is viewed as an open educational system which entails all activities that either prepare, support, or provide ongoing professional development to enhance teacher effectiveness throughout teachers' career (Mark et al., 2005). Over the last two centuries, several educational reform initiatives with emphasis on teacher education have been proposed and implemented to enhance instructional quality, students' academic achievement and the education system as a whole. An understanding of the history of teacher education in the Caribbean from the period of colonization to present-day will help shape the teacher education trajectory and inform the way forward for the effective operations of this system.

Before proceeding, the researcher wishes to clarify the term Caribbean' as used in the context of this research. Although what constitutes the term "Caribbean' varies depending on the aspects being considered, the perspective which is adopted in this discourse is a socio- historical interpretation proposed by Girvan (2001). The Caribbean, as Girvan (2001) explains, refers to "a cultural zone characterized by the legacy of slavery and the plantation system"(p.1). Territories of that cultural zone share peculiar similarities not only in terms of geography or language but more importantly have an education system, practices and policies that mirror a British colonial system (Charles, 2000; Mark et al., 2005; Miller, 1999, 2016; Petty et al., 2016). Hence, the terms English-Speaking or Commonwealth Caribbean are used synonymously in this research to refer to the countries of Jamaica, Trinidad and Tobago, The Bahamas, Guyana, Belize, Cayman Islands, Barbados; OECS member states namely Dominica, St Kitts & Nevis, Saint Lucia, Anguilla, St Vincent and the Grenadines, Antigua and Barbuda, all of which are

former British colonies. It must be noted though, that while these territories share the same geographical boundary, there exists marked differences that have informed the structure and implementation of teacher training and other professional development programs in each territory (Baker-Gardner, 2016). Having elucidated the term Caribbean, the researcher moves on to provide a historical account of teacher education and training in that cultural zone.

Prior to emancipation, teachers were not trained and had no pedagogical knowledge. In fact, much of the teaching done during the pre-emancipation era remained the primary responsibilities of white missionaries who also functioned as preachers (Baker-Gardner, 2016). Teacher education in the Caribbean began during the colonial period when the British government made provisions for the children of emancipated negroes to receive a primary education (Charles, 2000; Miller, 1999) through the Negro Education Grant. According to Whyte 1977 (as cited in Baker-Gardner, 2016) this money, in the amount of £25,000 was used to construct buildings, open colleges to train teachers and to pay part of teachers' salaries. The British government increased the grant by £5,000 and for a period of 10 years, provided £30,000 to the Caribbean. The need to train West Indian teachers locally was recognized by the British government and for this reason, £5,000 of the grant was allocated for teacher training. This development paved the way for the commencement of a recruitment process for local teachers to serve the region. Initially, trained teachers who worked in schools in the Commonwealth Caribbean were obtained from England.

In 1835, the first batch of teachers from England arrived in Jamaica to work in the very first established school. This was made possible through the assistance of the MICO trust: monies left by Dame Jane Mico and the Negro Education Grant (Charles, 2000; Miller, 1999). Later, the missionaries operated a total of eighty-six (86) schools including infant, primary and

53

secondary schools as well as normal schools in almost all the Caribbean commonwealth countries. Normal schools, subsequently rebranded as training colleges were first operated in Jamaica, Antigua, Guyana, Trinidad and Barbados. The MICO University in Jamaica emerged from this period (Baker-Gardner, 2016). The missionaries and religious leaders trained West Indian teachers attending these training colleges. The teacher trainees comprised mostly of untrained teachers who were already teaching. Additionally, training was provided to the most intelligent children who attended normal school to serve as teachers in denominational schools (Charles, 2000). Since such formalized training was non-existent in other states, teachers from other Commonwealth Caribbean travelled to the five islands for training. This marked the first attempts at initial teacher training in the Caribbean.

The British government's decision to withdraw the Negro Education Grant in 1845 led to a reduction in the number of teachers coming in from England. This contributed to serious teacher shortages and eventual closure of several teacher training colleges in the region (Charles, 2000). Following the closure of normal schools in Guyana, Guyanese teachers were sent to Barbados, Jamaica, Trinidad and Tobago for training (Miller, 1999). However, 87 years later, teacher education in Guyana resumed when the British government established a teacher training center to provide in-service training. With the passage of time, it became necessary to increase the number of teachers particularly at a time when the demand for education during the post emancipation era became greater. To address the shortage of teachers, local whites and those of a mixed race were recruited, but this initiative was short lived. The majority of persons who expressed a desire and willingness to teach were deemed unsuitable because they either lacked the academic requirement and or requisite moral values and good character.

54

Recognizing the need for reform and in an effort to increase the number of trained

teachers, the pupil teacher system was introduced in 1894 (Miller, 1999). In this system, an informal apprenticeship model which entailed the pairing of competent students with experienced teachers was used. Apprentices were not remunerated for the teaching support they provided. Instead, they were required to follow four hours of weekly professional development training by their head teachers and write the pupil teacher examination and teacher education certificate examinations during the four years that they served. Of course, it was important for pupil teachers to pass all examinations in order to be retained as full-time teachers. This informal system of apprenticeship gradually phased out in many territories and was replaced by other models of training for new teachers.

Several modalities were later used in the delivery of pre-service training and that varied across territories. According to Miller (1999) candidates who met the entry requirements received initial training via the following models:

1. Two years of in-college study in addition to one year of internship

2. Three years of intramural or in-college study plus one year of internship as was the case in Aruba

3. Two and three year in-college study models that were common in the Commonwealth Caribbean

4. School experience model (used in Belize) required candidates to spend one year in college followed by one semester of teaching practice and after which they were mandated to teach for one year within the school system and finally culminate their training by taking one year course of study in the training college

55

By the 1990s modalities had expanded to include distance education and school-based approaches.

Teacher training in the Caribbean according to Miller (1999) was characterized by the

following salient features:

1. Only primary school teachers were trained as there was no capacity locally to train secondary school teachers

2. The number of teachers who received training was extremely low compared to the high number of persons who held teaching positions

3. The majority of trained teachers were recruited through the pupil-teacher system

4. Program curriculum in terms of subject matter content was equivalent to high school level and some training in pedagogy which run for 2 or 3 years

5. Teachers from territories without a training institution and who desired training travelled overseas

Certification of teachers was done by the teacher training institution of each territory.

However, the need to identify one certifying body to spearhead and monitor the development and implementation of teacher education programs across the region was realized with the passage of time. It was then agreed that the University of the West Indies would undertake this new responsibility (Joint Board of Teacher Education, 2013). With the exception of Guyana which certifies its own teachers through the University of Guyana, UWI became the certifying body of teacher education. In the OECS, Teachers Colleges had been incorporated into the Community Colleges.

In a nutshell, teacher training and development in the Caribbean has an interesting history. The discipline was subject to various innovations and reform all in an effort to respond

to the numerous challenges faced, economic and educational trends, in a bid to improve the quality of education in the region. These reform efforts are seen in various dimensions namely entry requirements, certification, modalities and teacher professional development.

**A Closer Look at Education and Teacher Education in Saint Lucia**

A Snapshot of the Education System in Saint Lucia

Saint Lucia, also known as the Helen of the West Indies is a small island developing state and member of the OECS with a population of about one hundred eighty-three thousand five hundred (183,500). The education system in Saint Lucia like other OECS member states, has not retired in its reform efforts to respond more appropriately to the changing education landscape. It seeks to transform education by providing a quality education that promotes life- long learning and meaningful contribution as articulated in its vision: "An education system that shapes the development of a literate, numerate, skilled, life-long learning; one who is values- driven, globally adaptable, and contributing meaningfully to the development of self, community, nation and the region" (Education Sector Development Plan, 2015-2020, p.13). One of the foci of the education system in Saint Lucia is to build a culture of quality in terms of curricula, access to resources and educational opportunities, instruction, training, infrastructure, policy and other areas that whether directly or indirectly will assist in the attainment and realization of the goals and vision of the education system. This quality-oriented focus is facilitated by providing an education that is both empowering and seeks to promote the holistic development of learners, while at the same time, ensure that its initiatives and priority areas are in alignment with the sustainable development goals and global educational standards.

The education system in Saint Lucia, like other territories in the Caribbean, reflects a system of education inherited from the period of British colonization.  It is predominantly centralized. This means that the formulation and implementation of policies, plans and programs relating to all aspects of public education including financing and curricula are controlled and

coordinated by  one central body, the Ministry of Education. Currently, the education system consists of eighty (80) primary schools, twenty-four (24) secondary schools, eight (8) post-secondary and tertiary institutions and three (3) technical vocational institutions. Universal primary and secondary education were achieved in the 1980s and 2006 respectively. Despite several political pronouncements, access to early childhood education has not been made compulsory. This is one of the Education for All (EFA) goals and a critical education sustainable development target that Saint Lucia is yet to achieve to be on par with many of its OECS counterparts and other comparable Organization for Economic Co-operation and Development (OECD) territories.

Student performance at both the primary and secondary level continues to be a major concern for the Ministry of Education and other key stakeholders.  Over the years, the government has embarked upon several programs and projects geared toward capacity building of teachers; increasing access to educational opportunities; equipping schools with the necessary resources and tools needed to augment the teaching learning process; and the provision of professional development opportunities for educators. This is all in an effort to build a better education system and raise student learning outcomes. Moreover, students' education and their academic performance are supported by the:

1.  introduction of the school feeding program

2.  provision of bursaries to defray tuition costs for tertiary level students

3.  transportation subsidy

4.  textbook rental program and more recently

5. issuance of a five hundred-dollar ($500.00) voucher to the parents of every student who sat the Common Entrance Examination and successfully secured a place at a secondary school (Saint Lucia Medium Term Development Strategy, 2021-2023).

The exceedingly low enrolment rates (20.1%) at the tertiary level can be attributed to two main factors: (a) students' dismal performance at the Caribbean Secondary Education Certificate (CSEC) examination and (b) limited available space at the Sir Arthur Lewis Community College (SALCC). The SALCC is the nation's premier tertiary institution, the product of the amalgamation of the former Saint Lucia Teachers' Training College, Morne Technical College and A Level College. This was made possible through the enactment of government legislation Act No. 8 of 1985 for the purpose of providing higher educational opportunities in the fields of agricultural science; teacher education and educational administration; arts, science and general studies; health science; and technical education and management studies. Conversations regarding the transitioning of the Sir Arthur Lewis Community College into a University College commenced in 2008. Part of the preparatory work required changes to programing and institutional adjustments. The introduction of five bachelor's degree in the new academic year 2021/2022 is testament to the institution's commitment to achieving university status and responding to the changing needs and interests of learners as well as market-oriented trends. The Sir Arthur Lewis Community College remains committed to fulfilling its mandate in providing educational opportunities par excellence to its clients.

59

Teacher Training in Saint Lucia

Saint Lucia Teachers' Training College, as it was originally known at inception, was

established in 1962 but began operations in January 1963 to provide professional training to primary school teachers, most of whom had entered the teaching profession through the pupil-teacher system (Miller, 1999; SALCC, 1998).   At the time, two thirds of the teaching force was uncertified and had received no form of formal teacher training.  The few certified teachers who amounted to only 8% had received professional training at a Teacher Training College abroad.  From inception, the training program was one year duration.  During that year, the first cohort comprising forty-four (44) primary school teachers received training in basic teaching skills (SALCC, 1998).   In 1965, two years later, the program was extended to attend to the personal and professional needs of its student teachers. Teacher education and training in Saint Lucia has evolved in much the same way as those of other OECS states and Commonwealth Caribbean territories.  To capture more comprehensively the historical developments of teacher education in the local context, four main sub-headings are used for the purpose of organization and deliberation.   They are (a) Teaching and Training Entry Requirements; (b) Challenges; (c) Reform Efforts; (d) Induction and Professional Development.

*Teaching and Training Entry Requirements*

Historically, entry into the teaching profession like many other territories in the Caribbean region, did not require any professional qualification.  In fact, more than 80% of the teachers in Saint Lucia entered the profession without any formal teacher training (Miller, 1999; Petty et al., 2016).   Most teachers joined the teaching profession with basic qualifications in the

60

form of a Standard Six School Leaving Certificate. Hence, the main route for entry into teaching was the pupil-teacher system.  Following quantitative analysis of data gleaned which depicted principals' routes into teaching, Charles (2000) concluded that: "just over three quarters (76%) of

the principals entered teaching through the pupil teacher system, with the proportion from the primary sector being 80% compared to 64% in the secondary sector" (p.285). With the establishment of the Teachers Training College in the 1960s, the pool of recruits for pre-service training also came from teachers who were already working in the system. Due to the low academic qualifications for entry into the teaching profession, it was a bit challenging for most candidates to demonstrate sufficient mastery of the Teachers' College curriculum. It was not surprising that most of the trainees did not obtain passing grades in the final examinations. Still, the cycle of low academic achievement among primary school students persisted due in part to exposure to instruction that was delivered by trained teachers who were themselves incompetent and demonstrated insufficient mastery of subject-matter content and pedagogy.

The requirements for entry into the teaching service and preservice teacher training was then raised to CXC qualifications as per stipulated regulations for Teachers' Colleges outlined by the University of the West Indies. Teachers who were desirous of entering the profession had to possess 5 CXC subjects including English and Mathematics at General Proficiency level, Grades 1 and 2. In addition to the 5 CXC passes, candidates were required to have had at least two years teaching experience to be eligible for initial teacher training. From its inception until 2020, preservice primary teacher training in Saint Lucia took the form of a 2 year in-college program delivered by the Division of Teacher Education. Initially, the training and professional development of teachers and principals was the purview of the Ministry of Education (Charles, 2000). Today, while the academic qualifications still remain, teaching experience is no longer a

61

mandatory entry requirement. Proof of character and an interview are added requirements for recruitment into initial teacher training.

*Challenges*

It is surmised that the low entry requirement and standards to a large extent contributed to the high percentage of untrained teachers in the country (Charles, 2000; Nannyonjo et al.,2010), poor educational opportunities and students' dismal academic performance. As is recounted by Charles (2000) and Miller (1999) the quality of education was considered unsatisfactory. Other challenges faced by the education ministry included poor teaching methods, content lacking cultural relevance, limited teaching resources, unsupportive home environments for students and limited instructional time (Baker-Gardner, 2016), lack of student motivation, high number of untrained teachers, heavy workload of principals and low staff morale (Charles, 2000).

*Reform Efforts*

In an effort to address the challenges faced in the education system, several reform initiatives in teacher training were implemented. According to Charles, (2000), these initiatives included "attempts made to recruit better-qualified teachers, attracting sufficient numbers of qualified teachers, increasing the proportion of trained teachers, providing ongoing staff development and improving the quality of teacher education", (p. 202). Consequently, the pupil-teacher system which recruited teachers who successfully completed the Standard Six School Leaving Examination was eventually discontinued (SALCC, 1996;1998). This initiative was an attempt to pave the way for the recruitment of teachers who were better qualified for the teaching profession. An increase in access to a secondary education resulted in the construction of

62

additional secondary schools on island. In due course, many more students had obtained passes at the Caribbean Examination Council (CXC) level or had better O'Level qualifications. This meant that a better pool of potential candidates for teaching positions at the primary level was

created. Teaching positions at the secondary level were taken by candidates who had obtained A' Level qualifications from the Sir Arthur Lewis Community College (Charles, 2000).

The phasing out of the pupil-teacher system did pose some challenges as the recruitment of more academically qualified teachers exhibited some major deficiencies for the job. According to the principals in Charles' (2000) mixed method research, new recruits from secondary schools did not understand how pupils learn, lacked emotional maturity and poor classroom management, possessed inadequate curricular knowledge and delivered instructions that mirrored exactly how they themselves were taught. The deficiencies exhibited by the new recruits were understandable and expected, given that they entered the teaching profession with no initial training whether it was through the apprenticeship model or otherwise. Principals contended that these factors coupled with the lack of support from the Ministry of Education particularly when handling conflicts with teachers, students or parents negatively impacted their ability to manage their schools and the academic achievement of pupils. Consequently, one of the policy directions for teacher education institutions in the OECS states, where induction programs had either ceased, as in the case of Saint Lucia, or needed strengthening, is to train teacher mentors to support future teachers professionally and pedagogically (Nannyonjo et al., 2010).

Another initiative taken to increase the number of trained teachers in schools across the island was the special two-year intensive mass upgrading program (Charles, 2000; SALCC, 1996). This program was developed in 1986 by the Division of Teacher Education based on the

mandate given by the Ministry of Education. Primarily, the mass upgrading program was designed to train the backlog of long-serving mature teachers who had initially been recruited through the pupil-teacher system, did not possess the requirements for entry into the existing pre- service training program and had not attained the age of 45 (SALCC, 1996). The program was offered

separately and independent of the regular pre-service program and differed in several ways. First of all, candidates were required to spend one full year at the Teachers' College for taught courses then return to their schools as members of staff to engage in practical teaching duties that were supervised and assessed by personnel from the Teachers' College.  Upon successful completion of the program, mass upgraders were upgraded to a status that was slightly lower than teachers who possessed the prerequisite academic qualifications for entry into the regular program.   Mass-upgraders were considered 'trained' and their new status and salary reflected that of a trained teacher and not a qualified teacher.

Additionally, a Secondary School Teachers' Training program, funded by the European Development Fund (EDF) through the University of the West Indies   was an initiative that the Division of Teacher Education embarked upon to increase the proportion of trained teachers in the nation's schools. The program was designed to provide in-service training to secondary school teachers whose academic qualifications surpassed the minimum requirement for pre- service teacher training (Miller, 1999; Nannyonjo et al., 2010).  This meant that teachers who held an Associate Degree of higher or had obtained passes in two GCE Advanced level subjects were eligible for on-the-job teacher training. The EDF program was delivered via face-to-face instruction once weekly on a day release schedule set by the Ministry of Education. Several cohorts of secondary school teachers benefited from the EDF teacher training program. Upon

complete utilization of the funds, the program was phased out and replaced by the Diploma in Education (Dip.Ed.).

*Induction and Professional Development*

Historically, schools and school districts in Saint Lucia had no structured program in place for inducting new teachers and no written policy to guide the implementation of their induction programs (Baker-Gardner, 2016; Nannyonjo et al., 2010). Instead, what existed was an informal system of mentoring and teacher induction for new untrained staff. With no formal training and mentoring experience, principals inducted new recruits by providing pedagogical support in what they perceived to be the basics of teaching and learning (Charles, 2000).

Providing mentorship to new teachers based on limited knowledge and experience could have resulted in principals reinforcing inappropriate pedagogy given that they themselves had not received any professional and pedagogical training. Teachers' expressed much dissatisfaction with their induction to the teaching profession claiming that it was inadequate and ineffective. A high proportion, or more than half (64.9%) of the teachers who participated in the study according to Nannyonjo et al. (2010), indicated that they were not satisfied with the induction received. Despite the fact that induction was perceived by teachers and school principals to be critical in helping new recruits experience a smooth transition to the profession, and in the retention of qualified teachers, it was discontinued due to lack of participation (Baker-Gardner, 2016).

Local trade unions and teacher associations as well as non-governmental organizations also played a quintessential role in the professional development of teachers and school principals (Charles, 2000; Miller, 1999; Nannyonjo et al., 2010). Through the collaborative

efforts of the Organization of Canadian Overseas Development (OCOD), the Saint Lucia Teachers Union and Ministry of Education, qualified, trained and unqualified teachers and principals benefited from the training provided during summer workshops. For instance, unqualified teachers were supported through academic upgrading courses in subject areas such as English Language, Mathematics, Social Studies and Science. These sessions assisted unqualified teachers in

obtaining entry requirements for admission into the pre-service teacher training program. Orientation courses were provided to newly-qualified teachers who joined the teaching profession while refresher courses served as ongoing professional development for teachers who had already completed their initial teacher training program. Research conducted by Nannyonjo et al. (2010) showed somewhat mixed views about the satisfaction of professional development opportunities. 52.9% of the surveyed participants indicated that they were satisfied with the opportunities provided by the Ministry of Education for professional development while 47.1% expressed their dissatisfaction (Nannyonjo et al., 2010).   School principals too received most of their training through summer workshops that were facilitated by the Organization of Canadian Overseas Development (Charles, 2000).  The workshops which provided training in the areas of instructional leadership, guidance and counselling, and assessment were deemed ineffective as principals felt that their developmental and professional training needs were not being met adequately.  This sentiment underscored the need for the Ministry of Education to have had consultations with principals to determine their areas of weaknesses and professional training needs at the time.  It is perceived that the unavailability of vital needs assessment data may have contributed to the irrelevance and inability of the summer workshops in responding to the needs of school principals (Baker-Gardner, 2016; Charles, 2000).

66

Notwithstanding the innumerable reform initiatives implemented over more than half a century ago to improve teacher quality and student performance, the Ministry of Education is still challenged in meeting its vision in the provision of quality education.  The significantly high number of teachers who were deployed to teach subjects in which they received no formal initial training (Nannyonjo et al., 2010) was not only a clear illustration of teacher shortage in subjects

like Science, Physical Education and Mathematics at the secondary level but signaled the need for reform in program offerings at the Teachers' Training College.

For quality education to be achieved, an investment in initial and in-service teacher education and continuous professional development is a major requirement (Mark et al., 2005). One of the initiatives outlined in the Education Sector Development Plan (2015-2020) speaks to the implementation of a coaching program for new teachers to assist in the delivery of quality instruction in all schools. Additionally, this initiative is geared towards the enhancement of school climate and structure, and the promotion of a culture of excellence and accountability for performance. The assignment of a mentor to every new teacher within a school is indeed commendable and a huge step not only in supporting program graduates post initial preparation, but also in enhancing teacher quality given the challenges faced historically. However, such initiative has not been undertaken hence, there is need for the Ministry of Education, schools and education districts to move swiftly in supporting newly-certified and future teachers professionally and pedagogically.

67

## 2.4. Demystifying the Concept of Teacher Education and Training

A synthesis of the literature on teacher education discourse provides at least six classifications of the construct: a program of education and training aimed at developing teacher proficiency and competence to meet the teaching profession requirements and address the challenges faced on the job (National Council for Teacher Education, 2021; Sujjaman, 2017); the preparation of and sustenance of the teaching service in terms of quality and quantity (Mark et al., 2005); a set of policies and procedures for equipping prospective teachers requisite competences for effective performance of their roles; a system within a larger system and a process that supports

the growth and development of teachers throughout their teaching career (Mark et al., 2005; NCTE, 2021; OECD, 2019) and formal pathways to teacher training: preservice and continuous professional development  (OECD, 2019; Roberts-Hull et al., 2015). Regardless of the classification, it is important to note that training and development remains the primary function of teacher education.

Teacher training, whether it is done prior to or during service, within or outside the classrooms of training colleges or universities is designed to arm teachers with the knowledge, skills and competencies that are necessary for their effective performance resulting in positive student learning outcomes.  Studies  have confirmed that training of teachers improves their performance and effectiveness (Darling-Hammond, 2017; Gautam & Ramashia 2017);  self-efficacy (Neville et al., 2019) as well as students' learning outcomes and behavior.

Different forms of teacher training have been reported in the literature. These are classified as either preservice, in-service education or alternative routes as depicted by the OECD Teacher Education Pathway Model in Figure 2 below. The model delineates the two main forms of traditional training or pathways mentioned previously as well as four successive stages within

68

the pathways for teachers from the moment candidates are selected into initial teacher preparation programs to their first years in the profession (OECD, 2019).

One of the objectives of teacher training programs is to provide teacher candidates opportunities to practice and develop their teaching skills at schools under the supervisor of mentors or experienced teachers.

*Figure 2 OECD Teacher Education Pathway Model (2019)*

Pathway One: Pre-service Education

Preservice education consists of formal training provided to potential teachers prior to entry into the teaching profession (OECD, 2019). It is often referred to as off-the-job training (Akinyele, 2007) and is usually carried out fulltime in training colleges, schools, and universities for a specific period. Individuals who are enrolled in preservice training programs, in the context of this study, are referred to as teacher candidates or trainees. The preservice training program offered to teachers in some of the English-Speaking Caribbean territories including Saint Lucia is described in a subsequent section of this chapter.

69

Induction, an element of in-service, on the other hand, is understood as activities that are intended to support teachers during the first few years of teaching (Hunter, 2016; Langdon and Ward, 2015; OECD, 2019; Pieniazkiewiez, 2018; Sadiq et al., 2017; Stevens, 2019). These support programs for new teachers can positively impact their level of satisfaction by helping beginning teachers apply their theoretical knowledge acquired in their pre-service programs to real classroom teaching thus improving their practice. Induction programs will be discussed in greater detail in a subsequent section of this chapter. According to the OECD Teacher Education Pathway Model, an

amalgamation of preservice and induction constitutes initial teacher preparation (ITP), which signals the start, not the culmination of the professional development process (OECD, 2019; USAID, 2011) as is commonly misconstrued. Hence, the terminology initial teacher preparation will hereafter be used to refer to pre-service teacher education.

Typically, initial teacher preparation programs are characterized by a combination of learning theories and a practical component commonly referred to as teaching practice or practicum (USAID, 2011). More specifically, the training equips teachers with subject content knowledge, pedagogical knowledge (knowledge of how to teach), pedagogical content knowledge (knowledge of how to present subject matter content to children), knowledge of the learners (their development as children, abilities, diversities, learning styles) professional knowledge (understanding of laws relating to teaching, responsibilities of a teacher). In most contexts, ITP programs are regulated by government, schools of education and implemented by universities and teacher training colleges.

70

*The Associate Degree in Education (ADE)*

The Eastern Caribbean Joint Board of Teacher Education (EC JBTE), the primary certifying body of the Associate Degree in Education (ADE) was established in 2000 and comprises teachers' associations, School of Education, ministries of education and national colleges in Barbados and the Eastern Caribbean territories (JBTE, 2013; UWI, 2021). The ADE that is currently being implemented in Saint Lucia and some other OECS member states is a 66-credit program designed to provide initial teacher training to teacher candidates in subject content, pedagogy, and practical teaching in four (4) areas namely:

1. Early childhood

2. Primary education

3. Secondary education

4. Technical and vocational education (TVET)

The ADE in early childhood prepares teacher candidates to provide developmentally appropriate learning experiences for emergent and young learners ages 3-7 years. Candidates who pursue the primary program are prepared to provide instruction to children between the ages of 7 and 11 in the four core areas of Mathematics, Language Arts, Science and Social Studies. The secondary school program equips candidates for instruction in two areas of specialization (major and minor) and the TVET, for instruction in the Industrial Arts and Home Economics (UWI, 2021).

The goal of the program is to equip potential teachers with key competencies including the knowledge and understanding of their teaching subject(s); appropriate pedagogical expertise; and an understanding of their role as teachers (JBTE, 2013). Entry requirements for admission to the Associate Degree in Education vary depending on the school system for which training is

being sought.  In Saint Lucia, candidates who wish to pursue the primary program must possess a minimum of five CXC Grades 1 or 2 'O' level at General Proficiency in the subject areas of English A Mathematics, Social Studies or related subject (History, Geography); Science or related subject area (Integrated Science, Human & Social Biology) and one additional subject. Alternatively, applicants who have successfully completed pre-college courses that are deemed equivalent to the 'O' Level in terms of knowledge and skills acquired, can pursue the Primary

Program. Notwithstanding these minimum requirements, individual Teachers' Colleges are given some autonomy to raise eligibility for training depending on their own peculiar context.

Teaching Practicum (TP), henceforward referred to as practicum, teaching practice or practical teaching is assessed through classroom teaching which is weighted 60% of candidates' final TP grade and a compilation of a teaching portfolio worth 40%. Candidates who opt to pursue the ADE at the Primary level are required to teach the four core subject areas to the primary grade level to whom they are assigned, while secondary teacher candidates are mandated to teach 1014 periods per week in their major area of specialization and 5-7 periods in their minor. The TP which is scheduled for 10 weeks is implemented in three uninterrupted phases as shown in Table 1.1

72

*Table 1. 1*

Practicum Schedule for ADE in Saint Lucia

| Phase | Duration (Weeks) | Purpose | Major Activities | Personnel Assigned |
|---|---|---|---|---|
| 1 | 1-3 | clinical supervision for development purposes only | Candidates plan and deliver lessons in core areas<br><br>Feedback is provided based on<br><br>lessons observed and is intended for improvement and teacher growth; no grading is done. | College Staff Adjunct Staff |
| 2 | 4-8 | grading period | At least 5 lessons are observed and graded for the primary candidates At least 3 lessons are graded in major and minor area for the secondary candidates | College Staff Adjunct Staff |
| 3 | 9-10 | grading period; external secondary Ministry | Only 3 lessons are observed and graded for primary candidates and Assessor | UWI External assessment 2 for Personnel, |

Upon successful completion of the program, candidates are awarded an Associate Degree in Education certification which allows for matriculation into the Bachelor of Education degree (B.Ed.) program (UWI, 2021) where they can complete two additional years of study.

Pathway Two: In-service Education

It is virtually impossible for new teachers to learn and acquire all essential skills and techniques necessary for effective classroom practice during the initial teacher training or induction period. For this reason, it is essential that practicing teachers are sufficiently supported pedagogically and participate in a range of activities for continuous professional development and to positively impact students' learning outcomes (OECD, 2019; Osamwonyi, 2016). This form of job-embedded education and support, also called on-the-job-training, that is usually

73

provided through seminars, short courses, conferences, workshops, demonstrations, coaching and mentoring, is termed in-service education or training (OECD, 2019; Osamwonyi, 2016) or capacity building for teachers (Suleiman et al., 2017). Whether this pathway is viewed as staff development, continuous education or lifelong learning, the principal objective of in-service education is to strengthen practicing teachers' knowledge and pedagogical skills with a view to enhancing their instructional effectiveness and raising students' academic achievement (OECD, 2019; Osamwonyi, 2016; Suleiman et al., 2017).

While making the distinction between preservice and in-service education is an inevitability in contemporary teacher education conversations, this was not seen as significant historically in the English-speaking Caribbean as persons became teachers with no formal teacher training (Miller, 1990).

Pathway Three: Alternative Entry Points

Despite some noticeable similarities, initial teacher training programs globally vary in duration, guiding principles, structure and pedagogies. Moreover, the countless concerns and criticisms reported by stakeholders regarding their level of preparedness for teaching coupled with the need to address issues related to teacher shortages and students' low academic achievement have led several territories to explore alternative approaches for attracting and preparing prospective candidates for the teaching profession (Spann Casey, 2019). Alternative pathways to teacher training are acknowledged by the OECD Teacher Education Pathway Model to consider the informal and non-traditional routes to the teaching profession. Teachers who seek certification via alternative pathways, are usually university graduates, young professionals and career changers (Hastings, 2021; Hines, 2017; Spann Casey, 2019). A review of the

literature indicates that alternate routes do hold some promise (Weldon et al., 2013)  for attracting talented graduates to teaching. However, the initiative has proven to be challenging and a stressful entry point into the teaching profession. Similarly, Nelson (2020) found that alternatively trained teachers in a Catholic high school setting lack the language of teaching that they would have ordinarily acquired in methodology courses in pre-service training. The teachers reported challenges understanding and translating what they are told into practical concepts for classroom application.

Entry into the teaching profession without real classroom experience would necessitate the establishment of an effective mentoring program to facilitate a smooth transition and ensure that teachers are supported pedagogically and emotionally.

The findings of Hines' (2017) descriptive qualitative study revealed that the 19 alternate route teachers who participated in the study were able to overcome challenges related to their instructional practices, isolation and classroom management through the support provided by their mentors, administrators and other educational leaders. The findings suggest that the alternative certified teachers, according to the scholar are well-integrated into their classroom and school environment. Spann Casey (2019) employed a survey to investigate the effectiveness of the Program of Alternative Certification for Education (PACE), which was designed to supplement the low teacher supply in South Carolina. The researcher reported that 20 administrators who observed the practices of alternative certified teachers were invited to participate in the study. The significantly small number of principals (N=9) who completed the survey found the program to be effective as they generally felt that the teachers were sufficiently prepared. Conversely, the findings of Huffman's (2021) qualitative study showed that alternatively certified teachers expressed the need for more pedagogical support, positive

75

relationship-building opportunities with students and continuous professional development to better prepare them for teaching.

When all three pathways are compared it appears, from the literature that traditional pathways are more efficacious in preparing teachers for the profession (Darling-Hammond et al., 2002; Hastings, 2021). To illustrate, Hastings (2021) examined new teachers' perception of their teacher preparation post training. Data gathered from three hundred ninety-seven (397) traditional, alternate route and post-baccalaureate programs revealed that traditionally trained teachers are

better prepared to teach, and critically reflect on their instructional practices for subsequent improvement than alternate route or post-baccalaureate candidates.  Regardless of the pathway, the teacher educator, to which the research segues to next, is a critical factor in the teacher education process.

## 2.5 Evolving Concept of Teacher Educator

The conversation regarding who a teacher educator is, and the role played by teacher educators in the training of pre- and in-service teachers is evolving (American Association of Colleges on Teacher Education, AACTE 2018; Capello, 2020). One irrefutable conclusion that can be drawn from the Teacher Education Pathway Model presented in Figure 2 above, is that not only are teacher educators held accountable for training novices, but also  contribute significantly to the continuous development and growth of    practicing teachers.  In other words, teacher educators support both new teachers and experienced teachers at all stages of their career and can thus be perceived to be working in a range of settings including universities, teacher training institutions, public and private schools, training agencies and organizations and ministries of education.  Another logical conclusion is that teacher educators include all those

76

who play a role in the teacher education process or continuum. Hence, the narrow definition of a teacher educator as teacher trainer or faculty in higher education or teacher training institution responsible for preparing beginning teachers fails to acknowledge the various roles enacted by several key actors in enhancing teacher effectiveness and raising student academic performance (European Commission, 2013; Henning et al., 2019; Sujjaman, 2017). A more comprehensive view of a teacher educator profiles this person as:

1. Faculty who teaches education, discipline-specific and general courses in higher education or teacher training institutions

2. Faculty and adjunct staff who supervise future teachers during their field-based practical experiences

3. Trained and experienced classroom-based teachers who mentor teachers during practicum or internship and their colleagues the first few years on the job

4. Professionals in other sectors who provide in-service training and development for teachers

Based on the profiles presented above, teacher educators work and function in K-12 school settings as well as universities or training colleges (Olsen & Buchanan, 2017). According to the American Association of Colleges on Teacher Education – AACTE (2018), a university- based teacher educator is one involved in teacher preparation and whose primary institutional home is a university or college. University or college-based teacher educators assume multiple responsibilities including coaching, evaluating, instructing or lecturing, and partnership building (Appelgate et al., 2020; Olsen & Buchanan, 2017; Orakci, 2020; Sharkey, 2018; Tack, Valcke et al., 2018). Similarly, school-based teacher educators are involved in teacher preparation, however, they perform their mentoring, coaching, and collaborating roles at a school in addition

77

to their school responsibilities (Bass, 2021; Lee & Brook, 2020; Lofthouse, 2018). The terms cooperating teacher, mentor or collaborating teacher are also used to refer to school-based teacher educators. This new and evolving construct signals the need to change the conversation regarding who a teacher educator is and the responsibilities to be performed in the teacher preparation enterprise. A more comprehensive and evolving conceptualization is needed to re- engineer teacher education in Saint Lucia and by extension the Commonwealth Caribbean.

## 2.6 Program Evaluation Models

Although the term evaluation appears to be an elusive construct in the literature, in its most concise and broadest sense, it refers to the assessment of something's value, particularly in terms of its merit, worth and significance (Stufflebeam and Coryn, 2014; Stufflebeam and Zhang, 2017). That 'something' or object which is being evaluated can be a program, project, product, individual or organization all of which Stufflebeam and Coryn (2014) refer to as evaluands. Hence, program evaluation is conceptualized as any evaluation that affirms the overall value or quality of a specific program, and when necessary, provides a reliable and empirical basis for withdrawing poorly developed programs or strengthening and expanding potentially effective ones (Stufflebeam & Coryn, 2014).

Inarguably, several approaches or models to designing and conducting evaluations of professional development programs were identified following a comprehensive analysis of the literature. Some have been tested and found to be quite legitimate and robust while others, due to their partiality, are deemed illegitimate and are strongly discouraged by researchers. Stufflebeam and Zhang (2017) purport that pseudo evaluations are characterized by evaluations that are biased in nature such as those utilized in politically motivated studies which, albeit produce valid information, fail to share findings with specific factions of the evaluation audience. Moreover, the authors caution against the use of pandering evaluations and those that include only positive reviews or false testimonials.  Conversely, in selecting an evaluation model, researchers strongly recommend the use of a model that is legitimate, credible, possesses rigor and has been scrutinized against standards of systematic inquiry (Stufflebeam & Zhang, 2017).  EPIC evaluation, goal free

evaluation (Youker & Ingraham, 2014), responsive evaluation (Stake, 1975), the key evaluation checklist (Scriven, 2007), logic evaluation (Kaplan & Garrett, 2005),

Kirkpatrick's 4 levels evaluation and Stufflebeam's CIPP model are among the valid evaluation models promoted in the literature.  The subsequent section of this review focuses on the two latter evaluation models as these are most applicable given the context of this research.

The four-level evaluation model originally developed by Donald Kirkpatrick in the 50's (Kirkpatrick & Kirkpatrick, 2016) has been widely accepted for analyzing and evaluating the outcomes of training programs. The primary focus of the first level (Reaction) is to glean information regarding participants' reaction or level of satisfaction with the training received. Participants' reaction can be measured using surveys or written reaction sheet towards the end of a program or through focus group interviews (Kirkpatrick & Kirkpatrick, 2016). Level two (Learning) is mainly concerned with measuring the knowledge and skills gained and developed as well as the changes in attitudes following training.  It is the expectation that new learning and change in attitudes will inform participants' practice in the third level. An insight into participants' learning can be garnered from traditional pencil and paper tests, work samples, role play during training sessions or project-based learning. Level three (Behavior) seeks to determine the extent to which participants' training has resulted in a change in performance on the job or professional practice.  Observations of individuals on the job as well as their creative work artefacts provide practical and authentic data to confirm changes in performance. The final level (Results) measures the overall impact of the training on the organization both in terms of quantitative and qualitative outputs. Some examples of results that organizations aspire to achieve include increased production, higher profits, rise in sales and heightened staff morale or satisfaction. While a measure

of participant behavior (level three) and impact on the organization (level four) are critical to determining program effectiveness, it can be surmised from the

literature that these two levels seem to have been misunderstood and underrepresented as very few studies have gone beyond level two (Kirkpatrick & Kirkpatrick, 2016).

Kirkpatrick's model was primarily intended for the business world; however, it has been applied in a multiplicity of disciplines to evaluate the effectiveness of training and educational programs either empirically or through systematic literature review. For instance, Kirkpatrick's model has been found useful in identifying program strengths and shortcomings as well as providing a framework for program revision and improvement in health care education (Bijani et al., 2018; Bryant & Posey, 2019; Johnston et al., 2018; Kheirkhah et al., 2019; Low et al., 2018; the tourism industry (Abdelhakim et al., 2018; Zahro & Wu, 2016); in the commercial sector to evaluate the effectiveness of sales training (Tan & Newman, 2013); and in educational settings to appraise reading interventions (Ahuja et al., 2017).

Notwithstanding its usefulness, Kirkpatrick's model was decried for its strong reliance on a reductionist ideology, implying that the program's success or failure can be explained by examining the individual elements. The model did not consider variables that either facilitate or act as barriers to the attainment of desirable program outcomes (Gandomkar, 2018). Influenced by the work of Donald Kirkpatrick, Mc Neil (2011) proposed an evaluation model which is geared toward the improvement of program quality by comparing the results with the program objectives. Evidently, this outcome-based model like Kirkpatrick's original 4 levels approach, does not explicitly acknowledge other critical program components that can either positively or adversely impact program outcomes.

Fifty years later, James and Wendy Kirkpatrick (2016) improved the model (Figure 3) in an effort to address inadequacies, correct misconceptions, and misapplications of the original evaluation model.   The most notable changes were made at the third level (Behavior) to

incorporate several support mechanisms and processes such as monitoring, coaching, offering praise to program graduates or other form of recognition for good performance, and creating a positive work environment that reinforces efforts for optimal performance. The New World Kirkpatrick Model adopted as seen in Figure 3 unlike the original model captures these drivers or enablers and presume that when performed consistently by employers or managers in the work environment, they will have the greatest impact on the desirable outcomes and contribute to the successful operations of the entire organization.
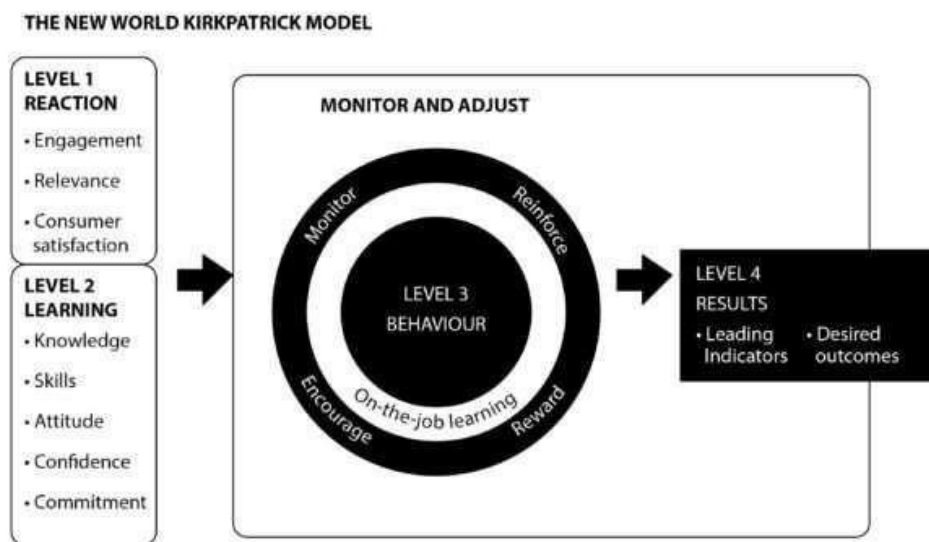


*Figure 3 New World Kirkpatrick Model*

Alslmah and Callinan (2021) utilized the new world Kirkpatrick model to evaluate 12 training programs designed for head teachers in Saudi Arabia.  One major limitation of the study

is that only female head teachers participated hence presenting a gender-biased view regarding the training process.   Nonetheless, the results indicated that the adapted model was effective in evaluating the training programs for school leaders.

Another comprehensive evaluation model that has been extensively researched is the CIPP model developed by Daniel Stufflebeam in the mid-60s. Unlike Kirkpatrick's model, the CIPP was designed to help improve and realize greater accountability in American school reform projects (Stufflebeam & Zhang, 2017). Embedded in a systems paradigm, the CIPP model provides guidelines for assessing a program based on its Context, Inputs, Process and Products. An explanation of each component will be provided subsequently. Not only does the CIPP measure program outcomes, but more importantly, it assesses program goals, resources, implementation and recognizes the significant involvement of stakeholders throughout the evaluation process (Stufflebeam & Zhang, 2017).

Like Kirkpatrick's four levels of evaluation model, the CIPP model has been applied in almost all disciplines to evaluate educational quality of programs (Al-Shanawani 2019; Aslan & Uygun 2019; Aziz et al., 2018; Thurab-Nkhosi, 2019); Tokmak et al., 2013; criminal justice, health, and agriculture. Furthermore, there is evidence of the burgeoning utilization of the CIPP model in dissertations in which doctoral students appraise several evaluands across a range of subjects (Kashar, 2018; Lawler, 2018; Riggans-Curtis, 2017; Rodgers, 2016).

Drawing from the principles of the CIPP model, Mizikaci (2006) proposed a quality systems based-theory evaluation model as an integrative tool that managers of higher education systems can utilize to ensure program improvement, effectiveness, and overall quality. Not only does this model view education as systemic but it also validates and includes inputs, processes, and outputs as critical aspects of program evaluation.  Notwithstanding its feasibility, it becomes

imperative that the model is implemented in a real higher educational context to clarify the processes and deem the model effective.

Despite the slight to great variance in models and approaches to program evaluation, the overarching purpose is two-fold: to determine efficiencies of program processes and outcomes and to make programs more accountable (Feuer et al., 2013: Guskey, 2016; Mc Neil, 2011; Mizikaci, 2006; Stufflebeam & Zhang, 2017).  Careful examination of the two primary models of program evaluation elucidated  in this chapter highlights four salient concepts of a systems theoretical orientation:  input, process, output and feedback, each of which is discussed in turn in the context of teacher education.

## 2.7 Impact of Teacher Education Programs

In response to escalating calls to evaluate programs that provide initial teacher training, researchers have employed a range of approaches and models with inherent merits and limitations. Papanastasiou et al. (2011) have, through an analysis of key program documents and other professional standards, evaluated teacher education programs to determine their coherence and quality. Similarly, Brownlee (2020) examined the web pages and syllabi of 15 alternate pathway certification programs in Arizona to determine the courses pre-service teachers are required to take as well as the methodologies employed in preparing them to teach in multicultural classrooms. Most of the programs according to Brownlee (2020) did not offer multiracial curriculum and concluded that teachers are not properly trained to teach target student populations. Consequently, the author dubs the program a "cheap fast track approach" to teacher certification. While document analysis gives a good indication of program coherence, this approach alone is not sufficient to determine the extent to which the program is in fact meeting its intended outcomes and whether teacher candidates are indeed demonstrating the essential graduate attributes or proficiencies outlined in those documents.

Ronfeldt and Campbell (2016) utilized observational ratings of nine thousand five hundred (9,500) program completers across one hundred eighty-three (183) programs in Tennessee to assess the effectiveness of their respective teacher preparation programs. The authors found the approach quite viable for formative program improvement purposes. However, it is clear from the findings that the marked disparities which exist among programs within the same institutions would necessitate a more holistic assessment and the inclusion of several other elements. A more meaningful model that combines the strengths of the New World

Kirkpatrick's model and the CIPP to evaluate the initial teacher preparation programs is thereby proposed.

An extensive review of the literature reveals a plethora of quantitative, qualitative, and mixed methods studies that have evaluated various aspects and components of teacher education and training to determine their impact and effectiveness. The four concepts of a systems theoretical perspective alluded to previously are referenced in this section of the chapter to guide the critical evaluation of various components of teacher training programs.

Teachers' level of satisfaction and effectiveness have been found to be tied to their quality of preparation (Afalla, & Fabelico, 2020; Jareno et al., 2021; Sutherland et al., 2021) as well as their teaching experience (Irvine, 2019). For instance, Jareno and colleagues (2021) conducted a survey to evaluate the quality of teaching in a pre-service training program for secondary and technical schoolteachers in Spain. Various elements of the teaching learning process namely the instructors' teaching style, methodology, resources and general level of satisfaction were examined. The results revealed an overall high level of satisfaction with the training received. Also, with the exception of individual work, all variables were found to have significant positive relationships with the training.

Input

In teacher education discourse, "input" refers to the substance and processes of teacher preparation programs as well as the attributes and characteristics of students who enroll therein (Feuer et al., 2013; Potts & Hagan, 2000) as well as those who are intimately involved in the delivery of the program. Teacher attributes such as trainees' academic knowledge, and beliefs and attitudes towards the teaching profession have a major influence on their learning during

training, their subsequent teaching performance and classroom effectiveness. Additionally, the competencies of candidates entering initial teacher training influence the quality of the outcome, and the same is acknowledged for trainers who are involved in the delivery of the program (Mark et al., 2005). Studies that have examined preservice teachers' attitude towards the teaching profession (Htang, 2017); the relationship and impact of training and developmental practices on faculty members' job satisfaction (Paposa & Mohait Kumar, 2019); the association between teaching experience and student satisfaction (Bebegal-Mirabert et al., 2018); and correlation between trainees' pedagogical competence and teaching efficiency (Afalla & Fabelico, 2020) have all demonstrated positive results. On the other hand, Graham et al.'s (2020) study found inadequate empirical evidence to substantiate the claim that teachers' years of experience results in high quality teaching. In fact, the authors noted no lower teaching quality for teachers with up to three years of teaching experience but observed a decline in teaching quality for teachers with four to five years of experience. In both cases teaching quality can be higher with targeted instructional and administrative support.

An examination of the input of teacher education (entry requirements, program content and curriculum, instructional and administrative support, and resources) highlights both strengths and shortcomings in various dimensions of program input.

Sahoo and Sharma (2018) conducted a descriptive survey with 300 hundred student teachers to explore their perception towards teacher education curriculum reform. The results revealed high positive perception on all program components. Ranjbari et al. (2020) evaluated Iran's latest preservice teacher education EFL curriculum to determine its adequacy and effectiveness. The findings revealed that unlike the previous teacher education program, the inclusion of more specialized, technical, and practical courses in the revised program curriculum

according to the participants    sets a better foundation in preparing future teachers for the profession.  Despite the reform, it appears that other aspects of input including the provision of adequate instructional materials, availability of more current course resources and adequate facilities need to be addressed to ensure effective implementation of the latest program.  In the same context, Bagherzadeh and Tajeddin (2021) reviewed 15 pre-service and in-service English Language teacher education programs to identify the aspects of curricular knowledge that are evident and incorporated into the training programs across the country.   A thorough document analysis revealed that all institutes recognize the importance of various aspects of curricular knowledge for effective teaching.  These aspects include but not limited to lesson planning, classroom management, designing materials, giving instructions and feedback, using and adapting instructional materials. However, the authors noted several gaps and inconsistencies across programs that they believe will contribute significantly to English Language teachers' instructional effectiveness if emphasized in all programs.

The lack of balance between theory and practice has been a recurring issue in many teacher education programs. Synthesis of the literature on program content of several teacher training programs shows an overemphasis on the theoretical dimension of teaching (Erisen & Katmer-Bayraki 2016; Ranjbari et al., 2020; Redman, 2015).


Process

Process, also referred to as throughput, is viewed as the operations of or the process by which the system acts upon the input (Potts & Hagan, 2000). From a social cognitive theoretical perspective, the teaching learning environment created and maintained by Deans of teachers' colleges, teacher educators and other key professionals, is integral to the teacher education

process. Program delivery methods, assessment procedures and practical teaching are the three main aspects of process examined, all of which have the capacity to transform the system from within in response to the internal factors of the environmental circumstances.

*Program Delivery*

Given that high teacher quality depends to a large extent on effective teacher preparation, teacher educators are mandated now more than before to model a wide variety of constructivist, student-centered pedagogies (Baskan & Ayda, 2018; Stieman, 2020) in preparing prospective teachers. An increasingly new goal for teacher education is to produce future teachers who are culturally competent and responsive (Donahire-Keegan et al., 2019; Jacobs et al., 2020; Lubin et al., 2020; Taylor, et al., 2016; Wachira & Mburu, 2019). These are teachers who have the requisite knowledge and skills that will enable them to appreciate and value the similarities and differences of diverse groups of students in their classroom settings. This new focus of teacher education curricula must be demonstrated by teacher educators at the training institution and school level (Lambert & Smith, 2016). Additionally, the classroom environment that teacher educators create and maintain, the types of learning experiences they provide for trainees' engagement and the kinds of interactions   promoted during training will invariably influence teacher candidates' learning, their perceptions about teaching and the future instructional decisions they make.  When teachers create learning environments that are conducive, interactive and supportive, not only are students more enthusiastic but they participate more actively in the instructional and learning experience. College-based teacher educators encounter trainees in their classrooms with beliefs and attitudes towards the teaching profession, teaching experience, knowledge about children and levels of academic competence that are different from those of

their peers. Although pre-service candidates may differ in some expectations they have for their teacher educators, they remain resolute in their need for course instructors to 'show' them how to teach and apply the theoretical knowledge acquired in meaningful ways. Preparing teachers to effectively support and meet the instructional needs of diverse populations is a necessity for today's classroom (Landon-Hays et al., 2020).

In a Finish context, teacher educators seem to have been among those in the lead to implement some of these reform interventions. Using a qualitative comparison approach, Acquah et al. (2020) conducted an extensive analysis of two hundred forty-six (246) reflective journal articles. The results suggest that modelling of culturally responsive pedagogical strategies by teacher educators allowed pre-service teachers to engage in critical self-reflection; critique and connect their own learning experiences to their future classroom practice. However, synthesis of the literature suggests that such compatible teaching is not quite evident in the delivery of courses in some teacher education programs. For example, Reupert et al. (2010) in their qualitative investigation found inconsistencies between teacher educators' perceptions of inclusive education and their actual practice. According to the participating teacher educators, the existence of several barriers at the teacher training institution seems to have impeded their ability to model inclusive practice in the delivery of courses. In support, teacher educators according to Olsen and Buchanan (2017) view their practice as a constant 'tug-of-war' between the constructivist-based instructional strategies promoted in teacher education preparation and the pressures from K-12 accountability-driven schools to prepare students for national or regional examinations.

90

*Micro Teaching*

Despite its prevalence in the 60s (Allen, 1967), its decline in the 90s and re-emergence in many teacher education programs, micro teaching, in all its forms and variants, continues to be an essential technique across teacher preparation programs worldwide to facilitate the application of theory to practice prior to the practicum.  The approach was originally designed to allow teacher trainees to practice the delivery of micro lessons (5-25 minutes) and behavior modification strategies to small groups of pupils (Ledger & Fischetti, 2020) under the supervision of a trained mentor who would provide feedback (Allen, 1967).  When video recorded, microteaching episodes allow for the viewing and reviewing of lessons by the teacher trainee and other peers for deeper collaborative critical reflection and feedback. Such first-hand exposure to the instructional experience enables trainees to learn from  real teaching in real classroom environments.

In contexts where it was problematic to access school-aged children for micro teaching sessions, teacher candidate peers were utilized instead.  Researchers (Arslan, 2021; Ledger & Fischetti, 2020; Wangchuck, 2019) have found this approach to be meritorious in developing teachers' pedagogical knowledge and skills;  minimizing teaching apprehension thereby increasing their level of self-confidence; and promoting critical reflection of and on practice (Elias, 2018; Ledger & Fischetti, 2020).   Notwithstanding the benefits of microteaching, it has been observed that the approach is underutilized in many teacher education programs.

*Practicum*

The practicum is a central component of all teacher education programs and a valuable opportunity to provide quality training for teacher candidates in preparation for school life

91

(Cretu, 2021). Developing teacher candidates' planning skills as part of preparation for classroom instruction is a primary objective of all teacher training programs. A review of the literature reveals that while teacher trainees acknowledge the significance of engaging in deliberate and thorough planning, they find lesson planning quite challenging (Sahin-Taskin, 2017) particularly if they do not possess sufficient knowledge about the learners in terms their learning needs, styles, and the general characteristics of the students for whom they are to plan instruction.

In preparation for teaching, candidates are taught the value of producing well-articulated lesson plans. This important part of the practice provides an opportunity for trainees to close the theory-practice gap and develop the competencies and dispositions that are vital to the teaching profession. In keeping with the apprenticeship model, novices are assigned to a more experienced teacher or mentor who provides guidance, instructional support and feedback based on lessons observed (Callahan, 2016; Lee & Brook, 2020; Lofthouse, 2018). Effective mentorship offered during the teaching practicum is critical to the professional growth of teacher trainees and represents one way of increasing new-teacher efficacy (Cheng et al., 2018; Koksal & Genc, 2019; Lee & Brook, 2020; Lofthouse, 2018). Bass (2021) dubs the mentor as the 'key to knowledge transfer' during the practicum experience. Given the increased and changing roles and responsibilities of mentors particularly with the introduction of standards and increased teacher accountability, one should not assume that effective mentoring is simple or straightforward. This professional activity according to researchers (Fletcher et al., 2021; Lofthouse, 2018) is characterized by a range of tensions as a consequence of the dual role of mentor and classroom teacher being performed.

92

In a qualitative study, Koksal and Genc (2019) investigated the lessons that 8 preservice teachers from Turkey learnt through their practicum experience as well as the challenges faced.

An analysis of data obtained from semi structured questionnaires and reflective journals underscores the effectiveness of the practicum in developing pedagogical strategies, teacher efficacy and professional teacher identity. More specifically, the results revealed that the practicum enabled candidates to develop new knowledge and skills through the integration of theory and practice. Results also highlight the positive changes in teacher candidates' beliefs and attitudes towards their teaching capabilities and their ability to cope with the anxiety and stress they possessed prior to the practicum exercise. Moreover, candidates admitted to developing a professional identity through an increased awareness of their roles in the classroom and interaction with their students, mentors, and other teachers at the school.

The role of formative feedback in developing and improving trainees' teaching skills during the micro teaching sessions and the practicum is extremely important. Mentors and college-based teacher educators as well as other supervisors are required to provide quality feedback as it is considered to be an integral part of the professional development process and serves to enrich the instructional experiences of novices (Cheng et al., 2018; Jones et al., 2018; Nel & Marais, 2021). Mentors differ in the type, quality, nature and meaningfulness of the feedback they provide (Nel & Marais, 2021). While the provision of meaningful feedback is essential to the professional growth of teacher candidates, not much has been done to explore the nature of the actual conversations that mentors hold with trainees pre and post lesson observations.

Despite the benefits gained from the practicum, studies have reported several challenges that prospective teachers encounter during teaching practice. Synthesis of related literature

reveal issues with classroom management (Huffman, 2021; Ulla, 2016); dealing with mixed ability and difficult learners; using technology effectively; promoting learners' critical thinking skills; lesson presentation (Dube, 2020; Koksal & Genc, 2019) instructional inflexibility in

classrooms; using student centred pedagogies (Mahmood & Zafar, 2018); lack of mentor guidance and feedback (Fletcher et al., 2021; Gonzalez-Toro et al., 2020; Huffman, 2021; Jones et al., 2018); lack of teacher confidence (Ulla, 2016); inadequate school resources (Araya et al., 2020; Ulla, 2016); assessment of student achievement and disinterest in supporting the student teacher (Fletcher, et al., 2021).

The collaboration, interaction and collegiality that is nurtured during effective mentorship is beneficial not only to the mentee, but the experience also proves to be advantageous to the mentor (Block, 2017; Doan, 2019; Dudick, 2016; Walters et al., 2020).

In Brown and colleagues'(2020) design-based methodological research, new teachers commented quite favorably about the support received from their mentors, collaboration with colleagues and the opportunities provided to share expertise and resources.   Block (2017) evaluated the influence of a mentoring program on the mentoring experiences of new teachers in New Jersey. The study found that while there was no significant influence on participants' overall job satisfaction, the mentoring plans possess a positive influence on the quality of the mentoring experiences of both mentors and mentees. Beginning teachers recognize the significance of interacting and connecting with their colleagues who teach the same grade, subject or topic.

Despite the promise that mentoring holds for positively influencing new teachers' pedagogical skills and contribute to the overall effectiveness of teacher preparation programs, an important observation made in the review of literature is that some mentors do not adequately

94

fulfil their expected roles (dos Reis & Braund, 2019).   One logical explanation for this is the lack of training provided to mentors. Studies (Lafferty, 2018; Thomsen, 2018) have highlighted the need for mentors to be trained to provide the appropriate support beginning teachers require to grow pedagogically, professionally and enhance their teacher efficacy.  For instance, Lafferty

(2018) reported that co-operating teachers who were trained and prepared for their role showed greater enactment of practices during the practicum period. Preparation for mentoring is even more significant for mentees who will at some point later in their teaching career be required to function as mentors to other novices (Thomsen, 2018). This cycle of continuous mentor training will undoubtedly help to minimize or eliminate the frustration that many teachers face in their early years in the profession. Moreover, a community of trained and skilled mentors at schools and school districts will be a welcoming result of this ongoing mentor training process. Evidently, when mentors understand the expectations and perform their roles accordingly, the outcome is encouraging (Lafferty, 2018; Thomsen, 2018).

*Assessment Procedures*

The increase in calls for reform in teacher education, introduction of teacher education standards coupled with the urgent need to improve teacher quality have pushed teacher education programs to devise more appropriate methods to assess trainees' learning (Bastian et al., 2016; Koray & Kahraman, 2019; Restrepo Bolivar, 2020), and to provide evidence to confirm that trainees have indeed learnt how to teach.

Assessment is broadly defined as the process of collecting information for the purpose of making instructional decisions. In pre-service teacher preparation, assessment is believed to be integral to ensuring the growth and development of teacher trainees. During teacher preparation

and field-based practical teaching assignments, assessment serves two overarching and symbiotic purposes: assessment *of* and *for* learning. Additionally, assessment is used as evidence of teacher candidates' learning such as performance-based tasks like professional portfolios (Collins &

Church, 2018) and other compilations that chronicle students' capabilities and growth throughout their training.

Assessment *of* learning or summative assessment is carried out at the end of a course, program or period of instruction to measure the outcome of students' learning (Kibble, 2017). Traditionally, teacher education programs have relied predominantly on high-stake final examinations to measure teacher candidates' content knowledge, basic skills and knowledge of teaching approaches. This form of assessment does have its place in the teacher certification process and there is evidence to confirm that preparation for end of semester of comprehensive examinations can be beneficial to both teacher trainee and course instructors. For example, students have reported their ability to synthesize and solidify their understanding of course material and bond with friends during study groups (Collins & Church, 2018). Test scores can indicate to the instructors whether instruction was effective. Conversely, this form of assessment has been criticized for its inherent limitations including: not being a good measure of students' learning (Pitsia et al., 2021); encouraging memorization and rote learning (Doman, 2018); increasing candidates' levels of anxiety (Swars et al., 2020); discouraging  teachers from engaging in culturally responsive pedagogical practices (Ramsay-Jordan, 2019); and compelling teachers to employ more teacher-centred approaches to instruction (Pitsia et al., 2021).

Conversely, assessment *for* learning occurs during the teaching learning process and measures teacher candidates' ability to apply pedagogical skills and knowledge (Bastien et al., 2016; Collins & Church, 2018; Ntombenhle & Christian, 2018). Teacher educators design and

implement various forms of formative assessment to gain an insight into prospective teachers' ability to demonstrate knowledge and skills in planning, executing the plan through instruction, assessing students' learning and reflecting.  Formative assessment is both frequent and interactive

(Doman, 2018).   Hence, the goal of formative assessment in a teacher education context is to promote active and meaningful learning and optimize candidates' instructional practice (Ntombenhle & Christian, 2018). Coursework assignments that require students to produce unit and lesson plans, make oral presentations, design instructional materials, compile portfolios (Alshawi & Alshumaimeri, 2017; Collins & Church, 2018; Jaekel, 2020); keep journals (Restrepo, 2020) engage in micro teaching make use of formative assessment in preparing future teachers.

Unlike the memory-based summative way to assess learning, formative assessment has been found to be more effective and beneficial in preparing prospective candidates for the teaching profession.   Pre-service preschool teachers perceive performance-based tasks, one type of formative assessment, as an opportunity to gain teaching experience and transfer theory to practice (Koray & Kahraman, 2019).   In-service teachers who participated in Doman's (2018) study expressed satisfaction with a flipped authentic assessment, an approach that uses technology to flip where and how assessments are done. Following their exposure to flipped authentic assessment during teacher preparation courses that were delivered using a flipped approach, the in-service teacher participants expressed a greater likelihood of incorporating the same form of assessment in their classrooms.

Feedback is at the heart of formative assessment (Deneen & Brown, 2016; Lutovac & Flores, 2021).   Teacher candidates depend on quality feedback during course delivery to check progress and understanding (Doman, 2018) and principally during practical teaching assignments

such as micro teaching, clinical periods and the practicum to help them reflect more critically on their teaching, design more effective lessons (Nel & Marais, 2021) and improve the teaching learning experience.   Performance-oriented feedback (Deneen & Brown, 2016) like constructive

criticisms on ways to improve performance on different teaching dimensions including classroom management, questioning, appropriateness of learning activities; raise motivation and enhance the teaching learning process, is desirable. For instance, in Chaaban & Sawalhi's (2020) qualitative research, student teachers expressed confidence in their ability to manage their classroom, implement a myriad of teaching strategies, interact more comfortably with their learners and adapt to change. Those desirable pedagogical outcomes can be best realized with meaningful feedback. Research shows that some trainees do incorporate the feedback received from their clinical supervisors and classroom-based teacher educators into their practice (Cheng et al., 2018; Mpewe, 2019; Nel & Marais, 2021) while others do not. Synthesis of the literature indicates that mentors' and supervisors' brief and vague comments contribute to the challenges faced by teacher candidates in implementing learner-centered teaching strategies during their practicum (Mpewe, 2019).

Teacher candidates' beliefs, perceptions, attitude towards and dispositions about assessment will not only influence their assessment literacy (Deneen & Brown, 2016; Koray & Kahraman, 2019; Lutovac & Flores, 2021; Xu & He, 2019) but also their assessment practices (Unal & Unal, 2019). To develop prospective teachers' assessment literacy and increase their probability of enactment in their teaching practice, teacher educators are urged to model sound assessment practices during teacher preparation (Restrepo Bolivar, 2020). The implementation of learning journals to gauge learning in an assessment and testing course is a clear illustration of this explicit instructional approach.

98

Developing reflective practitioners is part of the goal of many teacher education programs. A review of the literature shows that the use of paper-based portfolios and electronic portfolios (Alshawi & Alshumaimeri, 2017) has been found to be effective in promoting teacher

candidates' critical reflection on and of their practice; and in showcasing their professional development, skills, and ability to meld theory with practice (Collins & Church, 2018; Jaekel, 2020). Notwithstanding, the process of compiling the portfolio can be rather time consuming and frightening as experienced by candidates in Jaekel's (2020) case study who were new to this process. The practicum also provides opportunities for reflection (Chaaban & Sawalhi, 2020; Lutovac & Flores, 2021).

The quality of teacher education programs particularly in terms of its delivery can be assessed by teacher candidates anecdotally or quantitatively through satisfaction surveys. The feedback received should be used to identify gaps in candidates' learning and understanding of course material with a view to making appropriate adjustments to teaching (Doman, 2018) and inform changes in program delivery methods (Bastian et al., 2016); Jareno et al., 2021).

Output

The product exported into the environment as in this case, the quality of teachers, graduates' teaching performance, curricular knowledge (Bagherzadeh & Tajeddin, 2021), teaching dispositions and values following training (Feuer et al., 2013) are referred to as the output. Very often than not, it is the output that to a larger extent determines program quality: effectiveness, strengths as well as deficiencies and gaps. Thus, the output has the potential to positively transform both teacher preparation and K-12 classroom environments to enable the effective functioning of teachers' training colleges.

99

Empirical investigations which explore the impact of professional training on output abound. For instance, studies (Carr, 2013; Dwivedi & Singh, 2012; Gibbs & Coffey, 2004; Kiely & Askham, 2012; Lim-Teo et al., 2008) have explored factors related to the quality of output

including teacher competence, motivation level, teacher efficacy, attitude towards the teaching profession, pedagogical skills, classroom management, ability to work with diverse populations, job satisfaction and overall teacher effectiveness.  However, in the last five years, very little focus has been placed on the impact of initial teacher education programs on those teacher quality dimensions.

In Pritchard's (2017) explanatory sequential mixed-methods study, the author found that first year teachers expressed the need for support through the provision of feedback, resources, and effective collaboration. Moreover, new teachers cited managing student behavior, planning culturally responsive lessons, and differentiating instruction as areas that require strengthening in an effort to enhance their level of readiness for the real classroom setting.  In lending legitimate support, the findings of Van Buren et al.'s (2016) research confirmed the need for more exposure and experience with diverse learners to achieve high levels of efficacy among new teachers.

Regarding the association between years of teaching experience and teacher quality, a study conducted by Graham and colleagues (2020) confirm a lack of empirical evidence to substantiate any positive relationship. In fact, the authors concur with the findings of an extensive research review conducted by Kini and Podolsky (2016) that teachers' instructional effectiveness is at its highest when they teach in supportive and collegial working environments and in schools that are led by strong principals who provide countless opportunities for collaboration and team planning and teaching.  Correspondingly, Suleiman et al. (2017), examined the impact of teachers' capacity building on the academic performance of students in

100

five subjects in a Nigerian secondary school. The authors found that, notwithstanding the moderate capacity building opportunities provided as perceived by the teachers, a positive relationship was established between teachers' capacity building and students' academic

performance.  The authors emphasize the need for constant training and re-training of teachers as it is an essential ingredient to teacher effectiveness and student academic success. In echoing the same sentiment, Graham and colleagues (2020) conclude that in an effort to improve the quality of teaching, professional development learning opportunities and additional support are required by all teachers and not only those who are new to the profession.

Feedback

Feedback is perceived as the receipt of information that informs the system (teacher education) of its status and functioning (Potts & Hagan, 2000).  Qualitatively, feedback can take the form of comments, critiques, and views, and quantitatively as in surveys, test scores, and dropout rates.  This feedback which may be gleaned from the output or other elements in the environment such as students, principals, parents, researchers, and other school directorates (Worrell et al., 2014) affords teacher education institutions an opportunity to make necessary adaptations and modifications to relevant program components to ensure program efficiency.

According to Guskey (2016, 2017) for professional development programs to be effectively evaluated, they must capture and analyze information on five critical levels, all of which capture the four concepts of systems theory elucidated above. It must be noted that these five critical levels informed the generation of or tweaking of items for the quantitative and qualitative data collection methods employed in this study.

*Level One: Participants' Reactions*

This first level gleans information on program graduates' reaction to their professional training and experience over the course of their training. Questions require program graduates to indicate their level of satisfaction with program components such as course density and delivery,

teacher educators' competence; learning styles, nature of course assignments, practical teaching; support materials and resources provided. Rating scaled questionnaires, interviews and open-ended type questions are generally employed to provide feedback on the overall functioning of various components of the program. Typically, data can be gathered right after the professional experience or training.

*Level Two: Participants' Learning*

The second level of evaluation provides a measure of the knowledge, skills and dispositions gained by participants from the teacher training experience. This learning is juxtaposed with the goals of the program and the graduate attributes that teacher candidates are expected to develop and demonstrate upon completion of their training (output). Data gleaned from level two can inform adjustments and changes to be made in the content, methodology, program organization as well as the practical teaching model employed (process).

*Level Three: Organization Support and Change*

While it is acknowledged that teacher training institutions prepare teachers for classroom practice, it is important to note that learning to teach is not exclusively the purview of teacher education institutions. As an open system which requires collaboration of key stakeholders from related environments, it is imperative that ongoing organizational support   is provided to new teachers to enhance teacher effectiveness. Failure to provide ongoing administrative,

organizational, and instructional support to new teachers (output), compromises their initial teaching training experience and hinders their motivation to implement their new strategies to

improve their professional practice.  Feedback obtained from both program graduates, principals and district education officers will inform the sort of partnership that teacher education institutions can create with schools and ministries of education to ensure that schools are equipped with competent and high-quality teachers.

*Level Four: Participants' Use of New Knowledge and Skills*

The way novice teachers plan for and deliver instruction, create and maintain an environment that is supportive, student-friendly, motivating and intellectually challenging to foster student learning gives an insight into not only their new learning following teacher training but the use of and impact of new knowledge and skills on their professional practice (Guskey, 2016). One reliable way of knowing whether the teacher training experience made a difference in the teachers' professional practice (output) is through classroom observations or lesson recordings. An examination of teachers' reflective logs, lesson plans or journals as well as oral personal reflections can also shed light into their practice.  Moreover, structured interviews with teachers and their principals serve as valuable sources of data. It is important to note that unlike levels one and two, data should not be garnered soon after the training or appointment to schools. New teachers need time to familiarize themselves with the school culture and opportunities to adapt new strategies and best practices to their instructional settings (Guskey, 2016).

*Level Five: Student Learning Outcomes*

At the final level of Guskey's model lies the overarching goal of education ministries. Did the teacher training program benefit the learners in any way or have an impact on the

learners' school performance and or behavior?   Guskey (2016) cautions evaluators against the tendency to utilize a single indicator to judge the effectiveness of professional learning.  In fact,

systems that evaluate teacher preparation programs employ multiple sources of evidence to draw conclusions about the impact of initial teacher training and its role in contributing to high quality teachers and improvement in student learning (Feuer et al., 2013). These data sources include student work samples, results obtained from teacher designed classroom-based assessment; district-wide and large-scale national assessments such as Minimum Standard Test (MOE St Lucia) and secondary school entry examinations. Additionally, student surveys, student perception of their teachers' instructional practice, attendance records and other forms of evidence do shed light into students' learning and behavior (Feuer et al., 2013; Guskey, 2016; 2017).

Using a systems, social cognitive and stakeholder theoretical perspectives to determine the impact of teacher training program allows us to view teacher education and the role that teacher educators play in teacher training not as a single or unitary enterprise but as a collaborative and interrelated endeavor. What might be deficient or lacking in the teacher training process is usually performed by other stakeholders (Skyttner, 2005) such as master teachers, school administrators, educational officers, curriculum specialists of other personnel at the Ministry of Education. Consequently, the voices of those that form part of the various elements or environments of teacher education as well as their interactions among these stakeholders in contributing to and influencing teacher professional development and effectiveness (La Paro et al., 2018) are all considered.

In making a distinction between the two major components of teacher education, AlAjimi and colleagues (2016) examined the effects of preservice teacher learning (education in teacher

education programs) and student teaching (practical training in schools) on teacher education. The results show significant influence for preservice teacher learning (71%) and student teaching (75%) on teacher education. Interestingly, the results suggest that student teaching, that is, the

training received during practicum in schools, was found to be more beneficial to the 310 preservice teachers who participated in the survey than their learning in the program. Based on the study's findings, the researchers recommend that as part of the education component of teacher education programs, more practical teaching opportunities be provided to allow trainees to practice their pedagogical skills more frequently in teacher education classroom settings and learn from these teaching experiences. The authors also call for greater collaboration between teacher education programs and key stakeholders for K-12 schools. This is in keeping with a similar recommendation made by Hodges and Baum (2019) regarding the need to work together to improve teacher preparation by providing teacher candidates with field experience in a real- world contexts.

An effective technique used in teacher education programs for helping trainees bridge the theory-practice divide, foster critical reflection on their teaching performance, practice and develop their pedagogical competence (Danday & Monterola, 2019; Wangchuk, 2019; Zahid & Khanan, 2019) is microteaching. To solve the two common problems of time constraints and limited opportunities for practice, Deneme (2020) designed and conducted a series of out-of- class video recorded microteaching sessions with a group of 55 English language teacher trainees as part of a methodology course. The intention of the teacher trainer was to give trainees added opportunities to teach more micro lessons and to reflect critically on their teaching performance. At the end of the semester, the author administered a Likert-scale questionnaire with open-ended items to obtain both quantitative and qualitative data to better understand trainees' opinions on

105

the video recorded microteaching sessions. The results of the study revealed that trainees concurred that the video recorded microteaching sessions provided more opportunities to practice and develop their teaching skills and were quite beneficial in fostering deeper critical reflection

on their teaching performance.  In light of the study's findings, Deneme (2020) recommends the use of video recorded microteaching sessions in methods courses to eliminate problems caused by time constraints during regular teaching hours and to provide additional opportunities for microteachers to reflect on their teaching performance with a bid to strengthen their teaching skills.

## 2.8 Supporting New Teachers Post Initial Training

The teacher education process does not cease at the completion of initial teacher training but continues way into teachers' appointments at their respective schools.  The quality of instruction, teachers' commitment, level of enthusiasm and the overt interest taken in their students' learning, contribute to positive learner outcomes which in turn influence the quality of education provided.  Teacher quality is enhanced during the first few years of teaching and beyond through continuous training and professional development.  It has been established that beginning teachers need additional support post initial training in order to help them better manage and deal with the overwhelming number of unfamiliar work-related issues that they face on a daily basis (Brown et al., 2020; Kearney, 2017; Redding et al., 2019).  As key stakeholders in the teacher education process, schools and school districts have a crucial role to play in supporting new teachers. A review of pertinent literature reveals that studies (Reitman et al., 2019) have explored the various ways by which novice teachers are supported during their early years in the teaching profession following initial training.  This support can be viewed along a

106

continuum commencing with personal and emotional support to administrative and pedagogical support to continuous professional development throughout teachers' early years in the teaching profession and beyond.

Personal Emotional Support

It has been well established that the first few months and years of teaching can be quite stressful for new teachers. As they adapt to their new school and work environment, interact with different groups of students and colleagues, beginning teachers encounter a range of emotional challenges that can cause much frustration or make their teaching career a daunting experience (Bass, 2021; Hamm, 2017; Paula & Grinfelde, 2018). It is acknowledged that teachers' personal characteristics are quite useful in coping with some of the challenges faced during their early years. Research conducted by Cetin and Sadik (2020) for instance, shows that teachers' interest in students and the teaching profession, their self-confidence and effective communication skills are three main personal attributes that facilitate their professional adaptation to their new work environment. These attributes are among the personal dispositions embraced by the teaching profession and standards for mentors. An effective mentorship system can be cultivated at the school or district level to ensure that new teachers are paired with mentors (Bass, 2021; Lee & Brook, 2020; Lofthouse, 2019) who epitomize the above-mentioned personal attributes as well as sound pedagogical practices. So, in an effort to minimize the unavoidable stresses accompanied by the early teaching years, mentors and more experienced teachers can sympathize, offer advice and encouragement to new teachers who might need emotional support. Furthermore, the role that mentors play as motivator, advisor and counsellor (Bass, 2021) is paramount to the personal wellbeing of the new teacher. Mentor-apprenticeship interactions and relationships offer

107

mentors a chance to critically reflect on their own teaching practices as well as what has worked or not worked for them throughout their teaching career (Ayoobzadeh & Boies, 2020; Bass, 2021). Support can also come from school administrators and even family and friends outside the school

environment.  It must be noted that while various forms of emotional support may not directly improve the teaching performance of new teachers, they certainly go a long way in promoting teachers' personal well-being and the development of personal teaching dispositions that are critical to the profession and teacher retention.

Administrative Support

A positive school climate with a supportive administrator or principal is increasingly being regarded as a factor which can either directly or indirectly facilitate new teachers' implementation of best practices to which they were exposed during pre-service training and contribute to teacher retention and effectiveness (Redding et al., 2019). Research (Farris, 2018; Reitman et al., 2019) has shown that when school administrators provide encouragement, effective feedback and communicate clear expectations for teachers' performance, create scheduled times for peer collaboration, mentoring and coaching (Walker & Kutsyuruba, 2019), and set aside time during the academic year for professional development, new teachers experience higher job satisfaction and make the conscious decisions to remain in the profession longer (Redding et al., 2019).  A review of the literature shows that newly certified teachers have specific expectations of their school principals. They expect their principals to provide appropriate support in their new school environment; create positive and collaborative school culture (Zhang et al., 2019). The findings of a qualitative study conducted by Farris (2018) for instance, revealed three kinds of support new teachers expected their school leaders to provide

108

that will to a large extent influence their decision about staying or exiting the teaching profession by the end of their first year.

1. *Pre-Structure Support*

New teachers expected their administrators to share with them what has already been established in the school as well as appropriate protocols and procedures to allow them to act and work in ways that are in alignment with the school vision, policies and climate. The findings of Altayli and Dagli's (2018) study underscore the importance of supporting beginning teachers by integrating them into the school culture.

2. *Resources and Availability*

During the academic year, beginning teachers wished for their school administrators set aside time for one-on-one sessions, evaluation of their teaching performance through lesson observations and the provision of appropriate feedback. Additionally, principals are expected to provide access to resources and the necessary tools to allow them to plan and deliver good lessons.

3. *Supportive Environment*

It is the hope that school leaders will schedule time for teacher collaboration and interaction as this is critical for building relationships with colleagues and obtaining additional support. There is substantial empirical evidence (Redding, et al., 2019) to show that when school principals or administrators empower teachers and build strong teacher-administrator relationships, not only do they create effective school teams but more importantly contribute to teacher effectiveness. To contribute to transformative change in teachers' instructional practice, it is important that administrators engage in-depth classroom observations of lessons (Lochmiller

& Mancinell, 2019; Zhang et al., 2019) offer one-on-one coaching and meaningful ongoing learning opportunities to foster growth in new teachers' previously identified areas of weaknesses.

To sum it all up, in an increasingly globally competitive and accountability driven education system, school principals are charged with a greater responsibility unlike the traditional administrative or managerial role to function as instructional leaders who will provide opportunities for the collaboration, training and professional development of newly certified teachers in order to foster their growth and improve their students' academic success.

Pedagogical Support

The need for instructional support from experienced teachers or mentors and school administrators cannot be overemphasized. Beginning teachers long for innovative strategies, teaching ideas, meaningful feedback and constructive criticisms based on their lessons and other teacher-related activities (Bastian et al., 2016; Mpewe, 2019). Moreover, professional relationships that mentors and school leaders develop with mentees through    series of professional conversations, lesson observations, modeling of good teaching and feedback will indubitably help to overcome feelings of isolation (Bass, 2021; Hamm, 2017; Lee & Brook, 2020; Lofthouse, 2019), and overtime, hone their craft.  Beginning teachers believe that various forms of support provided will build their resilience (Wilson et al., 2020) contribute to their professional growth, and make their transition into the real classroom setting a more successful and fulfilling experience.  It is for this reason among others that mentors need to set high standards of professionalism, positive attitudes and good work ethics while mentoring their protégés (Bass, 2021). Moreover, often seen as a mutually beneficial experience, mentors gain

110

affirmation of their practice, experience growth related to their own teaching, and personal satisfaction seeing the rewards derived from guiding a new teacher through the usually stressful first few years of the teaching profession (Walters et al., 2020). According to Ayoobzadeh and

Boies (2020) mentoring provides opportunities for mentors to develop leadership self-efficacy or the confidence that they have in fulfilling their leadership role as mentors.

Professional development is often thought of as formal sessions such as seminars or webinars, workshops, or short courses at an educational institution. It can, however, occur in informal contexts and take other forms such as engaging in research, observing the practices of other experienced teachers, team planning meetings, coaching and mentoring of new teachers, (Kho et al., 2020; Petty et al., 2016) or participating in lesson study groups. Whatever the form, the purpose of professional development is the same, and that is, to improve teacher competence and accelerate students' learning.   It is necessary that teachers capitalize and seek professional development opportunities to acquire new knowledge and stay current abreast with the latest research, practices in the field (Petty et al., 2016).

In discourse related to professional development for beginning teachers, the constructs, 'induction' and 'mentoring' surface in every piece of scholarly work.  Induction can be defined as a comprehensive, systematic program of support provided to beginning teachers that is primarily aimed at helping them adjust to their new work environment and the demands of the job, promoting their professional growth and contributing to students' academic performance (Petty et al., 2016).  The undisputable fact is that induction programs depend primarily on mentors to provide appropriate forms of support to newly certified teachers (Lee & Brook, 2020; Lofthouse, 2018).  These professional development programs provide the support structures and

111

resources that have been found to positively influence teachers' practice and their decision to remain in teaching (Doan, 2019; Kearney, 2017; Reitman et al., 2019).

Related literature on various professional development or capacity-building opportunities for teachers chronicles several ways by which schools and school districts support new teachers

pedagogically, and the effect these interventions have on their teaching efficacy and students' academic achievements. Soe (2018) for instance, reported on a study which analyzed TALIS 2013 secondary school teacher questionnaire in a Finish context to determine the impact of teachers' professional development on their instructional practice. The results of the study revealed that teachers who completed all three cycles of teacher professional development (initial teacher training, induction and mentoring) implemented more effective instructional provisions than those who did not complete the professional development cycle. Likewise, the qualitative results of El Afi's (2019) mixed methods study suggest that teachers demonstrated significant improvement in their lesson planning, instructional methods, and their ability to manage their classrooms following their engagement in a professional development training. Moreover, teachers' participation in a series of designed-based professional learning activity which entailed self-reflection, collaboration and coaching resulted in observable improvement in their pedagogical practices (Brown et al., 2020) and positioned them as designers of learning.

Reitman and colleagues (2019) studied 60 teachers from California following their participation in an induction program to identify the significant supports that contributed to teacher retention. Beginning teachers indicated that the program offered them strong support in several areas: (a) training in instruction and curriculum allowed them time to study and observe instructional strategies being modelled as well as opportunities for practical application to meet diverse student needs (Pedagogical Knowledge); (b) strategies for reducing stress, and

relationship building with parents and other teachers (Building Relationships); (c) information learned about teaching gleaned from attendance at weekly seminars, monthly group meetings or conferences (Professional Learning); (d) job-embedded support provided by mentors (Mentoring); and (e) engagement in critical reflection on practice (Reflection). Following the

program, not only did newly qualified teachers feel well-equipped for the classroom but they also developed  professional competence that significantly impacted their own instructional practice and students' academic performance.

As part of a larger study that focused on induction programs used throughout Australia, Kearney (2017) conducted a case study to determine the characteristics of induction programs in various secondary schools, to identify areas of congruence and at least one exemplary program that can be used as a model for other states. The findings reveal that the most exemplary induction program found is characterized by:

1.  orientation of new teachers to the teaching profession and school

2.  assignment to a subject-specific mentor

3.  opportunities for collaboration

4.  structured observations of lessons including reduced load and release times

5.  focus on reflection

6.  provision of resources

7.  seminar and group meetings

8.  promotion of lifelong learning

9.  evaluation of teacher and program

10. continuous professional support and development program

113

According to the participants, the support systems such as the provision of a mentor, release time and reduced workload for both mentor and mentee was the most impactful to the success of induction programs.

An extensive review of the literature shows that more than 95% of the induction programs and other forms of professional development implemented in schools and school districts globally have been conducted through face-to-face modalities. A recent move to inducting new teachers using technology-mediated methods are in the ascendancy (Doan, 2019; Mitchell et al., 2017; van Tonder, 2021). These contemporary induction programs which utilize a range of technologies such as discussion boards, web-based learning platforms, blogs, emails and telephones while they hold much promise, can pose some challenges if not properly implemented and documented. Mitchell and colleagues (2017) highlighted challenges encountered in accessing, retrieving and preserving interaction data between novices and their coaches.

The recorded success and positive impact of induction programs on teachers' retention and instructional practice as documented in the literature (Doan, 2019; Kearney, 2017; Reitman & Karge, 2019) signal the need for all schools and education districts to invest quality time in planning and implementing induction programs that are evidenced-based and provides individualized support for teachers during their first few years in the profession. Given that induction programs rely on mentors as support structures, it means that mentors need to be adequately trained to fulfill their roles most successfully. Existing induction programs can be redesigned to reflect international standards, the needs of beginning teachers and the increasing need of education systems globally to offer blended or e-learning instruction to students. Not

only will exemplary induction programs develop high-quality teachers but will also ensure the retention of a community of skilled teachers at schools.

Another form of professional development that has been used extensively across schools and education districts globally to support newly qualified teachers and teachers who require assistance is coaching or teacher coaching (Bennett, 2019; Brandmo et al., 2020; Hakro & Mathew,

2020; Kho et al., 2019). By performing the instructional role of implementer, advocate and educator (Kho et al., 2019), coaches promote teachers' application of subject-specific knowledge, skills and teaching strategies into their classroom practice. The learning gained from conferences held before, during and post lesson observations (Hui et al., 2020) is beneficial to both the coach and the coachee. For instance, the findings of Hakro and Mathew's (2020) research indicate that the coaching experience fostered collegial relationships and created opportunities for the coach to help the coachees discover, through critical reflection, their teaching strengths and weaknesses. Relatedly, group coaching, according to Brandmo and colleagues (2020) provided opportunities for coaches to develop a clearer understanding of their role as instructional leaders, and their self-efficacy in performing this role. However, for coaches to effectively perform their instructional roles, they need to receive appropriate training (Bennett, 2019).

The effectiveness of professional development activities such as mentoring and coaching, is dependent on the structural supports that are put in place by school administrators. For instance, school principals who pair teachers who teach the same subject or grade level and designate a slot on the timetable to facilitate team planning and professional conversations, may influence the school climate in positive ways (Redding et al., 2019). This kind of collaboration and interaction that occurs among groups of teachers who are committed to improving their

professional practice, student learning and their academic performance is commonly referred to as a professional learning community or PLC (Carpenter, 2017; Carpenter & Munshower, 2020).

Synthesis of the scholarly literature on professional learning communities discourse has found the approach to be effective in shaping teachers' practice (Aaltonen, 2019; Bostancioglu, 2018; Carpenter & Munshower, 2020; Mintzes et al., 2013; Surrette, 2020) and positively

impacting student achievement in meaningful ways. A very good illustration of the professional learning that is made possible through the engagement and collaboration of subject-specific teachers in PLCs is Carpenter & Munshower's (2020) study. All teacher participants (N=120) expressed a preference for face-to- face PLCs. However, they noted that the intervention gave them the opportunity to (a) build professional relationships and friendships; (b) learn new perspectives, insights and experiences from other members; (c) share authentic and real solutions to classroom problems; and (d) increase their learning and teaching.

Like induction programs, PLCs are being taken in the virtual space to build better schools (Nelson & Bohanon, 2019); provide professional development opportunities (Bostancioglu, 2018); and to break barriers brought about by distance (Carpenter & Munshower, 2020) and global economic and health-related forces such as the COVID-19 pandemic (Gates, 2021). Findings of Bostancioglu's (2018) mixed method approach for instance, confirm that online formats provide a practical and effective option for professional development of teachers. However, for the process to be effective, it requires complete buy-in from the teachers, so that they can participate and collaborate fully in the virtual space. Carpenter and Munshower's (2020) phenomenological case-study is a very fascinating research which yields results that can certainly shape the practices of all educators across schools, education districts and teacher education institutions. The authors explored the experiences of a group of rural high school

teachers from two different geographical locations in the United States, following their participation in a virtual professional learning community which involved the use of Goggle Drive, Google Docs and Google Forms. In addition to the instructional impact, the researcher observed noticeable growth in the teachers' use of technology in planning and delivering

instruction. Participating teachers are reported to have developed confidence in integrating technology into their instructional practice.

This is the kind of collaborative learning and modelling that is encouraged in the preparation of future teachers and in the provision of ongoing professional development for beginners and other experienced teachers who are identified as being either technophobic or lacking the confidence to teach with new technologies. Given the pervasiveness of a range of information and communication technologies today, teacher training institutions, schools and school districts must capitalize on the affordances and opportunities provided by online formats and platforms to offer high-quality collaborative training and professional development for their teachers.

## 2.9 Transitioning to the Classroom: Challenges Faced by New Teachers

Despite the various forms of support provided to beginning teachers at their respective schools and education districts, synthesis of the literature yields several challenges that hinder new teachers' ability to implement instructional practices and strategies as recommended and advocated during their training. There is evidence to suggest that many teachers who have left the teaching profession are transferred to other schools or experience high levels of job dissatisfaction cited the lack of resources and support structures, (Kearney, 2016; Redding et al., 2019; Sawyerr, 2018); lack of administrative support (Walker & Kutsyuruba, 2019); unsatisfactory working conditions, ineffectiveness of induction programs in meeting their

117

personal and professional needs (Altayli & Dagli, 2018) as well as gaps between classroom expectations and school realities (Bano et al., 2019). For instance, a group of middle school

mathematics teachers expressed a strong sense of isolation during their first years of teaching owing to the lack of instructional support received from their school administrators (Redding et al., 2019).

In another study, Sawyerr (2018) found that new teachers indicated that the professional development and instructional support provided to them by the school or district was irrelevant, inadequate and ineffective. Furthermore, the beginning teachers reported that whatever noticeable improvements made to their practice was the result of their critical reflection on lessons or their own initiatives and not the support from the school or district.   Newly trained teachers have the expectations that when hired, they will not only be welcomed or given a brief orientation to their new work environment but more importantly, be sufficiently supported throughout their early years rather than being left to swim or sink in the profession.

Research has shown that ineffective induction programs are characterized by the way in which they are conceptualized, structured and implemented by school leaders and education districts. The term induction is often misused and taken to refer to the provision of pastoral care to support new teachers emotionally and spiritually or seen as a one- or two-day process (Kearney, 2016).  Providing emotional support is one important part of a comprehensive induction program and should not be misinterpreted as fragmented components.

The findings of the foregoing studies justify the need for more effective induction programs that are comprehensive, ongoing and aligned with best practices.  School administrators are urged to be better in the support they provide to new teachers. Redding and colleagues (2019) recommend taking along subject coaches during walkthroughs and lesson

observations for the purposes of addressing issues related to accurate content delivery and identifying areas of growth in lesson presentations.

Lack of instructional resources, teachers' incompetence, student indiscipline, classroom management (Rife Oman, 2019), examination pressures (Boakye & Ampiah, 2017; Charles, 2020; Paula & Grinfelde, 2018) are cited as perennial challenges encountered by newly qualified teachers that negatively impact their instructional practice. Cetin and Sadik (2020) explored the challenges faced by career-changing teachers as well as the factors that facilitate their adaptation. The authors reported teachers' incompetence in using constructivist-based instructional strategies, lack of classroom management   skills, and physical inadequacies of the school environment as challenges new teachers face.  In a related study, and upon reflection of their teacher preparation experience, new teachers identified classroom management and differentiated instruction as two main areas in which they required more training (Hastings, 2021). New teachers also need additional support in working and co-operating with families, and strategies for ensuring the holistic development of students (Harju & Niemi, 2020). Moreover, the pressure to complete the school curriculum; large class sizes; inadequate facilities and appropriate resources to promote collaborative learning environments; and teacher candidates' inadequate training are cited as barriers to the implementation of critical thinking skills in the classroom (Khalid et al., 2021).

From a regional standpoint, Charles (2020) interviewed forty-seven (47) secondary school Mathematics teachers in Dominica to find out the factors that affect their ability to implement recommended instructional approaches in Mathematics. The findings revealed that while teachers may have acquired knowledge of the recommended strategies either through pre-service training or other professional development workshops and programs, they reported that

they seldom use the strategies due to their time-consuming nature particularly amidst pressures to prepare students for CSEC examinations. Students' behavior, teachers' limited understanding

of the strategies and the inappropriate use of the strategies to teach various math concepts served as barriers.

The difficulties encountered by newly qualified teachers internationally and across teacher education programs are quite similar. In Boakye and Ampiah's (2017) qualitative study, newly qualified teachers reported several challenges they face in the teaching and learning of Science at a high school in Ghana. Lack of resources for teaching and learning, time management, teachers' deficient content knowledge, students' indiscipline, lack of students' interest and their general inability to complete the integrated science curriculum. In a Pakistani context, novice teachers identified the application of student-centred pedagogies in large classrooms, dealing with individual differences, heavy workload, non-cooperation of some school staff and parental interference as some notable challenges faced during their early years in the profession (Dayan et al., 2018). Some of the challenges beginning teachers encounter in real classroom settings are attributed to inadequate training (El-Saway 2018), a reflection of deficiencies in preparation programs or gaps between training and realities of schools.

120

## 2.10 Revamping Teacher Education: An Imperative for Teacher Quality

There is increasing consensus that skilled teachers are critical to delivering high-quality instruction and that the recruitment, preparation and retention of good teachers is an imperative for school improvement (Darling-Hammond, 2006; Feuer et al., 2013; Levine, 2006; OECS, 2018c). It is well acknowledged that achieving teacher quality and effectiveness goes beyond initial teacher preparation. The role that schools and Ministries of Education play in providing opportunities for teachers to engage in continuous professional development cannot be overemphasized. An extensive review of the literature suggests however, that in order to equip 21st century teachers with the requisite pedagogical knowledge, skills and dispositions to raise

student academic achievement in an increasingly standard-based, accountability-driven education system (Levine, 2006; OECS, 2018c),  education professionals regionally and globally must all collaborate to revolutionize the teacher education landscape (AACTE 2018; Feuer et al., 2013; Hodges & Baum 2019; Korth et al., 2009: Levine, 2006). To re-engineer teacher

education to achieve better quality teachers, the literature makes several recommendations which

include but not limited to the following:

1.  Revise teacher education curricular and level of certification

2.  Upgrade entry requirements for initial teacher training and professional practice

3.  Forge greater link between theory and practice

4.  Provide professional development for teacher educators

5.  Adopt Mentor Standards to select, train and recruit mentors

6.  Engage in ongoing monitoring and evaluation of teacher education programs

7.  Create and maintain systems of partnership

121

These recommendations are in keeping with the criteria that scholars (Department of Education, 2016: Levine, 2006) and others have offered for re-engineering teacher education programs. According to this 9-point template, an exemplary teacher education program:

- articulates an explicit focus in the education of teachers (purpose)

- is rigorous and mirrors program purposes and goals (curricular coherence)

- integrates theory and practice of teaching (curricular balance)

- contains a cadre of practitioners  who are   andragogically competent and current in their

    field (faculty composition)

- uses a set of criteria to select the right kinds of teachers for recruitment (admissions

criteria)

- has high graduate rates and students who are well prepared for the classroom (degrees)

From a systems theoretical standpoint, input, process, and output require thoughtful revamping in an effort to obtain desirable student learning outcomes.

Change in Teacher Education Curricular & Certification

The numerous incidences of violence and indiscipline among school children; high rate of male underachievement; family destabilization, introduction of regional learning standards and more recently, the suspension of corporal punishment in schools among OECS member states (OECS, 2018c) justify the need for teacher training institutions to make some adjustments to curricula to address the current realities of schooling and quality of education across OECD territories. According to Levine (2006) exemplary teacher preparation programs should articulate and demonstrate a strong commitment to producing high-quality teachers with graduate attributes that specify exactly what these teachers need to know and be able to do as they

progress along the teacher education continuum. Moreover, calls for the provision and incorporation of 21$^{st}$ century literacies and skills in teacher preparation curricula that today's teachers need to support K-12 instruction and to meet the needs of their increasingly techno savvy students are ubiquitous. In essence, universities and other training institutions charged with the responsibility for training teachers must endeavor to develop curricular that are coherent, inclusive, current (Levine, 2006) and aligned with international professional standards.

Additionally, certification requirements are being questioned because of the need to maintain a high-quality educational sector to meet the demands of today's highly competitive global economy (OECD, 2019). A four-year bachelor's in education (B.Ed.) degree is now

considered a more desirable qualification for primary school teachers in the Commonwealth Caribbean. Internationally, a similar time frame is deemed appropriate by some universities while for others, a 5-year master's program is considered more rigorous, academically, and professionally superior (Levine, 2006). Despite the difference in the duration and or type of teacher education program being offered across the globe, they should articulate a universal commitment to producing efficacious teachers with a clear understanding of the competencies, professional and pedagogical knowledge that excellent teachers should possess and demonstrate (Levine, 2006). A strong appeal is being made for teacher preparation institutions to improve their curricular to respond more effectively to contemporary educational challenges and global competitiveness in the profession.

123

Melding Theory and Practice

One of the major concerns expressed globally regarding the effectiveness of teacher preparation programs speaks to the quality, duration and model of the clinical practice or teaching practicum employed during the teacher preparation process. A central proclamation of the American Association of Colleges for Teacher Education is that practicum or clinical practice is central to high-quality teacher preparation (AACTE, 2018). This proclamation further explains that when clinical practice is embedded in every course of teacher education programs, a betterquality clinical experience is realized. In lending legitimate support, Hodges and Baum (2019) opine that this high-quality clinical practice goes beyond the traditional culminating experience just prior to graduation critical to is a compulsory course that equips candidates with the professional experience and a deeper insight into the profession and realities of the classroom. The need to provide multiple opportunities for new teachers to spend quality time in real classroom settings (Younus et al., 2017) under the supervision of school-based teacher educators who

themselves engage in high quality pedagogy has been documented (AACTE, 2018; Easley, 2020; Okogbaa, 2017).   In exemplary teacher preparation programs Levine (2006) found that field experiences begin early, are sustained, and provide countless opportunities to facilitate direct and immediate application of theory to real classroom settings. An integrated, field-based clinical practicum model (AACTE, 2018; Henning et al., 2019) is therefore proposed. This model of clinical practice represents a departure from a traditional teacher education program that emphasizes academic preparation and coursework assignments that are usually disconnected to school-based experiences to a program that is fully grounded in clinical practice and intertwined with academic content and professional courses (AACTE, 2018). Succinctly put, high quality teacher preparation requires a melding of theory with practice (Yin, 2019).  For

124

this clinically based program to be effective, it requires a shift in teacher educator roles and responsibilities.   Furthermore, the kind of support new teachers need to be competent and effective according to Darling-Hammond  is intensive mentoring which lasts through the first year of teaching (Scherer, 2012).

Introduction of Professional Standards for Mentors

For many teachers' colleges, the selection of co-operating teachers or mentors, is done arbitrarily thus resulting in several pedagogical inconsistencies, misunderstandings and challenges encountered by teacher candidates during practicum (Fletcher et al., 2021).  While classroom teachers are expected to mentor and provide support to new teachers, many of them fail to satisfactorily fulfill this role and consequently contribute to new teachers' limited or poor- quality pedagogical skills, a reflection of the pupil-teacher system practiced historically in Saint Lucia and the Caribbean (Charles, 2000; Mark et.al., 2005; Miller, 1999).  A more systematic and

efficacious approach in identifying, selecting and training school-based mentors is an imperative for strengthening initial teacher preparation within school placements (Department of Education, 2016; Hairon et al., 2020). Part of the selection process can entail classroom observations of potential classroom-based teacher educators along with personal interviews with school administrators. The goal is to identify exemplary teachers whose classroom practices mirror highquality teaching (Department of Education, 2016; Korth et al., 2009; Lofthouse, 2019) and whose teaching philosophies are consistent with the expectations of teacher education institutions. Mentors act as a significant resource for mentees or new teachers and represent the paste that helps connect all the activities of teacher preparation and induction programs together (Lofthouse, 2019).                    Due to the quintessential role that mentors play in encouraging and supporting the professional development and progress of teacher candidates as well as newly

trained teachers, educators and policy makers believe that specific guidelines and mentor standards are required.  In recognition of this need, the Department of Education (2016) in the United Kingdom developed four (4) main mentor standards that reflect evidenced based practices in initial teacher preparation and continuous professional development of newly qualified teachers. Also, these standards represent a summary of the roles and responsibilities that classroom-based teacher educators must fulfill as mentors. The standards are thought to serve as a useful tool to mentors, teachers in training or mentees, school leaders and teacher education institutions to ensure highquality teaching and teachers.

*Mentor Standard One: Personal Qualities*

The mentor's commendable personal attributes are seen as an asset to the mentoring process. They draw upon their interpersonal and active listening skills to help cushion the stresses and relieve the anxieties (Aravena, 2018; Gardiner & Weisling, 2018; Hamm, 2017) that program

graduates experience when they join the profession. According to this standard, mentors are required to demonstrate an understanding of the various ways by which they can support teachers who have recently completed their initial training; hold regular meetings and professional conversations with program graduates; establish trusting and honest relationships (Hamm, 2017); and support their teaching performance.

*Mentor Standard Two: Teaching*

The second standard characterizes the most common expectation of mentors in the professional growth of newly trained teachers or program graduates, and that is, the provision pedagogical support in ways that will positively impact students' learning outcomes. Mentors are required to support teacher candidates in developing their practical teaching skills; setting

126

high expectations for all students and meeting the individual needs of students. Through the modeling of high-quality teaching (Bass, 2021; Gardiner & Weisling, 2018) mentors (a) provide explicit demonstrations of instructional provisions; (b) create opportunities for clarification and deeper understanding of the practical application of these provisions and strategies; (c) and build teacher self-efficacy (Ayoobzadeh & Boies, 2020; Lee & Brook, 2020). Furthermore, the provision of constructive feedback based on lessons observed is emphasized as a part of this standard. Likewise, support in designing instructional materials and learner-centered lesson plans, and in monitoring and assessing student learning and progress is proffered.

*Mentor Standard Three: Professionalism*

According to the Professional Standard, mentors have a primary obligation to set high expectations for the teacher candidate whom they will be supporting and to help them better

understand what their roles and responsibilities entail as a classroom teacher. By informing mentees of the norms and culture of the school in which they operate (Aravena, 2018) mentors equip teacher candidates  with information and tools that are needed to respond to the realities of the school, thus making their mentoring practicum experience more rewarding. Part of their new mentoring role requires them to encourage new teachers' participation in school life and the wider school community. It is the expectation that mentors will support teacher candidates in the effective management of instructional time, the promotion of diversity and fairness during their interaction with all students.

*Mentor Standard Four: Self Development and Working in Partnership*

As life-long learners, mentors must take responsibility for broadening and developing their own professional knowledge and pedagogies. This is achieved by accessing opportunities

127

for professional development and engaging in action research and other types of educational research that seek to contribute to their teaching acumen.  Also, as part of this standard, effective mentors build strong partnerships with other mentors as well as parents of students. Working with families (Knight-McKenna et al., 2017) provide mentors invaluable insight and knowledge into students' home backgrounds, funds of knowledge, interests and ways to capitalize and cultivate important connections with the family from which they draw upon while performing their mentoring role during school placements.  To illustrate the benefit of a clear emphasis on familyteacher relationships in mentoring programs,  Knight-McKenna et al. (2017) examined the efforts made by one beginning teacher in forging connections with the families of students in her class.  The teacher cultivated positive relationships with the families of students, interacted with them in more authentic ways and valued the expertise and experiences of those families.

This was made possible through  opportunities afforded during mentoring sessions that focused on building teacher-family relationships.

Mentoring is thought to be most effective when its importance is understood by all key stakeholders; mentoring roles and responsibilities are fulfilled in accordance with the guidelines set out in established mentor standards; and most importantly, when it is comprehensive and structured (Department of Education, 2016; Hairon et al., 2020).   The standards can be used by mentors to familiarize themselves with their expected roles; promote self-assessment and deeper critical reflection on practice; identify areas that need strengthening; and to support newly certified teachers as well as those who are already in service but need assistance. The mentee develops an understanding of the various ways by which he or she can be supported in the profession. Mentees who aspire to become mentors later in their teaching career will find the mentor standards quite useful as they will endeavor to seek professional development in the

128

requisite skills and competencies.  Finally, school principals, education districts and teacher education institutions should utilize the standards to determine the various foci for training and professional development of existing and potential mentors. They provide a great set of criteria that can be used to ensure a more objective and rigorous method of selecting mentors for supporting the professional development of teachers during and post initial training.

New Entry Requirements for Initial Teacher Training

Current entry requirements for the primary and secondary programs continue to be a subject of much contention among teacher education professionals both regionally and internationally. Eligibility for admission into teacher training colleges varies across territories, schools of

education, and the teacher training colleges offering the program.  In Turkey for example, primary teacher candidates are required to pass an admission exam irrespective of their qualification or motivation to teach (Uzeirli & Kilicoglu, 2021).   Uzeirli and Kilicoglu (2021) in their qualitative comparative study examined the views of educators from Turkey and Azerbaijan regarding the teacher training process.  The authors found that participants of both territories share similar opinions of primary teacher candidates' entry into teacher training institutions and are of the view that their personal and professional qualifications should also be considered for admission to teacher training programs.

In the English-speaking Caribbean for instance, the entry requirements to teach at a primary school have evolved from basic literacy and numeracy skills, virtues, to arithmetic to the most recent being 5 CXC subjects or other precollege qualification deemed equivalent.  In the past, prior teaching experience was considered a pre-requisite for entry into teachers' training colleges however, this is no longer the case as secondary or tertiary level graduates can enroll in

129

the program once they have met the academic qualifications.  Similarly, the results of an alumni and faculty survey revealed that more than two out of every five principals and education school faculty members share the view that admission standards at American schools of education are too low (Levine, 2006).

Professional Development for Teacher Educators

The professional skills and competencies possessed by teacher educators as well as their ability to adopt effective teacher education practices determine to a large extent whether or not teacher training institutions will realize their intended goals. Researchers caution against the tendency to assume that good classroom teachers are the best candidates for appointment as

teacher educators (Korth et al., 2009; Olsen & Buchanan, 2017) or those who have attained a masters or doctoral degree in a related field. Inarguably, classroom teachers may demonstrate effective teaching skills and classroom management techniques, however, is it suffice to conclude that they possess the competencies and professional dispositions to function as college- based teacher educators? Similarly, a PhD in Science obtained by a university-based teacher educator does not guarantee the individual the necessary guidance for becoming an effective teacher educator (Parker et al., 2019). Does a sound grasp of discipline-specific content, which admittedly is essential, automatically qualifies or deems one suitable for working as a university or collegebased teacher educator?

Correspondingly, adjunct staff who are usually hired to work with teacher candidates during the practical experience are retired school principals and teachers who admittedly have a wealth of knowledge and experience to share with the trainees. However, expansive knowledge and experience does not ensure that one is adequately prepared to share with teacher candidates

the science and art of teaching. Some teacher educators possess a wealth of practical K-12 experience whereas others have extensive training as scholars and researchers (Parker et al., 2019). The role of university-based teacher educators goes beyond simply imparting discipline specific content to teaching teacher candidates about pedagogy – how to teach. As such, they must be able to model best practices (Parker et al., 2019; Tanguay et al., 2018) and provide student teachers opportunities to discuss their applicability in real classroom settings. In fact, Tanguay et al. (2018) purport that college-based teacher educators function as models of change in teaching dispositions and practice through their delivery methods and interaction with future teachers. Notwithstanding, research has shown that many university-based teacher educators received very little direct training and guidance to help them fulfil their role (Olsen & Buchanan, 2017).

To ensure high-quality teacher education and development, teacher educators should acquire the requisite training in pedagogy (child-centred learning methods and strategies) and andragogy (adult learning methods and strategies), practical and theoretical knowledge specific to teacher education in addition to their academic qualifications. The very same notion of preparation that is required for preservice teachers should be applied to the preparation of teacher educators (Korth et al., 2009). Both school and college-based teacher educators must be experienced, possess appropriate qualifications, and demonstrate professionalism (AACTE, 2018). More specifically, Parker and colleagues (2019) identify key competencies and credentials that teacher educators must possess: university-based theory; scholarship; research and school-based practice; pedagogical application; and relationship building. Additionally, ongoing professional development opportunities for teacher educators in the form of conferences, workshops, engagement in educational research and publishing in scholarly journals

(Joseph & Mitchell, 2019) is necessary in contributing to local knowledge and classroom practice (Appelgate et al., 2020; Orakci, 2020; Sharkey, 2018; Tack & Vanderlinde, 2016; Tack et al., 2018). Moreover, as an imperative for preparing future teachers, university-based teacher educators must endeavor to find innovative ways to deliver instruction to prospective teachers more efficaciously in an effort to deepen their understanding and facilitate application of student-engagement instructional practices in their future classroom settings.

There has been a shift in focus on the classroom teacher not as a cooperating teacher but a mentor and teacher educator (Collins &Ting, 2017; Henning et al., 2019; Korth et al., 2009). According to the authors, redefining the classroom teacher as a school-based teacher educator underscores the systemic and evolving nature of teacher education (Korth et al., 2009; Levine, 2006; OECS, 2018c) in the preparation of future teachers. This co-reform model (Collins & Ting,

2017; Korth et al., 2009) also acknowledges the shared responsibility and the opportunities afforded for effective partnership and networking between classroom-based and university or college-based teacher educators. Such collaboration will create opportunities for the articulation and maintenance of a shared commitment in the initial teacher preparation and ongoing professional development of practicing teachers.

Create and Maintain Fluid Systems of Partnership

Seen as an open education system, it is imperative that teacher education institutions forge effective partnerships with other key stakeholders in the education system to effectively achieve its objectives. Quality partnerships bridge the gap between teacher education programs and the K-12 school systems. The need for teacher training institutions to establish effective systems of partnership with schools, principals, school districts  and other stakeholders is critical

132

to ensure the development of sound pedagogical skills during the practicum and help newly trained teachers transition into the classroom (Boakye & Ampiah, 2017; Dayan et al., 2018; Simon, 2014; When university-based and school-based teacher educators collaborate or work hand in hand (Curtis et al., 2019) they create and maintain an interactive pathway for research to impact practice and practice to impact research.  One area that has received much attention is mentoring. In order for mentor standards to be fully understood, embraced and practiced, initial teacher training providers must develop deep collaborative partnerships among all key primary stakeholders (Department of Education, 2016; Fletcher et al., 2021).

**2.11 Summary**

In the second chapter of the dissertation, the researcher attempted to critically review related literature on the research topic. Next, the theoretical framework for this study which is situated in Bandura's social cognitive theory, stakeholders theory and a systems theory is described in great detail citing studies that have shown the application of these theories in situations that are somewhat similar to this research. The main tenets of each theory were broadly explained with specific application made to teacher education.

A systems theoretical perspective for evaluating training and educational programs and more specifically teacher preparation programs was examined and critically discussed. To chart the way forward for teacher education in the English-speaking Caribbean and more specifically, which Saint Lucia, it was necessary to chronicle the historical developments of teacher education and training. The literature shows that teacher training in the Caribbean has its roots in a colonial era and has evolved in terms of its entry requirements, recruitment into the teaching profession, modalities used during training, certifying bodies, and the model used for training.

Some of the challenges placed in the education system are still very similar to those experienced

133

even today. It is clear from the historical account that student poor achievement has remained a perennial problem for more than a century. The program continues to undergo changes in response to globalization, increased accountability, societal changes and calls for reform. Since the research was conducted in Saint Lucia, it was necessary to take a closer look at the education system, its structure and teacher training. Various reform efforts were discussed to chronicle the initiatives taken by the Ministry of Education to address the teacher training and other peculiar challenges faced by the education system. Almost all the sources used to obtain information which delved into the history of teacher education in the Caribbean and Saint Lucia are not recent.

To place the country in which the research is undertaken in context, the term Caribbean is defined. The researcher went on to demystify other key constructs such as teacher education, training, teacher educator and made a request for the adoption of a more comprehensive view of teacher educator. The distinction between college-based teacher educator and school-based teacher educator is clearly made.

The researcher then segues to the three main routes to teacher certification depicted by the OECD Teacher Education Pathway. The primary objective of teacher education remains the same whether candidates enter teaching through preservice training, in-service training or alternative routes. Next the various models used to evaluate teacher education programs are discussed with specific reference made to the New World Kirkpatrick model and Guskey's evaluation model. Studies that have applied these models are cited to add credence and justify the appropriateness of these models in conducting this mixed method research. A very important part of the chapter addressed the impact of various components of teacher education programs.

134

The main systems concepts of input, process, output and feedback were used as a guide to organize the discussion and show their relevance in the context of teacher education.

Another important section of the chapter focused on ways by which new teachers are supported following their initial teacher training to shed light on research question 5. To help new teachers transition to their schools and education districts, beginning teachers need to be supported emotionally, professionally and pedagogically by mentors, coaches, experienced teachers and school administrators. A section of the chapter critically reviewed some of the ways by which beginning teachers are supported as well as the challenge they encounter during the transition process.

The quality of an education system is contingent upon the quality of its teachers and the quality of teachers depends on the quality of teacher preparation programs. In light of this, analysis and synthesis of literature related to the topic suggests that teacher education programs must be re-engineered and reimagined in all its components to ensure teacher quality and a quality education system. Imperatives for teacher quality advanced in the chapter include revising teacher education curricula, upgrading entry requirements, planning and implementing professional development for teacher educators; forging greater link between theory and practice; developing and maintaining systems of partnership among stakeholders; monitoring and evaluating programs and developing a culture of research at the institution. These imperatives will reflect international standards and position teacher training in the Caribbean in alignment with the quality of education across OECD territories. There are several gaps in the literature that this study sought to address. The extended review of the literature has yielded sufficient information to shed light on the five research questions in this study. In the next chapter, the researcher describes the methodology used to conduct the research.

135

## Chapter 3: Research Method

### 3.1 Introduction to the Section

In this chapter, the researcher describes the research methodology and design employed in conducting this investigation as well as their appropriateness. The study's population and sample in terms of size and pertinent characteristics are explained including all efforts made to recruit potential participants. The researcher also explicates how the sampling guidelines that are closely associated with a mixed methods approach and a concurrent triangulation design were followed to enhance the validity and reliability of the results and avoid Type I and II errors.

Next, the data collection tools (questionnaire and interview protocols), and steps taken to enhance their authenticity and dependability are described. A deliberate attempt is made to outline all modifications made to the original questionnaire to reflect the context of this empirical investigation more satisfactorily. Procedures followed to collect data using both quantitative and qualitative methods are clearly outlined to facilitate the replication of the current study. This is followed by a description of the strategies utilized to code and analyze both data sets in light of the research method and design adopted. Finally, the chapter provides a description of the various strategies taken to ensure the ethical integrity of the research.

136

## 3.2 Research Approach and Design

Research Approach

As has already been briefly discussed in chapter one and elucidated further in chapter two, this research is anchored in a theoretical framework that is situated in a stakeholder, social cognitive and systems thinking. Theoretical principles and tenets shared by these three theories acknowledge the interrelatedness and interactions of different parts of an organization as well as the need to glean data from multiple elements of that same system in order for that system to be more comprehensively analyzed and understood (Frank et al., 2016; Koral-Kordova et al., 2018). Additionally, the study subscribes to the philosophical assumptions of pragmatism, a research paradigm which espouses that knowledge and reality are not absolute entities but are based on beliefs and habits that individuals construct through social interactions and experiences (Creswell & Creswell, 2018; Kaushik & Walsh, 2019; Mitchell, 2018). Researchers who adopt a pragmatist stance view a research problem within its broadest context and propose that within the same study, methods should be used in appropriate ways to more fully understand that research problem

(Creswell & Creswell, 2018; Sunzuma & Maharaj, 2019; Tsikati, 2019). Kaushik and Walsh (2019) advise researchers to use methods that are best suited to address the research problem and these methods can be a single method, multiple methods, or a mix of methods. All these theoretical underpinnings framed the study and guided the choice of approach and research design, the kinds of data gleaned to respond to the research questions as well as the methods used to collect and analyze the data (Adom & Hussein, 2018).

In this study, the researcher is of the conviction that utilizing a mix of methods for collecting and analyzing data, and obtaining diverse perspectives best provides a complete

understanding of the impact of the initial teacher training program rather than a single method. From the foregoing preamble, it is clear that both a systems theoretical perspective and a pragmatic philosophical worldview lend themselves to a mixed methodological approach, although the latter has been debated. Notwithstanding, pragmatism has emerged as a more dominant approach in providing a philosophical foundation for conducting mixed methods research as opposed to critical realism (Allmark & Machaczek, 2019; Iosifides, 2017) and post- positivism (Panhawar et al., 2017). In fact, Mitchell (2018) dubs pragmatism as "an attractive philosophical partner for mixed methods"(p.115).

The use of mixed methods to investigate phenomena in a range of fields and disciplines has gained momentum and increased popularity over the years particularly in doctoral dissertations (Bosica, 2021; Durak et al., 2018; Hartman, 2020; Rocchio, 2020; Shaw, 2020; Walter, 2020). A mixed methods paradigm as explicated by Bryman (2006); Creswell and Creswell (2018); Mertens and Hesse-Biber (2013) and Schoonenboom and Johnson (2017) entails the collection, analysis, and interpretation of a combination of quantitative and qualitative data in an effort to provide a

more comprehensive view of the phenomenon under investigation in terms of breadth and depth of understanding. Moreover, gathering data from multiple methods allows for the triangulation and verification of evidence related to the same phenomenon (Hesse-Biber, 2010; Johnson et al., 2007) enhances validity and credibility of the findings (Bryman, 2006: Creswell & Creswell, 2018; Mertens & Hesse-Biber, 2013); helps to offset the inherent limitations of both quantitative and qualitative research (Jason & Glenwick, 2016) as well as potential method biases; fortifies and enriches generalizability of research findings; and allows for the drawing of conclusions that offer greater explanatory power over a monomethod (Jason & Glenwick, 2016; Mertens & Hesse-Biber, 2013). These advantages have

prompted researchers to employ a mixed-methods paradigm in studies to identify the challenges related to the provision of feedback to clinical teachers on their educational performance (Jamshidian et al., 2019); to diagnose the organizational performance of local government (Olivier, 2017); to evaluate school textbooks (Panezai & Channa, 2017); to evaluate the impact of nursing education programs and interventions (Lock et al., 2018; Marshall et al., 2020); and to evaluate preservice teacher education programs (Fukkink et al., 2019; Stites et al., 2018; Sunzuma & Maharaj, 2019).

Despite the prevalent use of mixed methods as a more rigorous approach to systematic inquiries, the method has posed several challenges to scholars. Substantial research skill and expertise is required by researchers who wish to investigate phenomena using both quantitative and qualitative methods (Jason & Glenwick, 2016). Moreover, more time and resources are required than a single method study (Jason & Glenwick, 2016). This is an observation that I made during the conduct of this investigation. There exists a dearth of documented research which adopts a mixed methodological approach to evaluate the initial teacher training program in Saint

Lucia and across the OECS states. Before examining the two major classifications of mixed methods design and their related typologies, it is important to describe four critical steps that influenced the selection of the most appropriate mixed-method design for this investigative research. These factors are the study's purpose and theoretical perspective, implementation, weighing, and mixing.

139

*Purpose & Theoretical Perspective*

The first step in creating a suitable mixed method research design entails the articulation of an explicit statement regarding the purpose of the research as well as the researcher's theoretical standpoint (Hesse-Biber, 2010).   In other words, it is important for the researcher to articulate the main research aims and objectives as well as the standpoint or paradigmatic base from which the study is viewed (Creswell & Creswell, 2018; Kaushil & Walsh, 2019).  The overarching aim of this mixed methods research was to evaluate an initial teacher training program in Saint Lucia and to determine its impact on participants' levels of satisfaction with the training received and effectiveness in the classroom.  The researcher, from the onset, identified the theoretical principles of a stakeholder, social cognitive and systems theory as the main theoretical framework in which this investigative study is situated and contextualized.  The systems theory which influenced both a stakeholder and social cognitive theory is rooted in a pragmatic worldview which emphasizes that what is considered knowledge and reality are based on individuals' beliefs and practices that are socially constructed (Kaushil & Walsh, 2019; Rauscher & Greenfield, 2009). As a research paradigm, pragmatism requires researchers to collect and integrate different data sets generated by multiple methods and to obtain various perspectives which allow for a comprehensive understanding of the research problem (Kaushil & Walsh, 2019; Rauscher & Greenfield, 2009).

The first research question sought to determine the teachers' perceived level of satisfaction and effectiveness in the classroom as a result of the two-year initial training received. Furthermore, research question two aimed at hypothesis testing (Hesse-Biber, 2010) to determine the relationship between initial training and program graduates' perceived level of satisfaction and effectiveness in the classroom. To effectively test the hypotheses, the researcher

140

utilized a deductive approach using an appropriate statistical procedure to determine relationships among the variables. Evidently, data required to address the first two research questions were best captured quantitatively. Research questions three to five aimed at obtaining a more qualitative understanding of the research problem from the perspectives of the program graduates as well as their school principals, and other key stakeholders with whom the teachers frequently interact in the profession. Data were collected through open-ended questions and semi-structured interviews and analyzed inductively using themes and categories. The theoretical framework adopted in this research to a large extent informed who the participants should be, the kinds of data to be collected, appropriate data collection tools, data analysis techniques as well as the inferences made based on the study's findings.

*Weighting*

Once the researcher decided that a mixed method design was appropriate to the study's purpose and theoretical viewpoint, the focus then shifted to the second step which was to decide on the relative weighting of the data and quantitative and qualitative methods to ensure alignment with the research aims. Weighting or priority refers to the level of importance or emphasis assigned to the collection, analysis and interpretation of the data obtained from the two methods (Creswell & Creswell, 2018; Jason & Glenwick, 2016; Molina-Azorin et al., 2018). The relative weighting

can either be equal or non-equal. To illustrate, in mixed methods studies, some researchers ascribe greater importance to quantitative data and method while some give priority to qualitative data and methods, or both methods are given equal weight (Direkci, 2019; Molina-Azorin et al., 2018) in other cases.

141

*Implementation*

The penultimate procedural consideration relates to the implementation of the quantitative and qualitative data collection. Implementation speaks to the order, sequence, or timing of data collection (Hafsa, 2019; Jason & Glenwick, 2016; Molina-Azorin, et al., 2018). The assigned weighting can determine the sequence of data collection (Molina-Azorin, et al., 2018). Within a mixed-methods approach data collection can occur either concurrently (simultaneously or about the same time) or sequentially (in phases) (Hafsa, 2019; Molina-Azorin, et al., 2018). Researchers who collect, analyze, and interpret quantitative and qualitative data during a single phase of a study at roughly the same time are said to utilize concurrent timing. Contrastingly, those who collect both qualitative and quantitative data in two separate phases do so sequentially.

*Mixing*

A final but perhaps one of the most important considerations given addresses two essential questions regarding the data collected from both quantitative and qualitative methods.

1. When does a researcher mix the data sets?

2. How does the mixing occur?

Prior to proffering answers to the two questions above, it is helpful to explain what is meant by mixing in a strong mixed-methods design.  Mixing, also referred to as integration, is generally

described as the point or points in the research process where the researcher combines the two types of data (Creswell & Creswell, 2018; Rauscher & Greenfield, 2009) as opposed to the use of quantitative and qualitative data without any effort made to merge the two data sets. The latter is described as a mere collection of multiple methods rather than a strong mixed-methods design.

142

To respond to the first question, it is noted that both quantitative and qualitative data can be mixed at the data collection, analysis, and interpretation phase or at all three phases. Secondly, in a mixed methods research, data can be mixed in three different ways. The two data sets can be integrated, connected, or one can be embedded within the other (Creswell & Creswell, 2018). Taking the two data types and deliberately bringing them together or integrating them constitutes merging the data. This can be done during the data analysis, interpretation, or discussion phase. Connecting is a second strategy for mixing data obtained from a mixed methods research. This is done by mixing quantitative and qualitative data between the data analysis of the first phase of the research and the data collection of the second phase. The third strategy, embedding, occurs when a researcher decides to collect one form of data such as a survey and uses the other data form, an online interview for instance, to provide supportive information to the primary data form. Therefore, based on the mixing criterion, it is important to select a design that allows the researcher to integrate the two types of data at the analysis and interpretation phase of the research.

The two major classifications of mixed methods design are sequential (explanatory, exploratory, transformative) and concurrent (triangulation, nested, transformative). Almalki (2016) contends that the various typologies can present a challenge to the researcher in deciding which mixed method design is most appropriate for the study, however, researchers are encouraged to choose designs that will address the research questions most adequately.

Therefore, to determine the impact of an initial teacher training program from a multiple theoretical and pragmatic perspective, the researcher utilized a concurrent triangulation, mixed- method design. The decision to utilize this mixed-method design was made based on the four considerations explicated above.

Research Design

*Concurrent Triangulation Design*

Concurrent triangulation also referred to as convergent parallel is documented as the most common mixed-method design (Creswell & Creswell, 2018; Durak et al., 2018; Hafsa, 2019). It entails the simultaneous or concomitant collection of both quantitative and qualitative data (Hafsa, 2019; Molina-Azorin, et al., 2018; Rauscher & Greenfield, 2009). To put it simply, in a concurrent triangulation design, researchers collect information from both quantitative and qualitative methods either at the same time, or at almost the same time. This simultaneous data collection is usually done to facilitate the comparison of information in search of consistency in findings (Molina-Azorin, et al., 2018). Consequently, in an effort to obtain different but complementary data from program graduates as well as other stakeholders to determine the overall impact of the initial teacher training program, a concurrent triangulation design was employed. Quantitative data were collected using a 5-point Likert scale questionnaire survey.

In the second case, while the survey was administered to the larger sample, focus group interviews with program graduates were conducted with smaller sub samples. The researcher deemed a concurrent triangulation design the best choice for this investigation for three main reasons. The first justification relates to weighting. In order to understand the impact of the initial teacher training program from multiple perspectives and facilitate the comparison of data in search of consistency in findings, the researcher utilized an equivalent status design (Molina-

Azorin et al., 2018). This means that data obtained from both quantitative and qualitative methods were given the same level of dominance. Thus, the researcher placed equal weighting on the collection, analysis and interpretation of the data obtained from  the questionnaire survey and semi-structured interviews.

In addition to the equal weighting placed on both quantitative and qualitative data collection methods,  it was more cost effective and less time consuming to collect both data sets concurrently and at approximately the same time given the widespread distribution of primary schools across the eight education districts in Saint Lucia.  A third  reason for the appropriateness of a concurrent triangulation research design was the need to substantiate, expand and confirm data obtained from the survey (quantitative method) with semi-structured interviews (qualitative method) conducted with a smaller sample and other key stakeholders.
According to Molina-Azorin and colleagues (2018) the added value of the qualitative phase lies with the facility provided to corroborate, elaborate and clarify the quantitative results.

Data collected from the survey and semi-structured face-to-face interviews were analyzed separately with the results compared during the interpretation phase. A very similar approach was adopted by Zendah and Maphose (2018) in their mixed method investigation. The outcome of this process allows for the generation of a set of valid and well-substantiated conclusions regarding program graduates' perceived impact of their two-year initial teacher training. In a similar study, Stites et al. (2018) merged their quantitative online survey results with qualitative online interview results to examine the perceptions of childhood and elementary preservice teachers' regarding their preparedness to work in inclusive classroom settings and to better comprehend the factors which contributed to their level of preparedness. Furthermore, Yahiji et al.'s (2019) concurrent triangulation mixed-method study design allowed the researchers to integrate quantitative data

obtained from a questionnaire which sought to identify the strengths and weaknesses of a practical teaching assessment model with qualitative data garnered from focused group discussions and documentation to identify the challenges faced by advisors and teacher mentors in assessing candidates' practical teaching performance.

145

The convergent triangulation design has been lauded in the literature not only because it makes intuitive sense but also due to its efficiency. Notwithstanding, much effort and expertise is needed due to concurrent data collection and the decision to determine what additional data to obtain should inconsistencies exist in the data. These two shortcomings were minimized by the researcher's demonstration of adequate research skills and ability to manage both types of data simultaneously.  There were no observable discrepancies  in the data.

Having described and justified the research approach and design employed in the study, the researcher now segues to the population and sample.

## 3.3 Population and Sample of the Research Study

Population

The study's primary population comprised all primary school teachers (N=193) both male and female who obtained an Associate Degree in Primary Education (ADE) at the Department of Teacher Education and Education Leadership formerly known as the Division of Teacher Education and Educational Administration of the Sir Arthur Lewis Community College in Saint Lucia during the period 2012-2019. Since the ADE officially replaced the Certificate program in August of 2010, it meant that the first cohort would have graduated in 2012.

Subsidiary population consisted of principals of all primary schools (N=72 ) across the eight education districts, all district education officers (N=8) and curriculum officers for core subjects (N=4). Furthermore, the population is characterized by persons who possess absolutely no mental or learning disabilities.   Table 3.1 below provides a snapshot of the study's population. Table 3.1

Population of the Study

| Respondents | Male | Female | Total |
|---|---|---|---|
| Program Graduates | 20 | 173 | 193 |
| Principals | 6 | 66 | 72 |
| District Education Officers | 2 | 6 | 8 |
| Curriculum Officers | 0 | 4 | 4 |
| Total | 28 | 249 | 277 |

Sampling

A critical component that researchers ought to give careful consideration to  in empirical investigations is sampling. Indubitably, the validity and ethical integrity of a study can be seriously compromised if an inappropriate sample or sampling technique is utilized. Hence, to curtail the likelihood of making sampling errors, sampling bias, and drawing illogical conclusions in this study, it was important for the researcher to carefully select sampling methods based on the research design, the methodology of the research, data collection tools and accessibility of potential research participants (Creswell & Creswell, 2018).                     This       mixed method descriptive survey comprised two different groups of participants with the program graduates representing the primary respondents. Both probability and non-probability sampling methods were employed at different points of the research and data collection process.

Preparation for selection of primary respondents entailed obtaining from the Administrative Secretary at the Department of Teacher Education a sampling frame (Bruce et al., 2018; Ruane, 2016) including email contacts of all candidates who had registered for the Associate Degree in Primary Education during the period 2012-2019. Purposive sampling was used to select only program graduates who successfully completed the program and were employed with the Teaching Service Commission at the time of data collection.  Conversely, teachers who successfully completed the primary program but are either no longer employed with the Teaching Service Commission; teach at a secondary school; or teach French or Music for which no formal training was provided in the Primary Program, were excluded from the study. According to Ruane (2016) purposive sampling makes use of 'specialized knowledge or insight' to select the sample.

Information gleaned from initial contact made with some potential participants via email coupled with telephone conversations with some primary school principals informed the process used to eliminate those who did not meet the inclusion criteria. Based on the researcher's judgment, practicing primary school teachers who obtained an Associate Degree in Primary Education during the period 2012-2019 were the ones who could have provided the most pertinent information needed to address the research questions (Creswell & Creswell, 2018; Ruane, 2016) having met the inclusive criteria.

From the onset, it was important to establish the number of program graduates required to participate in the research particularly given the fact that the study was concerned with hypotheses testing. When a researcher's intention is to determine such relationships, probability sampling is recommended. To this end, stratified random sampling (Bruce et al., 2018; Creswell & Creswell, 2018) was adopted to give every eligible teacher a chance to be included in the research (Ruane, 2016). Additionally, an appropriate sample size had to be determined (Chander, 2017; Kang, 2021) and this had to be clearly articulated in the research report in light of previous observations made regarding its absence in some manuscripts (Chander, 2017).

Given that this research is the very first empirical evaluation of the initial training program in Saint Lucia, it was not feasible to identify an ideal study which could have suggested an appropriate sample size. Therefore, an alternative method which entailed the use of the G*Power software application proved quite helpful in estimating the size of the sample (Chander, 2017; Kang, 2021). This widely utilized software application was simple and easy to use. Another reason for conducting a power analysis (Chander, 2017; Creswell & Creswell, 2018; Uttley, 2019) was to determine how much statistical power the study has and to avoid making a Type II error. In other words, a power analysis ensures a high probability that the test

149

will show a relationship when a relationship does in fact exist in the population and a low probability of showing a relationship when none exists (Chander, 2017; Creswell & Creswell, 2018). A statistical power of .90 or .95 is generally recommended and considered acceptable (Chander, 2017; Kang, 2021). Therefore, an effect size($f^2$) = 0.15, alpha value = 0.05 and power = 0.95 was computed. The results revealed that a total of one hundred and seven (107) respondents were needed to achieve adequate power to detect any statistical differences in this study. It also suggests that the researcher would expect the same results 95% of the time should the study be repeated.

Furthermore, semi-structured interviews were conducted to gain a deeper insight into the impact of the program on teachers' perceived levels of satisfaction with the training received and their level of effectiveness in the classroom; the kinds of support they receive at their respective schools to enhance their effectiveness; and possible factors, if any, that negatively impact their classroom practice. This sub sample was conveniently selected as program graduates had the option to participate based on their availability. Primary school principals, education officers, and curriculum officers also received an invitation to participate in the interview for two primary reasons. First, these key stakeholders were best equipped to discuss some of the questions that the researcher wished to explore as they frequently interact with and observe the classroom teachers in practice. Hence, the responses helped to authenticate the views expressed by the teachers. Second, capturing the voices of principals and other education officers to determine program deficiencies and suggestions for program improvement adds value to the data collected. Moreover, it helped the researcher to understand their views and perspectives regarding the program's structure, overall impact, and implementation. The sample for both quantitative and qualitative data is presented in Table 3.2 below.

150

148

Table 3.2

Sample for Quantitative and Qualitative Data

| Respondents | Male | Female | Quantitative Data | Qualitative Data |
|---|---|---|---|---|
| Program Graduates | 10 | 102 | 112 | 16 |
| Principals | 2 | 14 | - | 16 |
| District Education Officers | 1 | 5 | - | 6 |
| Curriculum Officers | 0 | 2 | - | 2 |
| Total | 13 | 223 | 112 | 40 |

Demographics of Sample: Program Graduates

As mentioned in the aforementioned section of this chapter, the primary sample consisted of program graduates or teachers who met the criteria for eligibility while the second group was made up of principals of primary schools to which program graduates were appointed, district education officers and curriculum officers. Demographic details of each group of participants are presented.

*Quantitative Data: Level of Satisfaction and Effectiveness Questionnaire*

One hundred twelve (112) teachers, primarily female, participated in the study with most of them from the 26- 31 age range. Three respondents did not specify their age. Frequency computations of the demographic data further reveals that of the one hundred and six (106) respondents who indicated their year of graduation, 49 teachers graduated during the four-year period of 2012-2015 while the remaining 59 teachers graduated during 2016-2019. The

Associate Degree is the highest level of education attained by the majority of the teacher respondents.   Table 3.3 presents the demographics of the program graduates in terms of gender, age, graduation year and academic qualification.

*Table 3. 3*

Demographics of Sample (Program Graduates)

| Demographics | Frequency | Percentage |
| --- | --- | --- |
| | *N* | % |
| Gender | | |
| Male | 10 | 8.9 |
| Female | 102 | 91.1 |
| Age Range 20- | | |
| 25 | 7 | 6.3 |
| 26-31 | 66 | 58.9 |
| 32-37 | 22 | 19.6 |
| 38-43 | 12 | 10.7 |
| 44+ | 2 | 1.8 |
| Missing | 3 | 2.5 |
| Graduation Year 2012- | | |
| 2015 | 49 | 43.7 |
| 2016-2019 | 57 | 50.9 |
| Missing | 6 | 5.4 |
| Highest Level of Education | | |
| Associate Degree | 100 | 89.3 |
| Other | 12 | 10.7 |

 N = 112

Survey participants comprised program graduates who currently teach at schools located in all eight education districts in Saint Lucia  as depicted in Figure 4.
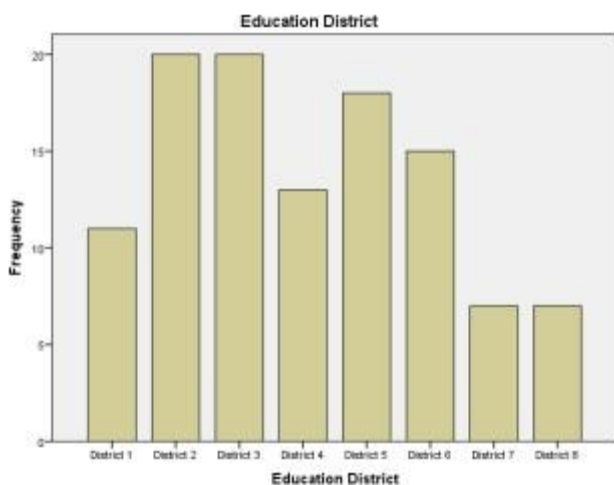
*Figure 4 Bar Graph: No. of Survey Participants per Education District*

Of the one hundred twelve (112) respondents, 71 (63.4%) had some teaching experience prior to receiving formal teacher training as opposed to 41 (36.4%) who indicated that they had no teaching experience before enrolling in the initial teaching training program. All teachers currently teach at the primary level with varying years of experience in the teaching profession. With the exception of six teachers who teach children with special needs, almost every teacher teaches a grade level that he or she has previously taught. Of the one hundred and one (101) respondents who specified their length of service in the teaching profession, the data revealed that 50% of the teachers have between 5 to 10 years of teaching experience as depicted by the demographic data in Table 3.4.

*Table 3. 4*

Demographic Data: Years of Teaching Experience

| Demographics | Frequency<br>*N* | Percentage<br>% |
|---|---|---|
| Teaching Experience Prior to Formal Training | | |
| Yes | 71 | 63.4 |
| No | 41 | 36.6 |
| Overall Years of Teaching Experience | | |
| Less than 5 years | 34 | 30.4 |
| 5-10 years | 56 | 50 |
| 10 years and more | 11 | 9.8 |
| Missing | 11 | 9.8 |
| N = 112 | | |

Qualitative Data: Interview and Open-ended Questions

Out of a sample of one hundred twelve (112) program graduates who completed the questionnaire,  only sixteen (16) participants expressed their availability for the semi-structured interview.  The second group of participants comprised sixteen (16) primary school principals (2 male, 14 female); six district education officers (1 male, 5 female) and two  curriculum officers (both female).  The age of most school officials falls within the range 45-50 and 51-60 years. They have 30 years or more of teaching experience but have been working in their professional capacity for 15 years or more. The highest level of educational attainment of the second group of participants  ranges from a bachelor's degree to a PhD.

### 3.4 Materials/Instrumentation of Research Tools

In an effort to glean quantitative and qualitative data in response to the research questions, one questionnaire survey, open-ended questions and a semi-structured interview protocol were utilized.

Quantitative Method

Questionnaires are widely used in empirical investigations to garner information quickly and efficiently from a large sample. They are used to survey respondents' perceptions, behaviors, attitudes, beliefs, and opinions based on a specific construct or research topic. The questionnaire survey used to address research questions one, two, four and five is an adaptation of a tool developed by Uysal (2012) and which is closely aligned with Guskey's (2016) model for evaluating professional developments programs. Uysal''s questionnaire aimed at evaluating a one-week in-service course (INSET) for primary school English Language teachers from Turkey to determine whether the course met its objectives; teachers' perceptions on the usefulness and effectiveness of the course; and its impact on teachers' knowledge-based, attitudes and classroom practices. An email was sent to the developer of the tool who is an Associate Professor of English Language Teaching of Hacettepe University in Turkey to request permission to adapt the original questionnaire. Approval was granted without delay.

Subsequently, modifications to the original questionnaire were made.

The original tool comprised forty-two (42) only positively-worded Likert scale items as opposed to a total of seventy (70) positively and negatively-worded statements developed for data collection in this investigative research. Twenty-eight (28) additional items were included to

better suit the context and purpose of this study.  From the onset, it was important for practicing teachers to reflect on the initial training received in terms of the acquisition of

knowledge and skills, how satisfied they are with the initial training and their ability to apply their new learning to classroom practice.

The adapted questionnaire titled, 'Level of Satisfaction and Effectiveness Questionnaire' (Appendix D) comprises three main sections.  Section A (9 items) required program graduates to provide demographic details about themselves as it relates to age, gender, graduation year, name of school at which they teach, grade level currently and previously taught, teaching experience prior to initial  teacher training, number of years in the teaching profession and highest level of education.  Section B, which forms the body of the instrument is sub-divided into three parts.  Part One of Section B (25 items) aimed at finding out how participants perceive the initial training received over the two-year period.   In an equivalent part of the original questionnaire developed by Uysal (2012), the author crafted 12 positively worded items (18-29) to measure the impact of the course on teachers' self-perception, motivation and knowledge-base.  Items 18, 19, 21, 24, 26 and 28 of the original questionnaire were kept, but rephrased to better reflect the purpose of this research.  For example, item 18 which originally read as: "I have a better self-concept, satisfaction and confidence in my ability  as a teacher now" was rephrased to "The 2-year training boosts my confidence in my ability to teach" (Appendix D: Item1).  Similarly,  item 24 (I have an increased awareness of the characteristics and  needs of young learners) was changed to  "The training made me  more  aware  of  the  characteristics  and  needs  of  my  students" (Appendix D: Item 5). Additionally,  some  items  were  replaced  by  other  more  pertinent  items  to  capture  program graduates' perceptions on other key program components and dimensions  such as assessment

(9,20); classroom management ( 18, 25); best practices in core subject areas (10, 12, 13,23). An example of a replacement is item number six which focuses on differentiated instruction as opposed to 'multiple intelligence' used in the

original questionnaire.    Another noteworthy alteration is the inclusion of three negatively-worded items (11, 19, 21) to minimize participants' response bias.   Using a 5-point scale with responses ranging from 1 (strongly disagree) to 5 (strongly agree), participants indicated the extent to which the training contributed to their learning and readiness to teach at the primary level.

'Teachers' Level of Satisfaction' is measured by twenty-six (26) statements in Part Two of Section B of the Likert-scale questionnaire.   In a comparable section of the original questionnaire seventeen (17) items were crafted.   All items  in Section 1 of the original questionnaire with the exception of items 4, 13, 16, and 17 were retained. Slight modifications were made to the phrasing of some of the items. For instance,  the word, 'course' was replaced with 'program'.   Item 4 (The course was motivating and interesting) and 16 (At the end, our evaluation about the course was collected) were omitted and replaced by more relevant items. Item 13 on the original questionnaire which read, "The new constructivist and communicative approaches  were  modeled  by  the  trainers",   was  rephrased  to  read  as,  "Student-centred approaches and strategies such as those I was expected to implement during practical teaching sessions, were often modeled by the course lecturers" (Appendix D: Item 38). A total of nine items were added to  gauge program graduates' perceptions on other aspects of their initial

training  such as assessment  (items 48, 49, 50, 51); practical teaching (items 43, 44, 45, 47) and technology integration (item 41), a critical part of program delivery.   The response scale ranges from 1 (very dissatisfied) to 5 (very satisfied) to reflect the degree to which respondents were satisfied with the two-year initial training in terms of four main components as seen in Table 3.5.

157

Table 3.5

Distribution of Items by Program Component

| Component | Item Numbers | No. of Items |
|---|---|---|
| Content & Structure | 26,27,29,32 | 4 |
| Practical Teaching | 34,36,40,41,42,43,44,45,47 | 9 |
| Program  Delivery | 28,31,33,35,37,38,39,46 | 8 |
| Assessment | 30,48,49,50,51 | 5 |
| Total | | 26 |

Part Three of Section B includes nineteen (19) items (52-70) which sought to find out whether or not the new learning gained from the two-year initial training helped to make a difference in the teachers' classroom practice.  In the original questionnaire developed by Uysal (2012),  13 items were crafted to measure the impact of an in-service teacher education course on English Language teachers' classroom practices.   The items generated aimed at determining teachers' engagement in instructional provisions namely designing  and using a variety of fun activities in lessons; and considering learner needs and styles in planning and delivering English Language instruction. In addition to these instructional provisions, the current study aimed at finding out whether teachers' instructional practices were positively impacting students' outcomes, a dimension not measured in the original questionnaire. Therefore,  a few items (30,31, 33) on the

original questionnaire were maintained but rephrased  while items 36-41 were collapsed to read as: "I now use a variety of materials and resources to cater to students' different learning styles" (Appendix G: Item 60).   Some items were included to capture essential aspects of instructional effectiveness   such as classroom management (Items 54,56), lesson planning (Items 57,58) differentiating instruction (Item 69), diagnostic assessment (Items 52, 53) and improved student learning outcome (Items 61, 63,64,65,67,68). A response scale ranging from

1(strongly disagree) to 5 (strongly agree) was used to measure program graduates' perception on their level of effectiveness in the classroom.

Qualitative  Methods

*Open- ended Questions*

Section C of the Level of Satisfaction and Effectiveness Questionnaire consists of three open-ended questions to obtain information regarding the challenges that teachers encountered during initial training and their opinions on how they think these challenges can be addressed. This section sought to glean data to respond to research questions three and four not captured in the survey and to provide deeper insights into closed-ended responses related to their perceived level of satisfaction.  The open-ended questions did not confine respondents to a specified number of options as is the case with the close-ended questions. Instead, they encouraged detailed and elaborate responses that delved a little deeper into the respondents' thoughts and perspectives (Harlacher, 2016; Hathorn & Dillon, 2018) regarding their initial training.

The inclusion of open-ended questions at the end of a questionnaire survey to gather qualitative data is not a new practice. Many mixed methods studies including those conducted by Chang et al. (2021); Gordon and colleagues (2019); Hathorn and Dillon (2018); Salame and Thompson (2020); Si (2020); Silveira-Zaldivar and Curtis (2019) among others, have employed Likert-scale surveys containing open-ended questions and in addition, semi-structured interviews as in research conducted by Silveira-Zaldivar and Curtis (2019) to collect data in the same study. The justification for including the open-ended questions in the survey was to give the data more diversity than would be possible with closed ended items; clarify, explain, or substantiate closed-ended responses and gather other pertinent data to address research questions that were not

captured in the survey. Like Hathorn and Dillon (2018) and Silveira-Zaldivar and Curtis (2019) and based on the recommendation made by Christensen (2021) in her doctoral dissertation for the inclusion of open-ended questions within the survey to gain students' perspectives on the barriers and support needed in peer mentorship, in this current research, a similar approach was taken.

Participants were required to describe in their own voice, the deficiencies or the challenges faced during training as it relates to practical teaching, course delivery, course content and assessment. There are closed-ended questions based on aspects of each of these four program components to which they indicated their level of satisfaction. Additionally, two open- ended questions were designed to give participants an opportunity to make suggestions for addressing the challenges encountered relating to the four program components identified previously. For instance, a sample open-ended question reads: "What do you think can be done to address some of the shortcomings listed above?"

Consistent with the principles of pragmatism, the researcher believes that given the context of this research, it was more important to design and employ the most appropriate methods to address the five research questions  than strict adherence to any one paradigm. Supported by empirical evidence the researcher was cognizant of the possibility of obtaining a moderate to high non-response rate to open-ended questions by its mere inclusion in the survey as this does not only lengthen the questionnaire, but also requires   more time and effort on the part of the respondents to complete. It is for this reason that the researcher preferred the manual administration of the questionnaires as opposed to digitally as this allowed respondents sufficient time during the day or week to complete them. Also, the reported difficulty associated with

160

analysis of open-ended data due to the diversity in opinions (Harlacher, 2016) was offset or equipoised through meticulous coding of written responses.

Interview

An interview is a qualitative data collection tool that affords researchers the benefit of exploring deeper into the views, opinions, and experiences of a small group of respondents thereby generating rich descriptions or in-depth understanding of the phenomenon being investigated (Aung et al., 2021; Dikko, 2016).  In addition to the open-ended survey questions, qualitative data for this mixed methods research were garnered via semi-structured interviews to validate and corroborate data and increase the credibility of findings that would have already been collected from the questionnaire survey.  The semi-structured nature of the interviews afforded the researcher more flexibility and freedom to change the sequence of the questions, probe deeper, rephrase questions to facilitate understanding (Dikko, 2016) and to veer slightly in an effort to pursue a response in greater detail. The flexibility afforded within a semi structured interview

made it  more appropriate for the current research as opposed to a structured interview. *Program Graduate Interview*

One semi-structured interview protocol (Appendix E) was designed  for a sub sample of participating teachers to obtain a deeper insight into their practical teaching experiences and challenges faced during their training.  One of the interview questions for example, probed into participants' overall impression of the practical teaching experience. Another question which shed light on the challenges faced required participants to discuss other ways they desired more training and support to positively impact student learning during the practical teaching. An additional purpose of this interview was to determine the kinds of support teachers are given at their schools (where they are now working) to enhance their effectiveness as well as the factors

that negatively impact their practice (research question five). The questions probed into the resources, materials, instructional support, and professional development opportunities that are made available and provided to teachers to enhance their teaching performance.

*School Principal Interview*

As school administrators and instructional leaders, principals have a key role to play in ensuring that teachers are supported on the job and that appropriate resources are made available at the school for teachers' use in the teaching learning process. Their views in shaping future teacher preparation programs are critical.  It was important therefore, to design a semi-structured interview protocol for school principals (Appendix F) to garner relevant data. The views of the school principals can be compared with and help to validate data obtained from the semi- structured interviews with program graduates.  All principals would have received pre-service initial  training prior to their appointment, as teacher certification in addition to other professional qualifications

are required to fill the post of school principal.  However, the researcher recognized that principals may have evaluated their teachers differently depending on their teaching experience, professional qualifications and perhaps their interaction with teachers as school principal.  Hence, it was important to obtain some demographic data in that regard.

The second section comprised 10 questions to which school principals responded as it relates to the quality of the teachers received following initial training; the teachers' ability to translate theory into practice as well as their perspectives on the effectiveness of the initial training program as a whole.  Additionally, principals got a chance to articulate the kinds of instructional and administrative support they provide to the teachers to augment their teaching practice. Most of the questions which formed part of the interview protocol for school principals and other

162

school officials were similar to those posed to the primary school teachers. This was done to ensure consistency and facilitate the comparison and corroboration of data.

*Open-Ended Questionnaire for Other School Officials*

Having been guided by a stakeholder and systems theoretical perspective,  the need to capture the views and opinions of not only school principals but also district education and curriculum officers was recognized. To determine the impact of the two-year primary teacher training program it was important that the voices of these stakeholders be heard particularly as they are both directly and indirectly involved in ensuring instructional quality and supporting newly-trained teachers with a view to contributing to their effectiveness. Therefore, an open- ended questionnaire protocol (Appendix F) was developed to gather qualitative data from district education  and curriculum officers who did not show a preference for face-to-face interviews.  In addition to the section on demography, the tool comprises 10 open-ended questions geared towards

capturing participants' views on the strengths and limitations of the initial training program; the teachers' readiness to teach at the infant or primary level; and suggestions for improving the overall quality of the program. The responses of district education and curriculum officers who are themselves certified teachers, helped to authenticate and corroborate the data provided by both teachers and school principals regarding the support provided to new teachers to (a) enhance their classroom effectiveness and (b) ensure their continuous professional development.

163

## 3.5 Operational Definition of Variables

Three (3) major variables are identified in this study. The first variable (initial training) is an independent variable that focuses on the training received by the program graduates during their two-year initial training program. The two dependent, interval variables which serve as primary concerns of the researcher in this investigative study are teachers' levels of satisfaction and effectiveness in the classroom. Operational definitions for all variables are based on empirical studies, policy documents, validated data collection protocols as well as the researcher's own interpretation and intuitions.

*Variable 1: Initial Teacher Training*

Training is an independent variable that has been defined broadly as development of knowledge, skills and attitude required by employees to perform adequately on the job. In the context of teacher education, initial teacher training refers to a process of education and skill development that teacher trainees or student teachers undergo as part of their formal teacher education process. It is regarded as the common path to becoming a teacher particularly in light of increased accountability for student performance and globalization. Programs that prepare and

train teachers expose them to different kinds of subject matter knowledge and related pedagogies as well as provide them with opportunities to apply their theoretical knowledge and understandings to practice. It has been well established that programs that prepare and train teachers for classroom practice play a critical role in contributing to instructional quality and effectiveness.

*Variable 2: Teachers' Level of Satisfaction*

Teachers are likely to judge the merit of a training program or form of professional development in reference to their needs, expectations and preparedness for their role. Teachers' satisfaction levels regarding any form of training or professional development are likely to influence their attitude, motivation, teaching behaviors and future instructional practice. Leong et al. (2021) broadly define satisfaction as the degree to which learners regard their learning experience as positive. This pleasant or positive feeling and or reaction, according to the authors, is derived when learners are of the view that their learning experience has fulfilled their needs. In this current study teachers' level of satisfaction is an outcome continuous variable which based on Leong and colleagues' (2021) definition refers to the extent to which program graduates perceive their initial training experience as useful and beneficial to the teaching profession, and has met their goals, expectations and training needs.

A review of the literature reveals that several dimensions are used to measure participants' satisfaction with any form of professional development including teaching quality, program quality and components, program relevance to participants, the assessment process, instructional materials and program structure. Participants expressed how pleased they are and the extent to which the initial teacher training program met their expectations and professional learning needs. Their perceived level of satisfaction can be used to measure the degree to which the teacher

training program was effective in meeting its objective (Uysal, 2012), the results of which are quintessential for designing and improving future teacher training programs.

*Variable 3: Teachers' Level of Effectiveness*

This is one variable that has been investigated extensively in the literature and it forms an important variable in addressing research questions one and two as well as testing the second

null hypotheses (Ho2). Oduwaiye et al. (2017) in their descriptive correlational study identified good classroom management, effective lesson delivery and improved student performance as three determinants of teacher effectiveness. More comprehensively, Akram (2019) defines teacher effectiveness as a process of measuring teaching quality based on four critical quality indicators which when combined, result in an acceleration in students' academic performance. According to Akram (2019) effective teachers must demonstrate:

1. a deeper knowledge of subject matter

2. effective instructional planning and strategies

3. competence in the use of different forms of assessment

4. an ability to create and maintain effective environments that ensure successful students' learning

In the context of this study, the construct connotes a similar interpretation to that of Akram (2019) and Uysal (2012) to measure the quality of the initial teacher training program in terms of how program components have contributed to the teachers' level of effectiveness in the classroom. In other words, has the initial training impacted teachers' abilities to design and implement student centred lessons, effectively manage classroom settings, apply a range of methods to

assess and monitor student learning in ways that produce positive outcomes in students' behavior, learning and academic performance? Simply put and as used in the context of this study, the construct refers to a measure of the quality of the initial teacher training program in terms of how program components have contributed to the teachers' success in the classroom. The ability of the classroom teacher to design and implement interesting materials and activities, plan and teach lessons, maintain positive learning environments and use a myriad of instructional approaches and strategies to produce desirable outcomes in students' general

166

attitude and interest in school or a subject area,; their academic performance or improved reading, writing or numeracy skills.

## 3.6 Validity and Reliability of Data Collection Tools

Validity and reliability are two important constructs that are critical to evaluating the meaningfulness and appropriateness of any empirical investigation as well as the authenticity and consistency of the study results (Creswell & Creswell, 2018). It is imperative that researchers adopt various strategies and utilize data collection tools and procedures that are both valid and reliable. If the methods used in a research project lack validity and reliability, the data gleaned using these methods will mostly like be misleading. In the current study, the researcher employed several strategies to ensure validity and reliability of the data collection methods and to minimize errors related to these two constructs.

Validity of Quantitative Methods

Content validity refers to the extent to which the items on an instrument reflect the content of the subject for which data collected using the instrument can be generalized (Taherdoost, 2016). The application of content validity to new instruments developed by researchers for conducting research is highly recommended. However, for the purposes of this research, the researcher adapted an already validated questionnaire survey to determine the impact of the initial teacher training program. In reporting the steps taken to ensure validity of the questionnaire survey used in her research, Uysal (2012) indicated that the instrument was developed using baseline information gathered from interviews conducted with practicing teachers, course instructors and teacher trainees; an analysis of course material; review of related

167

literature and Guskey's model for evaluating professional development programs. Given that the current study was conducted in a different context, most of the items were adopted from Uysal (2012). The first draft of the adapted questionnaire comprised sixty-six (66) items with three sections: Part One of Section B titled, 'Perceived Level of Satisfaction' (25 items); Part Two: 'Influence on Teachers' Subject Matter Knowledge, Skills and Motivation' (22 items); Part Three: 'Perceived Level of Effectiveness' (19 items). To ensure further content validity, the first draft of the questionnaire survey protocol (N=66 items) accompanied by the research questions was submitted to three teacher educators who examined the tool in terms of item relevance, appropriateness, and representativeness regarding the topic and research questions.

Feedback from the experts revealed several changes related to the phrasing and rephrasing of items for clarity and precision, item redundancy as well as the need to personalize questionnaire items. Several modifications were made to the first adapted tool. The first modification involved personalizing all the items to speak directly to the program graduates.

The second change entailed the addition of items. For example, one item was added to Part One of Section B of the first draft of the adapted questionnaire to make a new total of 26 items. The additional item reads: "End of semester exams allowed me to apply the theoretical knowledge gained in a practical way" (Appendix D: Item 51).  Three other items (45, 47, 50) were added to Part Two of Section B. Furthermore, it was felt that the item in the first draft of the adapted questionnaire: "My ability to teach at the primary level was enhanced following the program"' was a bit too broad and the need to craft items to address specific subject areas taught at the primary level was recognized. Consequently, items 10, 12, 13 and 23 (Appendix D) were created. Moreover, there was need to develop an item to determine participants' perception of the extent to which their initial training prepared  them for technology integration as a way to

support their classroom instruction.  The sample item reads, 'The 2-year training prepared me adequately to integrate different technologies into my teaching' (Appendix D: Item 24).

Another adjustment made to Part Two was the omission of two redundant items which originally read: 'The program helped me develop a sense of professional identity about teaching' and  'I think I have a better grasp of the content that I teach'.  Based on the feedback obtained from the review exercise, it was suggested that some items be rephrased for clarity and precision. Item nine which originally read as: "I can better diagnose students' learning needs" was rephrased to read as: "The training exposed me to different ways  to assess my students' learning in the subjects I teach" (Appendix D: Item 9).

Some items under Part Three were rephrased for clarity. For instance, the suggestion to insert the adverb, 'now' in items 54,55, 56,57,58, 59,60 and 66 was justified as participants had to consider how the initial training contributes to their current classroom practice.

Notwithstanding the changes, the reviewers indicated that the tool was quite comprehensive and measured exactly what it was designed to evaluate, a critical requirement that according to Taber (2018) and other researchers must be carefully examined as it can influence the internal consistency level of the instrument.

The questionnaire was further reviewed by the researcher's supervisor who suggested a reconfiguration of Parts One and Two of Section B. Part Two which was originally called 'Influence on Teachers' Subject Matter Knowledge, Skills & Motivation', now termed, 'Level of Training' (independent variable) is Part One in the final and revised questionnaire survey while the previous Part One (Perceived Level of Satisfaction) now forms Part Two. Most of the items in Part Two had to be rephrased to show a clear emphasis on 'Training'. Evidently,

related items had to be assigned new numbers to reflect the reorganization of Parts One and Two in Section B.

## Reliability of Quantitative Methods

Reliability is primarily concerned with repeatability and the extent to which the instrument provides stable and consistent results (Taber, 2018; Taherdoost, 2016). An instrument is considered to have high internal consistency reliability if all the items measure the same construct and demonstrate content validity. Cronbach Alpha is the most widely used and appropriate measure of reliability particularly when using Likert scales in data collection (Taherdoost, 2016). Notwithstanding the variation in scales or cut-off points for determining reliability, most researchers agree that Alpha values of .70 and above is acceptable. One prevalent method of establishing reliability of instruments is through pilot testing, a trial run of the main study to pretest the research tools. Uysal (2012) first pilot tested the questionnaire using 6 teachers as a means of

establishing reliability of the data collection tool. Cronbach alpha values of internal reliability for each section of the questionnaire according to Uysal (2012) were computed to be .89, .79, .86 and .92 respectively. Following adaptation, the questionnaire was further pilot tested using a group of 10 teachers who had completed the Associate Degree in primary education but did not form part of the sample. Although some pilot testers thought that the questionnaire was a bit lengthy, there was unanimous admittance that the tool was quite comprehensive and that items were clear with the exception of minor typographical errors.

Piloting testing data were entered into SPSS and the researcher further run a Cronbach Alpha reliability analysis for each part of Section B of the revised questionnaire. Internal consistency levels obtained for Part one, two and three are shown in Table 3.6.

*Table 3.6*

Reliability Results of Questionnaire

| Part | Category | No. of Items | Cronbach's Alpha |
|------|----------|--------------|------------------|
| 1 | Initial Training | 25 | 0.84 |
| 2 | Teachers' Level of Satisfaction | 26 | 0.93 |
| 3 | Teachers' Level of Effectiveness | 19 | 0.88 |

According to Taber (2018) if the reliability value is >.70, the instrument is considered to have adequate reliability. Table 3.6 shows that each category of the Likert-scaled instrument obtained high Cronbach Alpha values of 0.84 and above, hence the questionnaire was deemed to have relatively high internal consistency reliability and considered appropriate for the research project. Corrections to minor errors were made prior to administration.

## Validity of Qualitative Methods

The authenticity of qualitative data was also examined to ensure that the findings and conclusions drawn are supported by the data. This was done by one curriculum expert who had no connection with the research. Based on the feedback received, it was clear that the findings are devoid of the researcher's personal opinions and impressions and that all conclusions drawn are consistent with the raw data. Another strategy used to validate the credibility of data obtained qualitatively is member checking. An email was sent to all teachers who took part in the face-toface interviews to request their participation in the validation and verification of their interview transcripts. Participants were subsequently emailed and invited to confirm that what was transcribed, accurately represented what they expressed during the interview as per the attached interview transcripts. They were also given an opportunity to

171

correct errors and to provide additional information if necessary. Teachers confirmed the transcribed data as correct and true reflections of their opinions and views. Therefore, no changes were made to the transcripts.

## Reliability of Qualitative Methods

Pilot testing of interview protocols represents an essential and useful step in the process of conducting qualitative research. Conducting a trial run of semi-structured interviews provides an opportunity for researchers to clarify some questions and identify unclear and ambiguous items with a view to improving and refining the interview protocol (Aung et al., 2020; Dikko, 2016). To account for both validity and reliability of the qualitative data, interview protocols for principals, district education and curriculum officers were field tested using three curriculum experts in

English Language, Mathematics and Social Sciences. They identified potential issues that the participants may face in understanding and interpreting each item or question. This was done in an effort to make necessary adjustments to eliminate ambiguities and misinterpretations (Aung et al., 2020; Dikko, 2016). All suggestions made were accepted and used in reframing interview items to ensure clarity. The interview protocol for the program graduates, on the other hand, was not piloted tested as most of the items were crafted as a follow up to the questionnaire survey in an effort to obtain in-depth information regarding their two-year experiences particularly as it relates to the practicum.   Items which sought to glean data in response to research question 5 were quite straightforward. Moreover, the feedback obtained from the field testing of the interview protocol for school officials was used to inform the phrasing of the questions as most of them were quite similar. To further compensate, the researcher methodically recorded, organized and transcribed all interview responses verbatim. Transcripts of interview

172

responses were emailed to program graduates for verification, accuracy and confirmation. Also, all direct quotations were used without alteration and the views of the different participants utilized for triangulation purposes.

### 3.7 Trustworthiness of Data

Throughout the research process it was imperative that the researcher clearly and candidly described the research problem, the research methodology, procedures utilized in collecting and analyzing data, as well as the assumptions that informed data analysis. This was done in an attempt to achieve high quality, and meaningful data that can be trusted. Trustworthiness, or the extent to which the data originates from trustworthy sources (Mahanti, 2018) is established differently depending on the research paradigm adopted.   This study

demonstrated no strict adherence to either positivist or interpretivist perspective but a blend of the two paradigms hence, part of my responsibility as the researcher entailed reporting the various means by which the trustworthiness of both quantitative and qualitative data was secured. Trustworthiness is established using the four main data quality dimensions of credibility, transferability, dependability, and confirmability, whereas reliability, validity and objectivity are commonly used to secure the trustworthiness of quantitative data or from a positivist point of view.

Credibility, defined as the extent to which the research findings accurately mirror the information derived from the provider of the original data and the representations and meanings of the data provider, (Mahanti, 2018; Nowell et al., 2017) is perhaps one of the most important data quality dimensions. If the sources of the data cannot be relied on or the data gleaned does not accurately capture the occurrences in the research setting or environment, then there is sufficient reason to question the legitimacy, accuracy, and credibility of the findings. One

173

common technique used by both positivists and interpretivists researchers to enhance the credibility of findings and overall trustworthiness of the data is triangulation (Nowell, et al., 2017).

In this mixed methods study, triangulation was secured through the use of multiple data collection methods and sources. Method triangulation was ensured by collecting data via a survey questionnaire, open ended items, and semi structured interviews. Additionally, given that this study was predominantly anchored in a stakeholder and systems theoretical perspective, data triangulation was facilitated by gleaning data from multiple stakeholders (school principals, district education officers, curriculum officers) to allow for the comparison of views articulated by the program graduates and to obtain a more comprehensive understanding of the impact of the initial teacher training program. The theoretical framework also helped to add more depth to the analysis

of data in the sense that the researcher supported the views, perspectives, and experiences of all study participants with reference to the various ideas advanced by the theories already established in the scholarly literature. This helped to increase the credibility of the qualitative data (Nowell et al., 2017) as well as the internal validity of the quantitative data gleaned from the questionnaire survey (Kivunja, 2018).

Member checking, also referred to as participant or respondent validation, was another strategy utilized in the current study to explore the credibility of the qualitative results. Member checking takes different forms such as returning interview transcripts to participants; conducting focus group member checking (López-Zerón et al., 2021; Nowell et al., 2017; Zairul, 2020); conducting interviews with participants to check transcribed and interpreted data; or returning analyzed synthesized data (Birt et al., 2016). Whatever the format, the primary purpose of sharing data, interpretations and conclusions with the participants is for confirmation and

validation. The technique also represents a way to reduce the potential of researcher bias (Birt et al., 2016) while at the same time adding to the credibility and trustworthiness of the qualitative results. Despite its benefits, participating in member checking can be a rewarding experience for some participants as in the use of I-poems by López-Zerón and colleagues (2021), and the ARC (Asking, Record, Confirm) technique employed by Zairul (2020), while a distressing one for others. In light of this important observation, researchers are encouraged to find out from participants whether they are desirous in participating in the validation and verification of their interview transcripts. In keeping with this scholarly advice, the researcher invited teachers who had participated in face-to-face interviews to validate and verify their interview transcripts. Debriefing forms were emailed to all survey participants with the exception of those who did not provide an email contact. It was the researcher's final attempt to find out whether participants were

willing to have their data used in the research report. Responses received from some participants confirmed their willingness for their responses, views and experiences to be used in the research report.

Transferability, as one data quality dimension is primarily concerned with the applicability of the research or the degree to which the results can be transferred or applied to other similar contexts or settings (Mahanti, 2018; Nowell et al., 2017). To establish the transferability of the qualitative data it was incumbent upon the researcher to provide a thick description of the research procedure (Nowell et al., 2017). From the onset, all major steps in the research process were clearly described and a detailed account of the descriptive data including the sample, sample size, demographic data of participants, inclusion, and exclusion criteria was provided.  Previous studies which adopted a similar theoretical orientation to the one implemented in this research provided fairly good justifications for the appropriate use of the

theory or theories chosen. Likewise, the suitability of a systems, stakeholder and social cognitive theory used to guide this mixed method study was justified. Such detailed account of the participants and the entire research process and justification for the appropriateness of the theories adopted, will undoubtedly make it possible for other researchers to compare the findings of this current empirical investigation to their own research settings and contexts, thereby facilitating replicability. Additionally, the strategies helped to increase the transferability of the qualitative data garnered from semi-structured interviews and open-ended items, as well as enhancing the generalizability of the quantitative data analysis (Kivunja, 2018).

Confirmability is the degree to which the interpretations and findings of this research are derived from the data (Nowell et al., 2017), and can be confirmed or verified by other researchers. The researcher ensured that quantitative data obtained from the survey questionnaire were

reviewed and cross checked for accuracy immediately upon entry into SPSS. All assumptions of Pearson r correlation coefficient were met prior to computing the statistical analysis. Moreover, upon computation, the researcher emailed the data files and results as well as the conclusion drawn from the data to a practicing Research Methods lecturer. The research methods expert examined the quantitative data entered into SPSS software for accuracy; ensured that the most appropriate statistical method was used and that the conclusions drawn based on the data analysis were consistent. This was done in a bid to avert making Type I and Type II error. On the other hand, qualitative data gleaned from responses to open-ended questions and interview were also carefully examined and analyzed so that interpretations and conclusions drawn do not mirror the researcher's own perspectives and preferences but instead reflect the original views of the participants. This helped to increase the confirmability of qualitative

176

research findings (Nowell et al., 2017) and the objectivity of quantitative results (Adom & Hussein, 2018; Kivunja, 2018).

Closely related to confirmability is dependability. This quality criterion responds to the question of whether the interpretations and recommendations are in alignment with and are supported by data gleaned from the research participants (Korstjens & Moser, 2018). In other words, dependability refers to the consistency of the findings. Additionally, it was important to ensure that the research process was logical, traceable and well documented (Nowell et al., 2017) to achieve the dependability criterion. An audit trail (Carcary, 2020; Nowell et al., 2017) was used to show how qualitative data was obtained, reduced and analyzed, and how conclusions based on the data were arrived at. In a nutshell, the audit trail can easily provide readers and other researchers adequate proof of the decisions and choices made regarding the theoretical framework and methodology employed in this research study. Records of the raw data and interview

transcripts were submitted to the researcher's supervisor to allow for cross referencing of the data. Furthermore, the researcher took time to describe in tremendous detail the methods used to collect data, and the thematic data analysis technique used. Codes and themes emerging from the qualitative data were also reviewed to ensure alignment with the raw data. All of these critical steps were informed by the theoretical framework.   In reporting the results, the researcher ensured that interpretations or inferences made from the data were not only factual but also supported by the analysis. This was done to avert the likelihood of drawing misleading or inaccurate conclusions.

In essence, not only did the inclusion of a theoretical framework in this research project add rigor to the entire research process but it also ensured that the research findings are more

meaningful, trustworthy, and acceptable to the theoretical concepts and ideas presented in the literature (Adom & Hussein, 2018; Kivunja, 2018).

## 3.8 Study Procedures and Ethical Assurances

Data Collection Procedures

In compliance with the code of ethics or practice of several professional research bodies, a research and ethics application (Appendix A) to carry out this research project was submitted to UNICAF's Research and Ethics Committee (UREC) for which approval was granted prior to data collection (Appendix B).  Uncertain of the number of teachers who would meet both criteria for participation, it was necessary that contact was made with program graduates via email.  The researcher  contacted electronically all former program graduates for whom email details  were provided.  This process proved ineffective as very few teachers replied, making the non-response rate extremely high. The researcher surmised that perhaps teachers had either changed their email

addresses, received, but never read the messages as these may have gone to their junk mail or disregarded the message altogether. The researcher was left with no other option but to physically visit primary schools with teachers who had graduated from the initial training program during the period under investigation. This was done following verification obtained from telephone conversations held with the principals of the primary schools in Saint Lucia.

<div style="text-align: right">178</div>

*Data Collection Procedures for Questionnaire*

For the most part, on the days when the researcher was relieved of her teaching duties, she drove to primary schools across the eight education districts to gather data, starting with those schools within close proximity of her residence. Upon arrival at each school, the researcher checked with the school security office or caretaker before proceeding to the principal's office. The researcher briefed the school principal on the purpose of the research. At most schools, the principal  escorted the researcher to the teachers' classrooms whom they believe fit the criteria for participation as described.  At schools with about three or more recent program graduates, the researcher waited until recess, lunch or dismissal time to meet the teachers as a group. In a few cases, the school principals requested that packages be left in their possession for distribution to the teachers.

Teachers were briefed on the research project during face-to-face meetings and once they orally expressed their willingness to participate, the researcher went on to hand each teacher a copy of the consent form (Appendix C) and questionnaire survey (Appendix D).   In an effort to minimize a high non-response rate, given the length of the questionnaire, all teachers were allowed sufficient time to familiarize themselves with the research and to complete the questionnaire.   In most cases, the questionnaire survey was administered in the morning and upon completion, collected at the end of the day or at the next school visit.

Additionally, where time did not permit due to school related activities and closure of schools, program graduates were invited to participate via email. For instance, in cases where one or two teachers were found to be teaching at schools in remote locations that potentially posed increased physical risks to the researcher, telephone numbers of these teachers were obtained with their consent from their school principals. Then, the researcher made subsequent

179

calls and once the teachers agreed, the gatekeeper letter, consent form and questionnaire were sent electronically. One hundred twenty-three (123) questionnaires were completed and returned, five of which were received via electronic mail. However, given that the sample had to comprise participants who completed the Associate Degree in Primary Education program within the period 2012-2019, eleven (11) questionnaires were omitted since these participants did not meet this basic requirement. Five teachers who were eligible to participate in the study opted not to get involved. The researcher verbally thanked all teachers for their time, interest and participation in the data collection process of the research project.

*Data Collection Procedures for Face-to-Face Interview with Program Graduates*

Semi-structured interviews (Appendix E) were conducted with a sub sample of program graduates who expressed a willingness to participate while the researcher was still in the education district collecting data. This was done either as a group or individually on the same day after the completion of the questionnaire or the following day during the lunch break or dismissal. The purpose of the interview was explained to the participants, and they were once again assured of the anonymity and confidentiality of their responses. Permission was granted for the researcher to digitally record the interview responses. The interview was conducted to gain

a deeper insight into the impact of the program on teachers' perceived levels of effectiveness in the classroom and their general perspectives on their two-year initial training experience. The teachers got an opportunity to delve deeper into the practicum and the delivery of courses. They also mentioned the kinds of support they receive at their schools to facilitate the implementation of new learning, student-centered instructional approaches, and strategies to which they were exposed to during teacher training to their own classroom practice. School-related factors that

negatively impact their classroom practice were also examined.  Interviews held with a single interviewee lasted an average of 20 minutes while group interviews took between 35 to 40 minutes.  In a few cases, another visit or two to the school was required as school activities and the unavailability of teachers made it impossible to conduct interviews at the time.  At the end, the researcher expressed her gratitude to all teachers for taking time to participate in the interview and reassured them that their responses would be transcribed as recorded.

*Data Collection Procedures for  Face-to Face Interview with School Principals*

Whenever it was possible and following an expression to participate in the research, face-to-face interviews were conducted with school administrators.   The researcher requested principals' consent for the semi-structured interview to be digitally recorded to ensure its fluidity and to capture all responses. School principals got a chance to articulate their concerns about the initial training program in terms of its noticeable strengths and deficiencies and made suggestions for its overall strengthening to ensure more effective teacher preparation.   Face-to- face (synchronous) interviews  with school principals (Appendix F) took about 20-25 minutes.

*Data Collection  Procedures of Open-ended Questionnaire*

In a few cases, the researcher made several visits to schools as principals' busy schedules, or their absenteeism made it extremely difficult to conduct face-to-face interviews synchronously. At that point, the school principals concerned requested that the questions be emailed to them and even then, four principals did not respond despite the reminders sent to them.

Finally, other school officials namely district education officers and curriculum officers were contacted initially via telephone to apprise them of the researcher's intention, solicit their

participation and to make an appointment for a face-to-face interview if a willingness to participate was verbally expressed. This group of participants made a request for questions to be emailed to them in lieu of the face-to-face interview. Consequently, the interview protocol had to be tweaked and converted to an open-ended questionnaire (Appendix G). Upon receipt of email addresses, a formal request for participation and an open-ended questionnaire was emailed. Responses to openended questions provided by curriculum officers and district education officers also yielded data on program shortcomings and suggestions for improvement. The researcher thanked all participants for their interest and willingness to participate in the data collection process of the research project.

Ethical Assurances

The study utilizes human subjects all of whom are adults having no mental disabilities. The research presented low to no potential physical or psychological risks to adult subjects as program graduates were only required to read and indicate their responses to survey items by ticking or checking the appropriate box. Interview questions did not focus on topics of personal interest and program graduates and other school directorates were not required to disclose sensitive information (Creswell & Creswell, 2018). As a result, responses were less likely to cause negative emotional reactions.

Scholars including Sim and Waterfield (2019) and Creswell and Creswell (2018) cautioned researchers that information provided by participants should in no way reveal their identity. This critical ethical concern relates to anonymity, whether participants can be identified by the data provided or other forms of information relating to them.  To ensure that participants remained anonymous, codes were given to identify participants as data was entered into SPSS for cross checking and verification. In some cases, participants gave their verbal consent but preferred to remain unidentified on the consent form.   Moreover, data provided was combined and reported holistically, so in that way, the data in no way would be linked to individual participants or schools.

Another way by which researchers protect the participants' right to privacy is through the assurance of confidentiality.  To ensure that information remained confidential, participants were not required to write their names on the questionnaire. The information provided was not disclosed to others and used for the primary purpose of the research.

*Researcher's Role*

The conduct of ethical research is usually seen as a shared responsibly and lies with the researcher, ethics review committee and the research community. Although ethics review committees and the editorial boards of various publishers have an integral role to play in strengthening research integrity through their robust review and reporting of research projects, the ultimate responsibility for conducting ethical research lies predominantly with the researcher (Bhui et al., 2019; Creswell & Creswell, 2018; Cumyn et al., 2019).

A brief description of the context in which the researcher worked helps to provide a better understanding of this role. The researcher, also a former teacher educator, provided formal training to future teachers at the Department of Teacher Education in Saint Lucia since the inception of the Associate Degree in Education Program in the academic year 2010. This means that prior to conducting this research, the researcher was already acquainted with all program graduates as they had been taught at least two Language Arts courses during their initial teacher training. Furthermore, the researcher had multiple interactions with program graduates either during their own practical teaching experience or as mentor teachers in subsequent practical teaching episodes. Epigrammatically put, these teachers were no stranger to the researcher, hence the context was highly familiar (Xerri, 2018). Given the element of bias that might exist on the part of the program graduates who are also former students of the researcher, it was imperative that they were asked to be frank and honest with their responses.

Fulfilling the Ministry of Education's mandate to develop a program that is more rigorous both theoretically and pedagogically particularly in ICT integration and inclusive education necessitates some systematic appraisal of the current ADE program. Undeniably, evaluating the two-year teacher training is an attempt to better understand the institutional and

184

instructional contexts and its impact on program graduates' level of satisfaction with the training received, as well as their performance as they work with K-6 children in their respective classroom settings.  Admittedly, playing this dual role served as a means of professional development, which however, can pose several potential methodological and ethical challenges (Xerri, 2018), before, during and post data collection (Cumyn et al., 2019) and that if left unaddressed, could compromise the ethical integrity of the research (Creswell & Creswell, 2018).

Prior to data collection, the researcher's ethical responsibility entailed protecting the study's participants from harm, respecting their privacy, and adhering to acceptable guidelines to avoid potential risks to participants (Creswell & Creswell, 2018).  This prior role involved the provision of adequate information regarding the research.  In a letter addressed to participants, the researcher explained the purpose of the research, data collection methods and how the data gathered would be utilized, what their participation in the research project entailed, the time commitment, the benefits to their participation and potential risks involved if any as well as how these risks would be managed. Participants were assured of the confidentiality and anonymity of their responses. However, if the researcher wished to refer to specific participants or schools, pseudonyms were used to preserve their identity. Participants' rights to withdraw from the data collection exercise were respected.

An essential ethical concern in research is informed consent. The revocable nature of consent in empirical research (Sim & Waterfield, 2019) allows participants the right to withdraw from the study at any point in the research process.  This freedom to withdraw their participation was communicated via the Gatekeeper Letter  as well as the Certificate of Consent.  During the debriefing, participants were informed of the importance of the data they provided, its

confidentiality and anonymity. Their right to have their data removed from the research if they wished to, was honored.

Given the nature of the previous relationship with the study's main participants coupled with the researcher's active engagement in the research context, it was necessary for the researcher to constantly remind herself of her dual role as participants' former instructor and researcher during data collection. This constant reflection was critical to avert biases and preconceived assumptions that might have potentially influenced data analysis and interpretation. Similarly, Xerri's (2018) engagement in reflexivity helped to mitigate his presence and personal biases on the findings in an investigation involving students he had previously taught.

Extending beyond data collection, and in keeping with the ethical guidelines and regulations, the researcher ensured that the data provided by the participants were reported truthfully and reflected the views and experiences of the study participants (Creswell & Creswell, 2018; Xerri, 2018). The storage, access and disposal of the data gathered also served as major responsibilities of the researcher. To ensure proper storage, all completed questionnaires were packaged and kept in a locked cabinet, repackaged, and returned to the same storage facility following data entry into SPSS. Interview responses were transcribed verbatim. Audio files, printed interview transcripts and questionnaires will be permanently discarded after five years following completion of the dissertation. Finally, the researcher intends to inform participants of their right to access the results. The findings will be shared with them via their personal email and a hard copy of the dissertation will be made available at the Ministry of Education for further access.

186

## 3.9 Data Collection and Analysis

Data Collection

Both quantitative and qualitative methods were employed to garner pertinent data to address the five research questions which this investigative study aimed to examine.

*Quantitative Data Collection*

Quantitative data which addressed the first and second research questions were collected using a 5-point Likert scale questionnaire survey that was either hand delivered or emailed to program graduates.  Participants were encouraged to reflect on the initial teacher training program completed at the Division of Teacher Education and Educational Administration.   For the first part of Section B, the researcher was primarily concerned with participants' perception of the initial training received, the independent variable in this study. Using the scale of 1(strongly disagree) to 5 (strongly agree), participants indicated the extent to which they agreed with statements 1-25 as evidence of their perception of the initial training received during the two years.  For example, statements which sought to determine the impact of initial training, measure participants' readiness to teach (items 10, 12 13, 23, 24); knowledge of strategies to cater to student diversity (6, 14,15,20); knowledge of classroom management strategies and those for promoting active student engagement (8, 17, 18, 21, 25) and so on.

As participants continued to reflect on the various courses taken and experiences during initial training, they indicated their level of satisfaction (independent variable) with the program in terms of its content, structure, delivery and assessment. Items 26-51 of Part Two of the survey questionnaire sought to obtain participants' perceived level of satisfaction with the initial training received  using the scale 1(very dissatisfied) to 5(very satisfied).

187

For Part Three participants used the scale 1 (strongly disagree) to 5 (strongly agree) to indicate the extent to which they perceive the program as contributing to their level of

effectiveness in the classroom in terms of their ability to diagnose their students' needs (items 52, 56); plan for teaching (items 57, 58, 59, 69); and implement a wide range of strategies for promoting active student engagement (items 54, 55, 60) and improved learning outcomes (items 61, 63, 64, 65, 67, 68), for example.

*Qualitative Data Collection Methods*

Open-ended survey questions and semi-structured interviews were designed to glean qualitative data in response to research questions three, four and five. Having completed the questionnaire survey, program graduates were required to proceed to Section C to indicate in writing the various ways they think that the program was lacking or did not meet their training needs as it relates to practical teaching, course delivery, program content and assessment (research question three). Lines provided allowed participants the latitude to explain in detail the shortcomings of the program as perceived by them. Additionally, suggestions for addressing the shortcomings outlined were solicited as well as other aspects of training they deem necessary for inclusion in future teacher training programs (research question four).

One interview protocol designed for program graduates provided an opportunity for them to further evaluate their initial  training on the various components already rated in the questionnaire survey and the open-ended survey items. Most importantly, the interview picked up data to respond to the fifth research question. More specifically, the researcher was interested in the various forms of support provided to program graduates at their schools to facilitate the implementation of their new learning, the student-centered instructional approaches and

188

strategies learned during their training to their own classroom practice.  For face-to-face semi-structured interviews with program graduates,  it was important to identify a comfortable

environment in the school away from distractions and background noise. Teachers chose a quiet room for the interview. Although there was no need for a formal introduction since the researcher was quite familiar with all the teachers,  it was necessary to engage them in a pre- interview conversation to build rapport, put teachers at ease, reassure them of the confidentiality of their responses,  and the need for them to be frank so that their responses reflect their personal opinions and views. Before proceeding to the interview, participants had to be reminded that information provided would be used for the sole purpose of the research and discarded upon completion of the research report and within a certain time frame.  To begin Section B of the interview schedule, teachers were asked to reflect on their two-year teacher training experience like they did while completing the Level of Satisfaction and Effectiveness Questionnaire.

Additionally, they were asked to indicate the ways in which they felt that the program was deficient and did not meet their training needs. Program graduates took turns to articulate the numerous challenges they faced with respect to  the curriculum, program delivery, assessment and practical teaching components. Their suggestions for addressing the shortcomings identified were also explored.  Teachers also elaborated on the various ways in which they are being supported at their schools. Contrastingly, they mentioned various school-related factors that make it difficult to implement some of the best practices to which they were exposed during their initial training. Participants took turns  in focus group interviews  to respond to questions posed and where necessary, built upon responses given by their colleagues or provided diverse views that were reflective of their individual experiences during teacher training.

189

One of the strengths of the semi-structured interview is the freedom afforded to delve deeper with follow up questions that elicit additional and rich data not provided by interviewees in their initial responses. For instance, in one group interview, the researcher invited teachers to

explain how they benefited from the clinical period as a follow up to the second question (*would you say that you benefited from the clinical period, and in what way/s*?)  In another interview the researcher went on to probe deeper into the activities in which teachers participate as part of established professional learning communities (PLCs) at their schools (question nine: *apart from planning, what else do you use the PLC for?*).

Throughout the interview, the researcher was reflexive. This means that she was conscious and sensitive to the relationship between herself, and the interview participants given that she had taught these teachers during their initial training in previous years. Moreover, the researcher was cognizant of how her role and familiarity with the teachers and research context might have influenced conversations during the interview.  The researcher drew upon her previous knowledge and teacher education experiences to invite teachers to discuss issues related to the practicum and clinical period in greater depth rather than imposing her personal views and opinions about their own experiences. To put it succinctly, the researcher used reflexivity to enhance the robustness of the qualitative data.

Interview protocols for principals and open-ended questionnaires for district education and curriculum officers were designed to obtain data to address research questions three, four and five which facilitated the triangulation and corroboration of data already gleaned from program graduates.  A similar procedure was followed  to conduct face-to-face interviews with principals who showed a preference for this modality.  Due to challenges related to time and availability of some participants for face-to-face synchronized interviews, the researcher resorted

190

to obtaining data from two principals, two curriculum officers and six district education officers asynchronously via electronic mail. In this case, the respondents simply typed in their responses to the list of open-ended questions provided.

Data Analysis

As has been clearly articulated, qualitative and quantitative data were analyzed independently. However, the results of both data gathering tools were merged during the interpretation phase to allow for a more global perspective on the research topic under investigation.

*Quantitative Data*

Data obtained from the Likert-scale questionnaire were entered into SPSS 23. Ratings were reversed for items number 11,19, 21 as these were negatively phrased so that 5 became 1, 4 became 2, and 3 remained the same. As soon as all data were entered, they were screened and checked for accuracy, a necessary step for minimizing statistical errors when performing quantitative analysis (Woodson & Harris, 2018). Frequencies were computed for the demographic data. Measures of central tendency (mean, mode, median) and standard deviations for each of the two dependent or interval variables: teacher's level of satisfaction; and level of effectiveness (research question one). Moreover, Pearson $r$ correlation coefficient was calculated to verify a relationship between the independent variable (initial training) and the dependent variables (teachers' level of satisfaction and effectiveness). Although not quite critical in contributing to Type I and Type II errors, the researcher ensured that assumptions related to Pearson $r$ moment of correlation were not violated. For the most part, this was

191

determined by scatter plots generated which helped to verify or confirm the non-violation of most of the assumptions. Based on the results and using a value of $p=1$, the existence or absence of a

relationship between the independent variable (initial training) and dependent variables (teachers' level of satisfaction and effectiveness) was determined (research question two). The two null hypotheses were rejected based on the results.

*Qualitative Data*

Additionally, the researcher gathered qualitative data using open-ended questions and semi-structured interviews. Written responses to open-ended questions as well as semi-structured interviews were coded, and frequency counts of the various themes done. Unlike the responses obtained from open-ended questionnaire items which needed no transcription (Christensen, 2021) digitally recorded interview data gleaned from program graduates and most principals were transcribed verbatim. This was followed by a thematic analysis (Nowell et al., 2017) to help reduce and interpret qualitative data obtained from the open-ended survey items and interview to address research questions three, four, and five.

Thematic analysis offered a very useful method for examining the perspectives of the program graduates, school principals and other stakeholders regarding the impact of the initial teacher training program, program deficiencies and how it can be improved to prepare future teachers more successfully. An examination of participants' perspectives enabled the researcher to highlight similarities and differences in responses. Also, the thematic analysis method offered a more structured approach to summarize and manage the qualitative data in a way that enabled the researcher to report qualitative results in a clear and organized manner (Nowell et al., 2017). Most importantly, conducting the thematic analysis contributed to the trustworthiness of the

research results. Analysis of the qualitative data was guided by the following six steps as outlined by Nowell and colleagues (2017).

*Step One: Developing Familiarity with the Data*

Data obtained from open-ended questions from the final section of the survey questionnaire and semi structured interviews had to be properly managed. All interview responses which were initially recorded digitally were transcribed verbatim. Responses to open ended asynchronous questions obtained via email were retrieved and saved in a Microsoft Word document. Transcripts were grouped so that responses of all teachers, school principals, district education officers and curriculum specialists were saved in separate files to facilitate ease of analysis and avoid the mishandling of the data. Each file was printed and bound. This was the researcher's way of ensuring a non-electronic paper trail in the event that digital files got damaged or corrupt and became inaccessible.

Having no prior knowledge or experience with qualitative data analysis software, the researcher initially decided to explore the possibility of using one such software in this research. One of the most popular software, NVivo was explored, and a free trial version downloaded. After several unsuccessful attempts working with the software, the researcher realized that her unfamiliarity with the tool even after reading about it, contributed to the decision to resort to the conventional method used in previous research projects to analyze the qualitative data. Consequently, qualitative data obtained from open-ended questions and interviews were analyzed manually.

It was at this point that immersion in the data commenced. To develop familiarity with the data, the researcher first read through responses to open-ended questions. This did not pose

193

much of a problem as previously prescribed categories were given. For instance, under the category, 'Practical Teaching', program graduates wrote down challenges faced with respect to

mentor support and feedback, and the duration of the practicum. Next, a first reading of the printed transcripts, starting with the program graduates' responses was done to get a general sense of the perspectives shared by the teachers. This was then followed by multiple readings to obtain a clearer understanding of the breadth and depth of the content of those transcripts and to search for meanings and patterns in responses. During this time, recurring views and salient points were underlined and highlighted and in instances where teachers spoke about challenges faced during their training, the relevant program component was jotted down. The researcher's thoughts on those views were also noted. A similar process was followed for immersion in the content of interview transcripts of principals and other school directorates. At the end, the detailed readings of the transcripts assisted in the identification of ideas and themes for possible coding.

*Step Two: Generating Initial Codes*

Having read and developed familiarity with the data, the next step entailed the generation and assignment of initial codes. Both deductive and inductive coding were used to analyze the interview data. This proved to be a rather tedious, time consuming but valuable step as the researcher was required to go back and forth to the transcripts to focus on specific aspects of the data that would first of all, fit pre-established categories and secondly, to identify and capture other pertinent ideas that emerged from the data. To deductively code the data, the pre- determined categories or program components were used as a guide. This was done by enclosing important phrases, words or sections from responses that were relevant to each category with the

194

name of the category written next to the enclosure. For instance, in the verbatim response of one teacher, " it is easier for me to implement a strategy that was modeled to me than one I read", I paid attention to the words 'implement, strategy, modeled' to figure out that these words speak

directly to the category of 'Program Delivery'. Similarly, the verbatim response of another teacher, "some of them they don't model, all they do they talk they talk they do not cater to the visual learners" was also placed under the same category being guided by the key words and phrases 'talk, talk, don't' model, do not cater to visual learners'. However, to avoid missing out on any important information that was relevant to each category and the research questions as a whole, it was necessary to engage in inductive coding (Nowell et al., 2017). This method of coding enabled the researcher to delve a bit deeper into the response in search of possible themes emerging from the data that were either related to each category or resulted in the generation of new sets of codes. In the example of the verbatim responses referenced above, it was enlightening to note that in both cases the 'lack of modeling' emerged as a new code, and in the second response another new code 'not catering to learning styles'. Once the new codes were generated, the remaining steps became a lot more simplified.

*Step Three: Searching for Themes*

The third step entailed an active search for themes to capture new codes generated in the second step more accurately and meaningfully. To assist with the search, the researcher created a table consisting of a list of the different codes that had emerged inductively under each category as well as those that did not fall under any of the pre-determined categories. A visual display of the codes facilitated the comparison of codes across data sets and to identify areas of congruence and contradictions. At that point it was necessary to sort and collate all similar codes into themes. Therefore, codes were grouped into themes. Frequency counts of codes were done.

195

A variety of themes were generated including 'overemphasis on group work', 'classroom management', 'preparation time', 'insufficient feedback', 'disorganized lecturers', 'positive attitude' and 'lack of modeling', just to name a few. In a few cases, some themes were combined

to create new ones that in the researcher's estimation, were more significant in developing an understanding of the program's overall impact.

*Step Four: Reviewing Themes*

The main purpose of the fourth step was to review and refine themes already identified (Nowell et al., 2017).  This was done to ensure that the themes were a true reflection of the initial codes and that they were in tandem with the exact meanings conveyed by the data sets.  In cases where the researcher had missed out on important ideas, which happened a few times during the qualitative data analysis, new codes were created and incorporated as themes. A few themes were collapsed or omitted due to their similarity or overlap.  For instance, the two themes 'lack of modeling' and 'not catering to learning styles' were found to be quite similar. At the end, they were regrouped to form the broader theme "Diversity in Teaching Methods". The researcher was satisfied that the original and voluminous sets of interview data had been significantly reduced into a more manageable compilation of themes. This cluster of themes summarized the research participants' perspectives regarding the initial teacher training program.

*Step Five: Defining and Naming Themes*

A penultimate step in the qualitative thematic data analysis procedure required the researcher to define and name themes. At this very critical stage, the researcher had to determine which parts of the interview data that addressed each theme. Meanwhile, the identification of sample verbatim responses in preparation for the write up  of chapter four of the dissertation report was necessary.

*Step Six: Producing the Report*

This is the final step of the thematic analysis that signaled the researcher's readiness to begin chapter four of the dissertation report. The study was guided by five research questions,

hence the themes were organized and presented accordingly.  Whenever appropriate, the themes were presented in tabular form under each category followed by an interpretation of those themes. Verbatim responses of program graduates, principals and other school officials were included in the report to substantiate the themes and to show their prevalence in the qualitative data.

Mixing Data Sets

One of the critical questions asked regarding the mixing of data in a mixed methods study is "when does the data mix?" To ensure the robustness of a mixed methods design, data obtained qualitatively through the questionnaire survey and qualitatively via open-ended questions and interviews were mixed during the interpretation phase as illustrated in Figure 5 below.
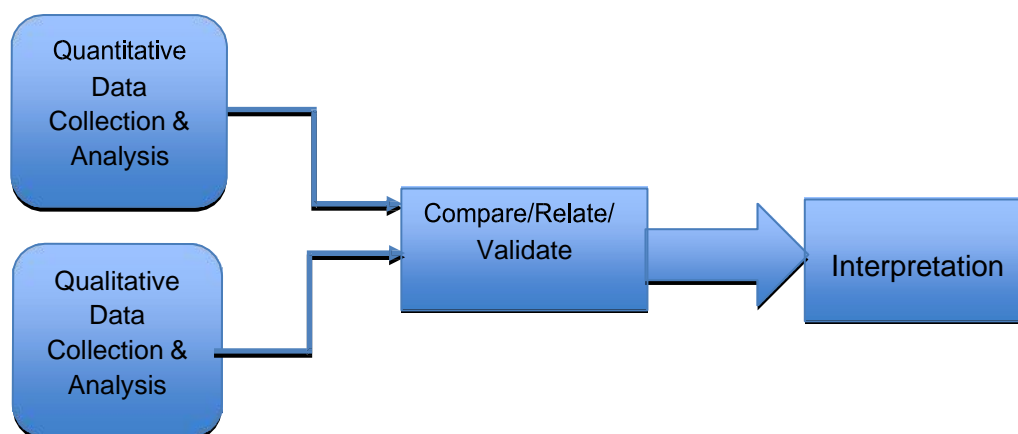


*Figure 5 Diagram Depicting Data Mixing*

197

This involved bringing together the results of the data analyzed statistically and thematically to facilitate the comparison and validation of program graduates' and school officials' perceptions on the overall impact of the initial teacher training program. Additionally, both data sets were merged during the presentation of the findings, interpretation, evaluation and discussion phases of the dissertation report. A similar approach has been used by previous researchers to mix quantitative and qualitative data sets.  For instance, Yahiji et al. (2019) concurrent triangulation

mixed-method study design allowed the researchers to integrate quantitative data obtained from a questionnaire with data garnered from focused group discussions and documentation. The quantitative data sought to identify the strengths and weaknesses of a practical teaching assessment model while qualitative data gleaned focused on the challenges faced by advisors and mentors in assessing teacher candidates' practical teaching performance.

## 3.10 Summary

In the third chapter, the researcher has described in detail the methodology employed in conducting this research to facilitate its replicability. The chapter began with a brief discussion on the philosophical worldview adopted and theoretical framework which underpin this research project. The study subscribes to the epistemological and ontological principles of pragmatism which view knowledge and reality based on beliefs and habits that human beings construct through experiences and interactions with their social environments. Related to a pragmatic worldview, the chapter provides a justification for the use of a stakeholder, social cognitive learning and systems theory which together helped to build a rigorous theoretical foundation for the research. This was done by showing how some of the propositions and constructs related to each theory are intertwined to show their suitability and interrelatedness. Drawing upon previous research studies to show the applicability of the theories and their appropriateness to

198

conduct the current study helped to strengthen the choice of theories. Next, a description of a mixed method research approach employed to evaluate the initial teacher training program from the perspectives of program graduates and other key stakeholders in the teacher education process followed. The selection of a concurrent triangulated design was done based on the theoretical framework developed which in turn informed the choice of research approach.

Specific considerations were given to the research purpose and theoretical perspective, implementation, weighting and mixing as the four criteria for selecting an appropriate mixed method design. Without the participants, this research project would not have been possible, therefore, the researcher ensured that the research population, target sample and the sampling procedures were explained in the chapter.

Furthermore, the chapter discussed in detail the main instruments used to collect quantitative and qualitative data to address the five research questions the study sought to investigate. The adapted survey questionnaire used to collect quantitative data was described with specific attention paid to the modifications made to the original instrument. Interview protocols designed for program graduates and school officials were also described and justified to collect qualitative data. Strategies employed to establish validity and reliability of both sets of data collection methods were presented.

Given that the research was also concerned with hypotheses testing, it became necessary to operationalize the key variables, that is independent variable (training) and dependent variables (level of satisfaction, level of effectiveness) as used in the context of this research. To maintain the ethical integrity of the research, the chapter detailed specific steps that were taken by the researcher with respect to obtaining participant consent and ensuring the anonymity and confidentiality of their responses. Data collection and analysis procedures were clearly outlined

199

to ensure replication, audit trail, and the trustworthiness of the research results. In all of this, it was important for the researcher to document her dual role as researcher and former teacher trainer to avoid researcher bias and enhance the trustworthiness of the results. Chapter three would not have been complete without a step-by-step account of the procedures that were

followed in collecting and analyzing quantitative and qualitative data. The SPSS software was used to analyze quantitative data while data gleaned qualitatively were analyzed thematically. In the ensuing chapter, the results of the research are presented, interpreted and evaluated in accordance with the research questions.

Chapter 4: Findings

**4.1 Introduction to the Section**

This mixed method investigative study was undertaken to respond to calls in the literature for teacher training colleges and other teacher education institutions to engage in ongoing evaluation of their programs to ensure program effectiveness and quality.  In Saint Lucia, the 2-year Associate Degree in Primary Education program that is offered jointly by the ECJBTE and the DTEEA, has not been evaluated. Yet, the Ministry of Education has mandated that the Division develops a new program to better meet the diverse professional and training needs of novice teachers. Admittedly, some courses have been reviewed and a few teacher educators have adopted a more constructivist approach to course delivery. Still, the kind of robust program evaluation that is needed to determine program impact and whether specific program  components are meeting their intended purpose is non-existent. In light of the aforementioned gap, it was imperative that the current program be evaluated as data gleaned from the evaluation will be used to improve program quality; inform teacher education policy and practice as well as give direction to the new Bachelor in Primary Education degree program that is currently being rolled out.

The study sought to evaluate the Associate Degree in Primary Education, an initial teacher training program in Saint Lucia and to determine its impact on teachers' perceived levels of satisfaction and effectiveness in the classroom. In this penultimate chapter, the researcher presents and evaluates the  results of the data gathered from both quantitative and qualitative methods to respond to the following research questions and hypotheses.

1. (a) What are teachers' perceived level of satisfaction with the training received ?

(b) What are teachers' perceived level of effectiveness  in the classroom following their

initial teacher training?

2. What is the relationship between teachers' level of satisfaction with the initial training received and their effectiveness in the classroom?

3. What challenges  are associated with the initial teacher training  program?

4. What measures can be taken to address the challenges  associated with the initial teacher training program?

5. (a) What forms of support are provided to newly trained teachers to enhance their level of effectiveness in the classroom?

(b) What  possible factors negatively impact teachers' classroom practice following initial training?

Research Hypotheses

1. **Ho$_1$** There is no relationship between training and teachers' perceived level of satisfaction.

2. **Ho$_2$** There is no relationship between training and teachers' perceived level of effectiveness.

## 4.2 Results

To shed light on the five research questions, both quantitative and qualitative data analyses procedures were employed.  The quantitative portion of this study which was addressed primarily through a 5-point Likert scale survey questionnaire, attempted to determine participants' perceived levels of satisfaction and effectiveness in the classroom following the successful completion of their two-year initial teacher training.  Means and standard deviations

202

were calculated to determine participants' perceptions.  Additionally, the researcher was interested in verifying whether a relationship exists between initial training (independent variable) and dependent variables (teachers' level of satisfaction, level of effectiveness).  Pearson r correlation bivariate coefficient was computed to verify a relationship between the independent and dependent variables. This was done following the creation of scatter plots to ensure that all assumptions were adequately met.  Results reported for research questions one and two reflect quantitative data gathered in this study.

Qualitative data obtained sought to identify the challenges associated with the initial teacher training program (research question three); measures that can be taken to address challenges identified or improve program quality (research question four); and the forms of support that teachers receive at their school to enhance their effectiveness as well as the factors that negatively impact their classroom practice (research question five).  Open-ended written responses in questionnaire and semi-structured interviews were the two methods used to glean qualitative data. Steps one to six of the thematic analysis procedure purported by Nowell and colleagues (2017) were followed to analyze qualitative data both deductively using *a priori* codes (program components) and inductively, using emergent or posteriori codes.

The ensuing section presents the detailed results of the quantitative and qualitative analysis of data garnered from the survey questionnaire, open-ended items and interview protocols.   For the most part, qualitative data helped to confirm and corroborate data obtained quantitatively to ensure triangulation.   The mixing of both data sets during the reporting, interpretation and evaluation phases is in keeping with the concurrent triangulation mixed method research design employed. All research findings are presented, evaluated and discussed according to the five research questions which the current study investigated.

203

**4.3 Research Question 1**

(a) What are teachers' perceived level of satisfaction with the training received?

Teachers' Level of Satisfaction with Training Received

Level of Satisfaction is used is this study to describe how pleased respondents are and the extent to which they perceive the initial training program to have met their expectations and professional training needs. Items 26-51 on the survey questionnaire sought to glean information regarding participants' level of satisfaction with the training program in terms of its content, practical teaching, course delivery, and assessment components using the 5-point scale of very satisfied (5) to very dissatisfied (1). Scrutiny of the data presented in Table 4.1 demonstrates that despite respondents' perceived satisfaction with the program content in terms of its currency on information about teaching (M= 4.13; Std=.740), and the adequacy of resources for learning (M=4.14, Std = 0.834), they are not quite satisfied with its organization (M=3.81, Std = 0.883) and relevance to their classroom needs (M=3.93; Std=.828).

Respondents seem satisfied with one aspect of program delivery where course lecturers created a comfortable and supportive learning environment (M=4.07; Std=.824) that encouraged peer-collaboration (M=4.57; Std=.732); and participation in several engaging activities (M=4.07, Std =0.896) which fostered their critical thinking about experiences in light of new learning (M=4.32; Std=.687). Although the teachers expressed general satisfaction with the provisions to discuss classroom management strategies (M= 4.08, Std =0.803) it appears that they were not given adequate opportunities to discuss and seek solutions to real classroom problems (M=3.72, Std =1.064). Additionally, respondents appear not too pleased with the teaching strategies used by their course lecturers (M=3.84; Std=1.065) and the frequency with which student-centered

204

202

strategies they are expected to implement in real classrooms were modeled by instructors

(M=3.69; Std=.998).

*Table 4. 1*

Teachers' Level of Satisfaction With Initial Training Received

| Items N=112 | Mean | SD |
|---|---|---|
| 26. The program was well organized . | 3.81 | .883 |
| 27. The content of the different courses was relevant to my classroom needs. | 3.93 | .828 |
| 28. A variety of teaching learning approaches and strategies were used in the delivery of the program. | 3.84 | 1.065 |
| 29. The program offered up-to-date information about teaching. | 4.13 | .740 |
| 30. My learning in the various courses was appropriately assessed. | 4.08 | .752 |
| 31. During the program I was encouraged to participate in several engaging activities. | 4.07 | .896 |
| 32. The resources and materials such as handouts, PowerPoint, articles, books, videos etc. used during classes were adequate. | 4.14 | .834 |
| 33. The course lecturers made the atmosphere comfortable to share and discuss my learning, understanding and experiences. | 4.07 | .824 |
| 34. The program offered adequate opportunities for me to plan and teach lessons in an effort to develop my practical teaching skills. | 3.65 | .946 |
| 35. I was encouraged to discuss and find solutions to real classroom problems. | 3.72 | 1.064 |
| 36. I was given opportunities to implement what was learnt during the program in real classroom settings. | 3.87 | .983 |
| 37. I was encouraged to collaborate with my fellow peers/colleagues. | 4.57 | .732 |
| 38. Student centred approaches and strategies such as those I was expected to implement during practical teaching sessions, were often modelled by the course lecturers. | 3.69 | .998 |
| 39. I was encouraged to think critically about my experiences in light of my new knowledge. | 4.32 | .687 |
| 40. I was given opportunities to create materials to be used during practical teaching. | 4.16 | .935 |
| 41. The program provided me with opportunities to integrate technological tools into my teaching. | 4.21 | .853 |

| | | |
|---|---|---|
| 42. Teaching practice gave me lots of opportunities to apply what I learned to the real classroom. | 4.15 | .880 |
| 43. The support and feedback received from my co-operating teacher during practical teaching were adequate. | 4.07 | 1.183 |
| 44. The support and feedback received from my college supervisors were adequate. | 4.22 | .894 |
| 45. The 10 weeks of practical teaching gave me adequate time to better my teaching skills. | 3.96 | 1.026 |
| 46. The program afforded me opportunities to discuss classroom management strategies with my peers. | 4.08 | .803 |
| 47. Teaching practice equipped me with the necessary skills to plan and execute effective lessons to foster student learning. | 4.10 | .939 |
| 48. The feedback provided based on coursework assignments was adequate. | 3.83 | .928 |
| 49. Course assignments deepened my understanding of key course-related concepts. | 3.86 | .795 |
| 50. The number of assignments to be completed per course was adequate. | 4.05 | .952 |
| 51. End of semester exams allowed me to apply the theoretical knowledge gained in a practical way. | 3.86 | .968 |

In regard to the practical teaching component, respondents' satisfaction stems from the opportunities provided during training to utilize technological tools to support instruction (M=4.21; Std =.853) as well as chances to create instructional materials (M=4.16; Std =.935) in preparation for their field-based teaching experiences. Respondents express the view that their initial training did not provide sufficient opportunities to apply their new learning in real classroom settings (M=3.87; Std= .983) or develop their practical teaching skills through lesson planning and

implementation (M=3.65; Std=.946).   However, the Practicum, as perceived by the respondents

gave them countless opportunities for practice in real classroom settings, (M=4.15;

Std=.880) which in turn equipped them with more effective lesson planning and implementation

skills (M=4.10; Std=.939). Notwithstanding, respondents are not quite satisfied with the 10- week

duration as they believe that the time was inadequate to notice significant improvement in their

teaching skills (M= 3.96; Std=1.026). In terms of mentorship, respondents seem satisfied with the

support and feedback received from their co-operating teachers (M=4.07; Std=1.183) as well as

their college supervisors (M=4.22; Std=.894). However, their views on the support received from

their  co-operating teachers  differ noticeably as shown by the wide variance (Std =1.183). Simply

put, respondents express mixed sentiments regarding the support provided by their co-operating

teachers during the practical teaching exercise.

Regarding course assessment, respondents are of the view that their learning in various

courses was appropriately assessed (M=4.08; Std=.752) and that the number of assignments per

course was adequate (M=4.05; Std=.952).  On the other hand, they seem less satisfied with the

quality of course assignments in fostering learning (M=3.86; Std=.795) as well as the adequacy

of feedback based on these assignments (M=3.83; Std=.928). Moreover, the data shows somewhat

satisfaction with semester examinations as they believe that these do not adequately allow for the

application of theoretical knowledge in practical ways (M=3.86; Std=.968). Overall, the

descriptive statistics reveal a high level of satisfaction (M=104.98 or 84%; Std =

14.070) with the initial training received during the two-year period.

*Perspectives of Principals, District Education and Curriculum Officers*

Of particular interest to the researcher was the need to find out how school principals, district education officers and curriculum officers view program graduates' readiness or preparedness to teach at the primary level following their two-year initial teacher training. Notwithstanding the high level of satisfaction (84%) as perceived by program graduates with the

training received, principals and other school officials (education and curriculum officers) seem to have somewhat mixed views (M=6.71; Std =1.5537) with most ratings falling within "average" to "high" as depicted in Figure 6 below.
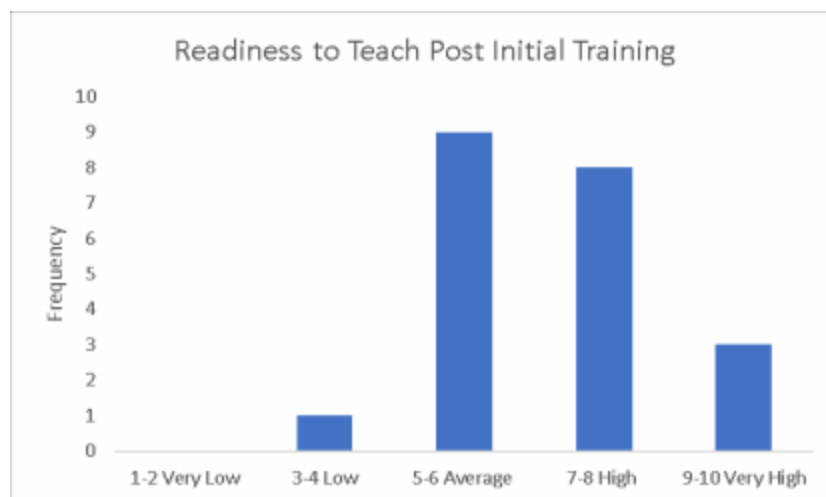


*Figure 6 Ratings on Readiness to Teach at Primary Level Post Initial Training*

The teachers at one school received a rating of 9 because according to the school principal:

They came in from here before they went to teachers' college. One came from here but the other one volunteered for about 6 months. They were prepared but the only thing was lacking in their preparation was the use of ICT in the classroom. (Principal #02)

Another principal who gave a rating of six to the beginning teachers at one school, cited some of the areas in which the new teachers struggle and would require additional training. The principal asserts:

I would say about 6 in terms of, they come with a background of teaching methods,

strategies, learning theories, their behavior management of students, the different things

they implement in the classroom… but the core thing, the learning, the differentiated

teaching is a major challenge, and the behavior management of students is emerging now

as a major major challenge. (Principal # 01)

Principal #07 rated the readiness of new teachers at her school at four

mainly due to the deficiencies initially exhibited by the teachers in their ability to work with special

needs students.  The principal indicated that the teachers were unaware of the demands of children

with special needs, noting that they have "a lot of toileting… and all kinds of training". She also

highlighted the need for the teachers "to be trained in using different assessment tools for special

needs". (Principal # 07).  A different experience is shared by another school principal about one

of her new teachers:

Miss Albert [pseudonym] is doing the special education program and she is doing a great

job. She is given them individual attention. In terms of her success story there is this child

in the special education and by grade five she is no longer in the program. She is now in

grade 6. She is the most improved student. (Principal # 08)

It is important to note that one school principal expressed difficulty in rating the readiness of new

teachers at her school indicating that "one was very prepared while the other was the

opposite"(Principal # 05).  For the other teachers the same principal expressed uncertainty since

according to her "not all of them came directly to me after College. Some of them were at other

schools so they already had some more experience". (Principal # 05)

One district education officer who rated the beginning teachers in one school district at

six admitted that despite the high level of enthusiasm displayed by new teachers upon completion

of their two-year initial training, it is short lived. According to the education officer, the beginning teachers "are aware of the theories of language development and how children learn language. They understand the aspects of language that must be taught in the primary

grades, are very effective at creating materials to support their lessons". (District Education Officer # 01). A rating of eight by another district education officer meant that:

> The teachers have a good command of the subject content and thoroughly understand the learning needs of the students. They have been exposed to a wide range of teaching strategies and are using them in the execution of their lessons. (District Education Officer # 03)

There is general consensus among principals, district education officers and curriculum officers that newly trained teachers demonstrate a certain degree of competence in subject content, instructional approaches and their ability to design instructional materials. Program graduates' high level of enthusiasm and positive attitude towards the teaching profession was also highlighted. However, school officials namely principals, district education and curriculum officers, attribute the inadequate preparation of beginning teachers to several deficiencies related to program components in addition to certain quality attributes of some teachers.

(b) What are teachers' perceived level of effectiveness in the classroom?

Teachers' Level of Effectiveness in the Classroom

In the context of this study level of effectiveness is used as a measure of the quality of the initial teacher training program in terms of how its components have contributed to graduates' performance in their respective classrooms. That is, their ability to demonstrate sound subject matter; effectively plan and implement various instructional strategies; utilize different forms of

assessment; and create classroom environments that promote meaningful student engagement and

learning (Akram, 2019). Part three of the questionnaire survey comprised 19 items (52-70) which

sought to determine respondents' perceived level of effectiveness as measured by a 5-

point scale of Strongly Agree (5) to Strongly Disagree (1).  Means and standard deviations were

computed   for each item on the scale.   In total, the Mean of 78.87 (83%) and Std of 8.065 suggest

that respondents perceive their level of effectiveness in the classroom to be moderately

high as seen in Table 4.2.

*Table 4. 2*

Teachers' Level of Effectiveness in the Classroom

| Items | | M | SD |
|---|---|---|---|
| 52. | I can now effectively diagnose my students' learning needs. | 3.90 | .842 |
| 53. | Knowing my students' weaknesses makes me better able to assist them. | 4.56 | .582 |
| 54. | I can now use different strategies to better manage my classroom so as to minimize classroom disruptions and student misbehavior. | 4.17 | .781 |
| 55. | My lessons now include more fun activities which enable students to participate. | 4.50 | .601 |

56. My lessons now include more cooperative group learning activities.    4.33   .690

57. I can now plan and implement effective lessons.    4.48   .586

58. I now consider my students' learning needs and styles more when    4.44   .708

    planning and teaching my lessons.    4.35   .719
    59. My lessons are now more
enjoyable.    4.31   .644

      3.93   .766

  60. I now use a variety of materials and resources to cater to

    students' different learning styles.    61. I have    2.82   1.258
successfully improved my students' ability to read.    3.88   .825

62. My effectiveness in the classroom is only as a result of my 2-year.    3.97   .729
    teacher
training.

63. I have successfully improved my students' ability to write.    4.14   .772

64. I have successfully improved my students' ability to compute

    and solve math problems.

65. I have successfully improved my students' ability to understand science

    concepts that they had misconception about.

66. I can now develop my own games and activities to teach

    various concepts.    4.39   .635
  67. I think my students are making satisfactory progress at this level.    4.21   .592

  68. As a result of my teaching, there has been an improvement

| | | |
|---|---|---|
| in my students' learning. | 4.36 | .628 |
| 69. I have successfully been able to differentiate my teaching to cater | | |
| to students' needs. | 4.06 | .774 |
| 70. I think my training played a significant role in contributing | | |
| to my effectiveness in the classroom. | 4.13 | .840 |

The ability to diagnose students' learning needs and styles and using diagnostic data for instruction is critical to teacher effectiveness and student learning. The teachers in this study are generally of the view that they are better equipped to diagnose the learning needs of their students (M=3.90, Std =0.842) as an awareness of students' weaknesses enables them to better assist learners (M=4.56, Std =0.582). For example, they concur that their lessons now reflect more cooperative group learning activities (M=4.35, Std=0.690) and students' learning needs and styles (M=4.44, Std= 0.708). Furthermore, respondents believe that they are now able to plan and implement lessons that are more enjoyable (M=4.35, Std =0.719); effective (M=4.48, Std = 0.586); and reflect activities that encourage more student participation (M= 4.50, Std = 0.601). Following their initial teacher training, respondents generally agree that they can now use different classroom management strategies (M=4.17, Std=0.781); differentiate instruction (M=4.06, Std = 0.774); employ a range of resources to cater to student diverse learning styles (M =4.31, Std = 0.644); and design their own games to teach various concepts (M=4.39, Std= 0.635). Based on their instructional practices, respondents generally concur that their students are making satisfactory progress (M= 4.21, Std =0.592). To illustrate, they are of the view that slight improvements have been observed in their students' reading (M=3.93, Std = 0.766); writing (M=3.88, Std = 0.825); computation and problem-solving skills (M=3.97, Std= 0.729);

their understanding of science concepts (M=4.14, Std = 0.772) and learning in general (M=4.36, Std= 0.628).   There is consensus that the two-year initial training played a significant role in contributing to teachers' classroom effectiveness (M = 4.13, Std =0.840). Notwithstanding, a Mean of 2.82 with responses of wide variance (Std =1.258) seems to suggest the recognition of other contributors to respondents' perceived level of classroom effectiveness and not only the 2- year initial teacher training.  To reiterate, it must be noted that, generally, the teachers perceive their effectiveness in the classroom to be positively influenced by their initial training as evinced by the descriptive statistics  (M=78.87 ; Std = 8.065).

Interview data also shed some light on some of the strategies implemented by teachers to galvanize students' interest, change attitude, improve their reading and writing or just to make a difference in their academic life.  One teacher shares how she caters to her students' varied learning styles:

> I also use lots of ICTs and lots of videos and they're given the opportunity to watch a video, talk about the video, maybe crate different things they see. They do it in different ways. For example, there is a visually impaired student in my class and at times he might have to draw or listen and then talk about it…. I also use a lot of chats. They're given or maybe I might start off with a chart and they might have to finish it. They might have to tell you what is missing, get their own pictures and do their own learning. (Teacher #052)

Another teacher shares her experience helping her struggling readers develop reading fluency:

> Well, I have a group of students who are not too good in the reading so what I would do to help them with the reading, I would give them the content in the form of a passage and

they have to complete a web or answer questions based on the passage. So, I would give

them the content, they would get familiar with it and then I would call them to read,

adhere to the different punctuation marks, how they pronounce the words and I find that

even if all of them don't improve, the majority of them improve because some of them

were not even at the grade 2 reading level but they are at grade 3 instructional level so it

is good. (Teacher# 054)

*Observations of Principals, District Education and Curriculum Officers*

Interview responses of principals, district education  and curriculum officers  serve to

corroborate the quantitative data obtained regarding program graduates' perceived level of

effectiveness in the classroom evinced by observable teacher strengths.  This group of participants

express their overall satisfaction with the performance of the teachers who have graduated from

the initial teacher training institution with levels of satisfaction varying from one principal to

another. They noted some salient strengths in those teachers such as (a) their high level of

motivation which translates into more enthusiastic teaching; (b) a willingness to try out new ideas

and strategies; (c) rich pedagogical content knowledge; (d) ability to plan and execute efficacious

lessons; and (e) a strong desire to take initiatives that seek to positively impact student learning

outcomes.  According to one principal the teachers have "returned from the training with the

attitude of wanting to implement, wanting to follow through with some of the ideas they picked

up and grasped at teachers' college". (Principal #02).   Another principal echoed the same level

of exhilaration exuded by the new teachers and their general attitude to wanting their students to

learn:

You find a higher level of professionalism in terms of they always eager. Anytime you come to them with advice in terms of how things can be better they are always willing to stay after school to plan and prepare. The other strength is the general attitude of wanting

214

kids to learn and they always tell you that is their concern. So, I'm assuming that the program has impacted them in a positive way in these areas. (Principal #01)

One curriculum officer affirms that teachers "are very effective at creating materials to support their lessons" (Curriculum Officer #01). According to one district education officer, "teachers have the ability to create learning experiences that make these aspects of subject matter meaningful and relevant for students". (District Education Officer #01)

Notwithstanding, one principal (#14) who initially gave an average rating of five out of 10 with 10 being the highest to indicate the readiness of the two newly appointed teachers at her school, clearly expressed her dissatisfaction with their performance. According to the school principal, the teachers who had no prior teaching experience seem less eager to seek assistance from their more experienced colleagues, exhibit poor classroom management skills and are slow at implementing strategies to foster meaningful learning. Consequently, the principal (#14) reported that the teachers' ineffectiveness has contributed to a drop in students' performance in school-based assessments. The principal indicated that the blame should not be cast on the Department of Teacher Education for the teachers' lack of interest and motivation. Instead, it has a lot to do with their personality.

There is consensus among principals, district education officers and curriculum officers that while there is still room for improvement, newly-trained teachers take initiatives in ways that are believed to positively influence their students' behavior and learning. For instance, teachers tend to take their students out on field trips to provide learning experiences and reinforce

concepts; engage students in project-based learning; procure their own materials to supplement school resources; integrate ICT in instruction albeit with varying degrees of

proficiencies; engage in action research; and invite resource persons from the school community to teach and speak to students on various curricula topics that are of national significance.

While the researcher's intention was not to obtain numerical evidence to ascertain the impact of teacher performance on students' academic achievement, it seems clear anecdotally, that instructional practices of the majority of program graduates are to some extent contributing to an improvement in students' general attitude towards school and overall learning.

## 4.4 Research Question 2
**What is the relationship between initial training received and teachers' level of satisfaction and effectiveness in the classroom?**

The first part of the research question explored a relationship between Initial Training (independent variable) and participants' perceived Level of Satisfaction (dependent variable).

In this study, Initial Training is used to refer to the process of education and skill development that teacher trainees undertake as part of their formal teacher education process. Twenty-five (25) Likert-scaled items were designed to ascertain respondents' perception regarding the quality of training received during their two-year professional experience. Descriptive statistics of the two interval variables shown in Table 4.3 reveal means and standard deviations for Initial Training (M=101.84; Std = 11.907 and Level of Satisfaction (M=104.98; Std =14.070).

*Table 4. 3*

Descriptive Statistics of Independent & Dependent Variable

| Variable | Mean | Std. Deviation | N |
|---|---|---|---|
| Initial Training | 101.84 | 11.907 | 98 |
| Teachers' Level of Satisfaction | 104.98 | 14.070 | 83 |

The descriptive statistical data shows that responses for the dependent variable (teachers' level of satisfaction) are on average 3.14 points greater than the independent variable (initial training) with scores or ratings slightly more dispersed (Std =14.070) than scores obtained for independent variable (Std.= 11.907).

To obtain valid and accurate results and ensure that the correct statistical test was used, the researcher had to satisfy the following five main assumptions of Pearson product-moment correlations coefficient.

1. All variables are interval that is, they are measured on a continuous scale.

2. A linear relationship exists between the independent and dependent variables.

3. The variables are normally distributed.

4. The scores are independent, that is, the scores of one variable does not influence the scores of the other.

5. There are no significant outliers as these can lead to misleading results.

In order to confirm the non-violation of most of the assumptions, scatter plots were generated. An examination of the scatter plots confirmed that assumptions two to five were met. Once all five main assumptions were met, the bivariate correlation was conducted. The scatter plot also helped to determine the direction of the strength of the linear relationship between the independent and dependent variables. Observation of the results of the Pearson

correlation test presented in Table 4.4 indicates the existence of a moderate positive relationship ($r=0.540$; $p<.001$) between the two continuous variables. This seems to suggest that as initial training increases, teachers' perceived level of satisfaction also increases.

Therefore, the null hypothesis: $Ho_1$ 'There is no relationship between initial training and teachers' perceived level of satisfaction', was rejected.

*Table 4. 4*

Bivariate Correlation Between Variables (Initial Training and Teachers' Level of Satisfaction)

| Variable | | Initial Training | Teachers' Level of Satisfaction |
|---|---|---|---|
| Initial Training | Pearson Correlation | 1 | .540** |
| | Sign (2-tailed) | | .000 |
| | N | 98 | 74 |
| Teachers' Level of Satisfaction | Pearson Correlation | .540** | 1 |
| | Sig. 2-(tailed) | .000 | |
| | N | 74 | 83 |

**Correlation is significant at the 0.01 level (2-tailed).

The second part of research question two sought to determine a relationship between the two-year initial teacher training and teachers' level of effectiveness in the classroom. Descriptive statistics of the two variables as shown in Table 4.5 reveal means and standard deviations for Initial Training ($M=101.84$; $Std = 11.907$ and Teachers' Level of Effectiveness ($M=78.87$; $Std =8.065$).

218

*Table 4. 5*

Descriptive Statistics of Independent & Dependent Variable

| Variable | Mean | Std. Deviation | *N* |
|---|---|---|---|
| Initial Training | 101.84 | 11.907 | 98 |
| Teachers' Level of Effectiveness | 78.87 | 8.065 | 100 |

Examination of the descriptive statistical data suggests that scores obtained for initial training (independent variable) are on average almost 23 points greater than ratings received for teachers' level of effectiveness (dependent variable). A higher standard deviation (Std.=11.907) computed for the independent variable suggests that scores are more spread out from the mean compared to a standard deviation of 8.065 obtained for the dependent variable. Having met all five assumptions of Pearson Correlations, the bivariate correlation was conducted. The results of the Pearson correlation test as presented in Table 4.6 indicate the existence of a moderate to high positive relationship (r=0.687; p<.001) between the two variables. This means that the two-year initial training positively impacted teachers' level of effectiveness in the classroom.

*Table 4. 6*

Bivariate Correlation Between Variables (Initial Training and Level of Effectiveness)

| Variable | | Training | Level of Effectiveness |
|---|---|---|---|
| Initial Training | Pearson Correlation | 1 | .687** |
| | Sign (2-tailed) | | .000 |
| | N | 98 | 88 |
| Level of Effectiveness | Pearson Correlation | .687** | 1 |
| | Sig. 2-(tailed) | .000 | |
| | N | 88 | 100 |

**Correlation is significant at the 0.01 level (2-tailed).

The more training teachers receive the higher they are to perceive their level of effectiveness in the classroom. Hence, the second null hypothesis: **Ho₂** 'There is no relationship between initial training and teachers' perceived level of effectiveness', was rejected.

**4.5 Research Question 3**
**What are the challenges associated with the initial training program?**

Data obtained from open-ended questionnaire items and semi-structured interviews with program graduates, principals, curriculum officers and district education officers shed light on a myriad of challenges and deficiencies related to the Associate Degree in Teacher Training Program. Capturing the program limitations from several sources is in keeping with the theoretical framework. This facilitated the corroboration and triangulation of the views expressed by program graduates thus enhancing the credibility of the data. It must be reported that seven or six percent (6%) of the respondents did not attempt any of the open-ended questions and just left Section C of the survey questionnaire blank. This means that a very high response rate (94%) was received for open-ended questions. The researcher adhered to the steps outlined in a thematic analysis procedure (Nowell et al., 2017) to analyze qualitative data. Respondents' qualitative responses are presented under various *a priori* codes (program components) and *posteriori* codes (themes) which emerged from inductive analysis.

Practical Teaching Component

Frequency counts of responses from open-ended questionnaire items were taken to highlight their prevalence. All program graduates recognize the importance of the practicum as part of their initial teacher training. However, they identified several challenges experienced with the practical teaching component of the program. Thematic analysis of the responses revealed the following themes as reported in Table 4.7.

Respondents are of the view that they did not receive adequate support and guidance

from their co-operating teachers regarding lesson planning and delivery, classroom management

particularly since they had no prior teaching experience.

Table 4. 7

*A Priori Code: Practical Teaching*

| Themes/Challenges | Frequency |
| --- | --- |
| Structure & Duration of Practicum | 85 |
| Limited Mentoring | 35 |
| Lack of Resources | 11 |
| Anxiety | 9 |
| Ineffective Classroom Management Skills | 4 |

*Structure and Duration of Practicum*

The structure and duration of the teaching practicum emerges as the most frequently cited

deficiency for program graduates.   Respondents' concerns regarding the structure of the

practicum as it relates to its timeliness during the two-year initial training were consistent.

According to one teacher:

  The practical teaching came in a bit too late. Not having that exposure  made it a bit more

    difficult especially with the grade that I had. We should have more practical experience in

    the classroom especially for persons  who had not taught much to have that kind of exposure.

    (Teacher # 029)

In concurrence, another teacher asserts, "with no prior experience of teaching at the primary level,

I felt like I was just shoved in a class". (Teacher #053)

Some teachers view the practicum as a staged performance. One teacher's verbatim comment asserts: "the practicum is more like lights camera action…a show; like they teach you something and that's the day of the performance, the director comes there and action". (Teacher # 030) In acquiescence, teachers highlight the need for more practical teaching opportunities in real classroom settings prior to the 10-week Practicum.

The majority of respondents express the view that due to the practicum's compact and exam-driven nature, the time allotted did not afford them adequate opportunities to hone their teaching skills particularly those with no prior teaching experience. As one respondent puts it:

I don't think 10 weeks was sufficient time allotted for teaching practice because some of us were never exposed to teaching in a classroom before attending college. Also, more time in the classroom would better prepare us for the many challenges faced in the classroom. (Teacher # 006)

Consistent with this view another teacher states, "the 10-week practical teaching is not sufficient time to help teachers better their teaching skills" (Teacher # 042). Another respondent concurs by stating, "I was not prepared for teaching practice because I had never set foot in front of a group of students before" (Teacher #102). To one teacher, meeting the needs of learners was secondary during an exam-driven practical teaching exercise: "Student teachers usually focus on getting a good grade rather than meeting the needs of learners. Further this tends to put an emotional strain on teachers rather than them enjoying the experience" (Teacher #110).

These views are validated by 12 principals and other school officials namely district education and curriculum officers. In the verbatim response of one principal, "the 10-week teaching practice can never be sufficient for somebody who had never taught before". (Principal # 13)

District education and curriculum officers echo the exact sentiment emphasizing the inadequacy of the practicum in helping teacher candidates develop strong pedagogical skills.

Contrasting views expressed by three teachers suggest that the 10-week period was adequate as it afforded them time to grow and bond with students. According to one teacher the 10 weeks afforded, "time to improve on my lesson plans and the way I delivered the content. I was also able to build relationships with the students. It served as a good stepping stone into the profession" (Teacher # 009). In the exact words of another teacher, "it was adequate for me since I taught before so when it came to class management I did not really struggle". (Teacher # 052). Interestingly, the views of these teachers are consistent with those expressed by the principals of the schools to which they are appointed as the demographic data showed that the classroom teachers or program graduates had teaching experience prior to accessing initial teacher training.

The lack of or limited opportunities to interact and work with children in real classroom settings, but not in contrived settings as is usually done during Micro Teaching, seemed to have been a major impediment during the practicum for teacher candidates. According to one respondent, "majority of the practical teaching done throughout were executed at DTEEA and this experience was not real and in no way prepared (me) for the behavioral, cultural and other factors that affect the teaching learning process daily" (Teacher # 087). Many respondents including those with teaching experience prior to their formal initial training expressed the view that the practical teaching was not sufficient. Consequently, they should have had more exposure to the classroom environment prior to teaching practice. To many participants, practical teaching fails to prepare them for the real challenges and situations they are likely to face in their own classroom settings upon appointment. As one teacher figuratively explains:

In most cases you got the chocolate version of the classroom because most times the teacher [cooperating teacher] would remove the disruptive students for you especially when you have an examiner but getting into the real classroom on your own you find that it is totally different. (Teacher # 013)

One teacher observes that "during practical teaching the number of students are usually lower than normal" (Teacher #034), thus contributing to the chocolate version of the classroom that Teacher #013 alluded to. Consistent with this reaction, another teacher explains, "I believe teaching practice is not a true reflection of what the real classroom is and some of the strategies which were effective during teaching practice may not be as effective in the real classroom" (Teacher #070). Despite the importance of the practicum in preparing teachers for the classroom, some program graduates felt ill-prepared to work with special populations. In one teacher's verbatim comment: "the teaching practice experience was valuable; however, it did not prepare me adequately for working with students with special needs". (Teacher #071)

Respondents indicate that the teaching practicum comes too late into the training and consequently, teacher candidates are shortchanged in terms of their level of preparedness for the actual practical teaching experience. Interview data obtained from the school principals, district education officers and curriculum officers echo the very same sentiments expressed by program graduates. This lack of exposure to authentic classroom settings where teachers in training can get to know and better understand students, their learning styles, behaviors and needs and get opportunities to try out new learning and strategies at different points during the training, seems to be a major drawback. Also, the inability of teachers in training to procure and access needed resource materials for instruction due in part to their lack of financial support and or

225

unavailability at assigned schools, in their view, adversely impacted their practical teaching performance.

*Limited Mentoring*

With respect to the clinical period which lasts for three weeks, respondents complained about its brevity and the quality of guidance and support received in lesson planning, lesson demonstrations or modeling as well as constructive feedback from both co-operating teachers and college supervisors.  Only one participant identified lesson demonstrations or modeling by the co-operating teacher as one of the ways she was supported during the clinical period or the first three weeks of the practicum.  When asked about the frequency, usefulness and meaningfulness of feedback received from both school-based and college-based teacher educators, participants expressed mixed sentiments and reactions.  Some participants found the feedback provided by their classroom-based teacher educators during practicum to be positive in contributing to their improvement over time and overall teaching performance.  According to one teacher: "my cooperating teacher was very frank. She would sit with me, she would point out what I did incorrectly, she would give me suggestive activities; how I can do it better and I picked from that and moved on" (Teacher # 013).   A similar reaction was echoed by another teacher: " my cooperating teacher would give feedback after every lesson, she provided positive feedback.  If she looked at my weaknesses she would highlight it and  possibly tell me how I could make the weaknesses  strengths". (Teacher  #015)

Yet another commented:

> I had a wonderful co-operating teacher and I believe this was a major contributor to me enjoying the practical teaching. She made positive comments and encouraged me to keep

226

up the good work. Whenever she would notice a weakness she would not just point it out to me but she would give advice on how to do it better. I felt more relaxed reflecting with the co-operating teacher than the supervisors. The advice did improve my practice. (Teacher #009)

For others however, the feedback was lacking, demotivating and meaningless.    One teacher painfully recounts her experience:

 I do not think it was very motivating or encouraging. To tell you the truth that was my worst experience ever. I felt like my co-operating teacher was more barging me and that I could not do anything well. She had a problem with everything and when my examiners came it was the opposite. (Teacher # 012)

Another teacher indicated that she found her co-operating teacher to be uncooperative:

I did not have a co-operating teacher. She did not co-operate with me. I don't know what was wrong with her. We did not gel very well and that created problems.  I had to go to Ms. Brown's (pseudonym) co-operating teacher and the teachers in the school to assist me. Ms. Brown's co-operating teacher was more help to me than mine was. (Teacher #054)

Another teacher commented on the limited and unconstructive feedback given by the co- operating teacher in facilitating her professional growth:

I had a co-operating teacher. I would show her my lesson plan and she just tell me it's ok and you would hardly get any remarks from her to say well I think you need to change this, or I think you need to get a chart for this or something. (Teacher #056)

Such an experience underscores  the need for good relationships to be developed between the teacher candidate and the co-operating teacher or classroom-based teacher educator in order for

227

desirable outcomes to be realized.   It is only when such professional relationships are established

that meaningful conversations are held to discuss the teacher's strengths and to highlight areas that

need to be improved as well as suggestions for planning and executing more effective lessons in

the future.   On the other hand, if co-operating teachers are not fully aware of or understand their

role during the practical teaching exercise, it is very likely that they will  not perform their

mentoring role effectively. According to one teacher, "co-operating teachers were not effectively

informed of their role and the length of support that they were to give to student teachers" (Teacher

#036),  which may have contributed to their failure or reluctance to model the instructional process.

Infrequent visits by and lack of feedback from college-based teacher educators seemed to

have been another major problem some teachers faced during the 10-week practicum particularly

during the clinical period.   According to one teacher:

I didn't get many visits at all. The only person from the college who actually came to see

me was Ms. John (pseudonym). Otherwise, I did not see any of my lecturers. So, the feedback I

got was from people I did not know, although it was helpful, but I would have preferred somebody

familiar, the person who actually taught me. (Teacher #016) Another teacher asserts that she

"barely had a clinical period" (Teacher #054), suggesting that she did not benefit from the clinical

experience.   One teacher expressed the view that while she received feedback from her college

supervisors, it was usually conflicting:

> You got an assessor who would say maybe you need to challenge your students and for
>
> that same subject you would have another assessor who might say you should not
>
> challenge your students, so one is underestimating them, another one you need to
>
> challenge them more – so it was just contradicting. (Teacher #012)

228

Teachers' views and experiences regarding the quality of instructional support and feedback received from their classroom-based teacher educators or co-operating teachers emphasize the need for urgent intervention regarding mentorship. Furthermore, the expectation that school principals seem to have for teachers in training to execute good lessons irrespective of the circumstances or instructional milieu within which they operate, must also be examined. One teacher recounts, "student teachers are put into classrooms where they are made to feel unwelcomed, but still need to put in tremendous effort to execute fantastic lessons, which the class teacher does not even do herself/himself". (Teacher #047)

*Lack of Resources*

There seems to be a genuine concern expressed by some teachers regarding the burden placed on them to meet the financial demands of their initial training particularly in preparation for and during field-based practical teaching assignments. Many teachers find it challenging to procure the necessary resources and instructional materials to support their practical teaching. While some may have the means to do so, others lack the financial viability and in such cases look to the teacher education institution or the school of placement to provide some support. According to one teacher, "lack of materials provided to teachers during practical teaching has created a strain on teachers who are not financially capable" (Teacher #046). In agreement, another teacher asserts, "the expense that the teacher in training suffer to be equipped with the necessary materials and resources can be very much overwhelming". (Teacher #002)

The unavailability of technological equipment at the time they are required for lessons made it difficult for teacher candidates to integrate technology into instruction as expected. As one teacher recounts: "during practical teaching it is hard to have a lesson incorporating the use

229

of technology such as videos because of the unavailability of equipment for example the projector or television". (Teacher #052)

Based on the comments it is evident that some teachers require financial support during the practicum so that they can obtain needed resources and materials for the practicum.

*Anxiety*

Although this theme was not among the most prevalent, it can be inferred from the open-ended items and interview responses that many teachers experienced some form of anxiety during the practical teaching period.  According to some  teachers poor communication between teacher candidates and co-operating teachers was demotivating and contributed to student teachers being overwhelmed during the practicum period. Some teachers felt that the final assessment created much tension and anxiety. In one teacher's verbatim response to an open- ended item, "lessons were not as effectively delivered when the examiner came to view them.

There was absolutely no calm or relaxed frame of mind, which led to a less than optimal performance" (Teacher#074).  In another teacher's direct words, "on teaching practice we are already nervous, with us not knowing when the examiners are coming makes it worse. We needed to feel comfortable in order to perform effectively and efficiently" (Teacher #099).

 The overemphasis placed on "perfection  and not progress" (Teacher #018)  is partly responsible for the level of apprehension experienced by some respondents during the practical teaching period.  Moreover, teachers' anxiety negatively impacted their teaching performance as one teacher recounts, "at times students develop unexpected anxiety that hinder their performance. As a result, students may receive unsatisfactory grades that do not necessarily reflect their true potential" (Teacher #084).  Additionally, thorough planning requires time and if teachers do not

230

have sufficient time to plan lessons and design the instructional materials needed to accompany lessons, then that can cause a certain measure of stress. In one teacher's verbatim response the practical teaching "was stressful with students not being given enough time to prepare". (Teacher #091). Yet for some, the lack of preparation to deal with difficult students seems to be a stress factor.

*Ineffective Classroom Management Skills*

Despite teachers' satisfaction with the opportunities provided during training to discuss classroom management strategies, it appears that not enough was done to prepare teacher candidates for what they were going to face in the classroom. Teachers identified their limited ability to effectively manage students' behavior as an impediment to their practical teaching experience. According to one teacher, "since teachers are not adequately prepared to deal with the challenged students, this can be a problem during the practical teaching" (Teacher #003). Obviously, it is important that teachers have good control of their classrooms and manage student behavior to ensure effective teaching and meaningful learning. In pointing out one program deficiency one teacher contends that: "the training program did not address management of some behaviors adequately and there are some grave and challenging behaviors that students exhibit in our schools today. I believe teachers need also to be equipped for these". (Teacher # 001)

In sum, it is sufficient to conclude that the practicum, albeit perceived as valuable, does not seem to adequately prepare program graduates for classroom practice and to deal with the myriad of challenges they face in real classroom situations.

231

Program Delivery

A critical element of teacher education as an open educational system is its process. The various teaching methodologies employed by course instructors in the delivery of courses; the kinds of learning experiences and support provided; and opportunities afforded to teacher candidates to practise what they are learning, all work together to influence teacher quality and classroom effectiveness (output) of future teachers. Two main themes emerged from the analysis of qualitative data as depicted in Table 4.8 below.

*Table 4. 8*

A Priori Code: Program Delivery

| Themes/Challenges | Frequency |
| --- | --- |
| Diversity in Teaching Methods | 63 |
| Course Support | 9 |

*Diversity in Teaching Methods*

Lack of diversity in teaching methods emerged as the most prevalent challenge associated with the teacher training program. Due to the theoretical nature of the courses, the respondents express the sentiment that course instructors tend to devote a larger portion of instructional time to covering content leaving little opportunities for concept development or linking theory with practice. One respondent captures this succinctly by stating: "delivery of courses focuses more on content and theory instead of guiding teachers on how to actually teach in the classroom" (Teacher #038). Due to the course density and limited time, respondents complain about the tendency of some course instructors to rush instruction particularly towards the end of the semester which inadvertently compromises quality teaching and learning. According to one teacher, "the heavy nature of the courses did not allow students to fully grasp concepts nor

interact with content in a meaningful way during class time" (Teacher #026). Another respondent asserts: "the courses were too compact and there was too much to be done in a short period of time which in turn caused the courses to be stressful and at times not enjoyable" (Teacher #006).

Teacher candidates  have the expectation that all course instructors will employ diverse instructional provisions and model the best practices and student-centered strategies that they should implement during practical teaching. However, this expectation, they claim, is yet to be met by most college-based teacher educators or course instructors. According to one respondent, "some of the lecturers do not practice what they teach in terms of the various strategies and approaches that they want us to utilize in the classroom" (Teacher #011). Another respondent recounts:  "they did exactly what they warned us not to do"(Teacher #102). Yet another teacher recalls, "the courses were not delivered in a manner which reflected what was expected on teaching practice and the career path chosen" (Teacher #054).  According to the program graduates, courses were delivered mostly through teacher centered strategies such as lectures, reading from handouts, excessive use of PowerPoints without much consideration to teacher candidates' learning styles, prior knowledge and teaching experiences.  The failure of some course instructors to vary their teaching strategies and incorporate hands-on materials and appropriate resources to facilitate meaningful learning seems to be one of the biggest deficiencies of the program as it relates to program delivery. One respondent reflects, "certain courses required more student-teacher interaction to better understand concepts instead of simply reading a PowerPoint presentation or reading from a handout" (Teacher #060). This sentiment is supported by other respondents who expressed the view that some lecturers delivered courses with the assumption that all teacher candidates had some teaching experience and background, and as such, did not do enough to cater to the needs of those who had never taught before.

233

In alignment with the teachers' sentiments, principals, district education and curriculum officers urge college-based teacher educators to rethink their practice by moving away from the 'do as I say' methodology and provide more explicit instruction on how to teach. One school principal sums it by asserting, "I would love to see more modelling at the Division of Teacher Education, this is how you do it" (Principal #01). This should then be followed by the provision of opportunities for collaborative and independent practice. In that way, immediate corrective feedback and support can be given to teacher candidates who grapple with lesson planning and delivery and various dimensions of the instructional process. From the qualitative data, it seems evident that course instructors need to change their methodologies and adopt more studentcentered and diverse approaches during course delivery to ensure quality preparation for teaching.

*Course Support*

The support or lack thereof provided throughout the delivery of program courses did not seem like a major issue for most of the teachers. However, a few teachers express the view that they did not receive adequate support due to the course instructors' absence, tardiness or inefficiency. According to one teacher, the program "was well done by most, though factors such as absenteeism of lecturers due to illness did impact on the progressive advancement of students, lecturers did help via email" (Teacher #087 ). In some cases, course instructors compensated for their absence by forwarding via electronic mail course material they would have covered in class. Another teacher concurred by saying that, "at times no teacher[lecturer] was available to deliver lessons" (Teacher #031). In terms of punctuality, one teacher remarked, "a few lecturers were not on time for classes, and some deviated from what should actually be done too many times" (Teacher #008 ). A few teachers made a call for more support and resources to facilitate

234

their learning during training. One teacher felt that she received, "little support from some lecturers as some are unable to motivate students"(#072). Another admits that some lecturers were "disorganized" (Teacher #075). Inadequate "contact hours" (Teacher #051) is seen as a challenge in the delivery of courses, albeit not a significant one.

Program Content

Program content and curriculum as well as its relevance, instructional support, resource materials and personal attributes of teacher candidates form essential parts of 'input' that help shape teachers' theoretical and practical knowledge which in turn can determine their satisfaction level with the training received. Table 4.9 presents two primary themes related to program component.

*Table 4. 9*

A Priori Code: Program Content

| Themes/Challenges | Frequency |
|---|---|
| Course Density/Theoretical | 42 |
| Lack Relevance | 29 |

*Course Density*

In relation to the Program Content, respondents are of the view that the program is too compact and theoretical. Program graduates perceive the program to contain too many courses to be covered in three semesters which in some cases caused information overload. One respondent reflects, "the content of some courses was too heavy. There was too much information to cover and not enough time. The courses did not cater for student teachers who had never taught before"(Teacher #063). Consistent with this sentiment some respondents indicated

that due to the density of the course they usually browsed through reading material without deriving the gist or full understanding of what was read.  Overall, respondents express the view that the program seemed a bit rushed. One respondent captures this succinctly by stating, "a three-year program condensed into two years made the course seem a bit too rushed" (Teacher #038). Another respondent comments on the disconnect between theory and practice in some courses. According to the respondent, "there are some courses that have too much content which does not seem to link to the practical or theoretical aspects of teaching" (Teacher #014).

*Lacking Relevance*

The program is perceived to lack both classroom and cultural relevance.  Respondents express the view that some courses do not reflect the goals of the primary school curriculum neither do they respond to the socio-economic, cultural and learning needs of today's students. Consequently, they concur that the program content does not prepare them adequately for classroom practice.  One respondent emphatically states that the program content "was good in theory but it did not adequately cater to the ideal Caribbean classroom". (Teacher #037) Furthermore, respondents are of the view that the program content does not adequately prepare teachers for dealing with children with personal and behavioral issues and those with special needs as one respondent sums it: "the primary education program does little in preparing teachers in teaching special needs students. in agreement, one teacher states: "the time allotted for the special needs course was too little to cover the content" (Teacher 082).  Yet others felt ill- equipped to deal with the multiplicity of issues they are likely to encounter in the classroom, "the content lacked real life examples of how to deal with various issues that can and often will occur in the classroom". (Teacher #016)

*Table 4. 10*

A Priori Code: Assessment

| Themes/Challenges | Frequency |
|---|---|
| Lack of Authentic/Performance-based Assessment | 28 |
| Overwhelming Coursework Assignments | 22 |

*Lack of Performance-Based Assessment*

Assessment is perceived by program graduates to be too traditional with a greater focus on measuring trainees' content knowledge mostly through pen and paper tests. The lack of authentic performance-based tasks to measure and monitor teacher candidates' progress and growth over time, appears to be a major program shortcoming. According to the respondents, end of semester examinations failed to sufficiently measure their learning and application of course material. One program graduate comments on the inadequacy of the semester examination in providing evidence of their development as teacher trainees, but rather encourages rote learning geared towards obtaining a passing grade, "it is not a true reflection of what I think or feel. Assessment is like regurgitation, and it's done just for a pass". (Teacher #083). Another teacher concurs, "I was focused more on passing the course than becoming a good, trained teacher".(Teacher #049). Program graduates contend that end of semester examination results come in too late and fail to provide sufficient details regarding specific areas of strengths regarding their performance. Respondents express the view that they were exposed to various forms of assessment. Nonetheless, they contend that many lecturers did not make effective and sufficient use of them in either assessing student teachers' learning and development or modeling how these varied assessment procedures can be used with their future students.

*Overwhelming Coursework Assignments*

Some coursework assignments are perceived to be too many, challenging and weighty. The completion of several assignments that are due at about the same time seems overwhelming. Assessment done through group work, according to the respondents, is not quite beneficial to the student teacher. In fact, as one respondent opines, "assessment and group work seem to be used as a strategy to help lecturers complete content, however students do not benefit".(Teacher #003). Another respondent admits that they were encouraged to work with persons who are "unwilling to participate or work. This can be strenuous as only a few individuals put in the effort yet everyone gets the same grade". (Teacher #008). The over emphasis on group work as part of the assessment practices of course instructors is perceived to be unfair and not a true reflection of individual achievement. Rather it simply allows "the more dedicated to carry the weight of those who are not" (Teacher #074) and everyone to obtain the same grade 'in spite of other members not playing their part". (Teacher #029)

Another concern expressed by participants relates to the meaningfulness of their course assessment and whether the results offer a true picture of the skills and competencies required to teach. One teacher expressed the view that, "getting a 4.0 GPA because you did exceedingly well in final exams does not make you an excellent teacher". (Teacher #102).

238

## 4.6 Research Question 4
What measures can be taken to address the challenges associated with the initial teacher training program?

This research question intended to gather specific data from stakeholders which can be used to be address program challenges to ensure its effective functioning. This is in consistent with one of the main propositions of both stakeholder and systems theory. Program graduates, school principals, district education and curriculum officers provided responses to this question.

*Revamp Program Content and Structure*

Respondents call for a restructuring and extension of the training program to allow for sufficient time to grasp content, develop pedagogical competence and promote effective teacher training. The views articulated by the majority of  respondents speak to the need to improve the quality of teacher training through a greater emphasis on the practical application of theoretical knowledge.  Respondents opine that more time and opportunities should be given to engage in real teaching in real classroom settings.  In retrospect, one teacher asserts, "if I had more opportunities to go in front of a class to teach, it would have been easier for me" (Teacher #030). This reflection is consistent with the view expressed by another respondent who explains that: "since teaching is practical, student teachers need to be at schools more often to use their skills learnt rather than just at the end for 10 weeks". (Teacher#067)

In terms of Content, respondents suggest that course content be updated to reflect the goals of the primary school curriculum as well as the needs of 21$^{st}$ century learners. Other aspects of training that respondents think the program should address to enhance teacher readiness and effectiveness for teaching at the primary level entail courses in conflict

239

management, inclusive education, parental involvement, emotional intelligence, and a greater focus on classroom management.  According to one program graduate, "there should be greater

focus on preparing student teachers to deal with real experiences particularly that of behavioral problems in the classroom and ways to deal with them" (Teacher #092). The need for teachers to be trained to handle the realities of the profession that can either directly or indirectly influence the teaching learning process is underscored in the following recommendation:

> The realities of teaching should be addressed more. It is difficult dealing with conditions of work, difficult parents and students, having to provide students with services that you are not trained in. Emphasis is placed on the teaching aspect, but ways of coping with other issues in education should be made a priority.(Teacher # 025)

To prepare teacher candidates more effectively to work with diverse student population, some respondents suggest that special education be given greater priority and be offered as a separate course: "The special education component of the program should actually be one on its own to facilitate proper training of teachers in the special education schools". (Teacher #001) Consistent with this sentiment another teacher explicates: "Due to the number of students with special needs being enrolled in the general classroom, I think more time should be allocated for this course" (Teacher #082). Yet another respondent explains that:

> More time should be spent in learning a plethora of behavior modification strategies to help teachers adequately deal with various behaviors that occur during learning and teaching. In addition, teaching student teachers ways to effectively diagnose various learning disabilities and strategies that can be used to assist these students would be an asset in helping teachers to better cater to the complex needs of their students especially those struggling and the gifted (Teacher #110).

240

Respondents also note the need to conduct a series of seminars on essential dimensions of the instructional process such as how to create interactive charts, and how to write legibly on the

chalkboard in preparation for practicum. The need to incorporate the school curriculum during initial training is also highlighted as one measure that can be taken to address teacher candidates' lack of curricular knowledge and familiarization. According to one respondent: "the primary school curriculum should be utilized a lot more to familiarize student teachers with it".(Teacher #011).

Consistent with the views of the program graduates, principals, district education and curriculum officers express the view that the semesterized program for initial training needs to be revisited as it is not only inadequate, but it fails to provide opportunities for depth of learning. According to one principal, "it's almost like before you set foot in the college you're out because I don't think the teachers get the kind of depth that you require them to have".(Principal # 13)

*Screening and Training of Teacher Educators*

The role that co-operating teachers or school-based teacher educators play in the practical teaching exercise is critical to the professional development of the teacher candidate. To ensure effectiveness, respondents are of the view that classroom teachers identified as mentors or co-operating teachers should demonstrate a willingness to serve as mentors and understand what their role entails and demands throughout the practical teaching period. Additionally, some respondents are of the view that co-operating teachers and supervisors should be carefully "screened" (Teacher #073), "fully assessed", (Teacher #037) and "adequately trained" (Teacher #075) to ensure that they are pedagogically competent and possess the disposition to fulfil their roles and contribute to the teacher candidates' effective performance. In that way, co-operating teachers and non-college supervisors would be better equipped to provide more quality support

241

to teachers in training during practical teaching.  Moreover, some respondents call for more active engagement of principals of schools to which they are assigned in their development as one respondent states: "school principals should be more involved in the planning stages to be more receptive and supportive of student teachers", (Teacher #098).

The need for teacher educators particularly college-based to remain current and well-grounded in their field through their engagement in continuous professional development was also echoed by school principals and other school officials. According to one school principal:

> Quality education requires quality teachers, quality resources quality teaching and so they must provide opportunities for the teacher educators to go and better their craft. You can't be at teachers college having completed your masters 15 to 20 years ago and you have not done a refresher yourself. (Principal #13)

*Adopt a Student-Centred Approach to Program Delivery*

Program graduates (N=48) express the view that the training program should be more student-centered and that course instructors should not only vary their teaching styles to cater to diverse student population but more importantly, model the teaching strategies that teacher candidates are expected to implement during practical teaching. A starting point according to one respondent is for "lecturers to try their best to know the learning styles of their students and incorporate them into their teaching" (Teacher #100). Furthermore,  "the courses should be delivered by modeling the various strategies which teachers are expected to use in a primary classroom instead of lectures"(Teacher #050).  Another respondent concurs by stating that, "the course lecturers should model the approaches and strategies that they expect the teachers who are in training to implement during practical sessions/teaching practice". (Teacher #015).  In

242

particular, respondents call for more demonstration lessons in differentiated instruction including techniques for catering to students with learning disabilities. Moreover, respondents express the need for more opportunities during course delivery to plan and teach lessons related to various concepts and apply effective classroom management skills when working with real children. Although real classroom environments are preferred,  a few respondents, in retrospect expressed the view that  teachers who lacked confidence could have benefited from individual microteaching sessions.  As one teacher puts it, "microteaching should be done a little more often which will help build the confidence of a teacher who has not had any experience teaching". (Teacher #041)

Lesson planning and implementation as well as effective classroom management are two areas that both respondents and other school officials (principals, district education and curriculum officers) identified that program graduates require more training and mentorship.   It is also suggested that in an effort to develop familiarity with the primary school curriculum, course instructors should utilize curricula guides of the four content areas (Language Arts, Math, Social Studies, Science) during course delivery.   According to one teacher, the first time she saw a curriculum guide was just prior to the practical teaching assignment. In  her verbatim response, she thinks that, "there should be effective use of the curriculum guides used at the primary level. Lecturers should ensure that every teacher candidate understands proper lesson planning and the correct format for each subject". (Teacher #102). In support another teacher asserts, "the primary school curriculum should be utilized a lot more to familiarize the student teachers with it". (Teacher #011)

243

*More Effective Practical Teaching Model*

To address the challenges faced with poor pedagogical skills, forty-five (45) respondents propose a restructuring of the practicum component and an effective model that allows teacher candidates sufficient time to refine their teaching skills more effectively throughout the training. The majority of respondents purport that the 10 weeks allocated to practical teaching is inadequate and suggest this component should be interspersed or done in phases. One respondent suggests, "The practical teaching aspect of the program should be done continuously throughout the two years and not only in the final year. This would help teachers in becoming comfortable and better prepared to be assessed" (Teacher #038). Another respondent concurs:

> The practical teaching can be done in phases where student teachers can be given the opportunity to teach at different learning institutions so that they can be exposed to a myriad of learning environments which in turn, will better prepare the student teacher for whatever classroom environment they are placed in. (Teacher #006)

Other respondents think that an entire year be devoted to practicum instead of one semester particularly for those with no prior teaching experience as one teacher states, "I think teachers training program should be longer to cater for persons coming in with no experience and the final year should serve as practice as a teacher assistant at a school of your choice". (Teacher #049) Furthermore, the respondents suggest a practical teaching model that allows for multiple opportunities to interact and work with children in different classroom settings prior to the final practical teaching exercise. Such opportunities, according to the respondents, would make it possible for teacher candidates to get to know children better in terms of their learning styles and needs, implement teaching approaches and behavior modification strategies and to assess the effectiveness of these instructional provisions. Furthermore, more time spent in the classroom

244

means more visits from college assessors which also implies more feedback and opportunities for growth. According to one teacher, "students should be given more authentic teaching opportunities throughout their study period, so that the practical teaching period will not be too much of a shock or too difficult" (Teacher #047). Respondents generally believe that the clinical period should be longer than three weeks to allow their mentors or classroom-based teacher educators sufficient time to model good teaching, which means more time to observe, teach and engage in critical reflection of lessons taught. It also means that teacher candidates would have more time to demonstrate progress in lesson planning and delivery thus making the practical experience less stressful and more rewarding. One teacher sums it by stating that, "more time should be spent applying concepts and skill and reflecting on the process" (Teacher #069). In terms of grading, respondents express the view that the grading period should be extended, as 'the true reflection of the teacher's ability would be highlighted without the pressure of obtaining a passing grade". (Teacher #048)

Similar sentiments were expressed by principals regarding the practical teaching component. One principal states, "for me, what I would like to see more is the practice teaching where they [teacher candidates] actually go into the classroom setting and really get that experience" (Principal # 14). In offering a plausible approach for the practical teaching component, another principal states:

> I have advocated that when these people [teacher candidates] come out at the end of the two years they should be attached to a school, attached to a senior teacher, you give them a stipend…. And then the formal part of the examination comes at the end of that. (Principal # 13)

245

The principal went on to iterate that the responsibility for assigning the teacher candidate with a mentor or a classroom teacher who can model good teaching lies with the school principal. However, the principal emphasized that throughout the year the teacher candidate should be subjected to multiple unannounced visits and lesson observations by other teachers at the school, the principal, college supervisors and other professionals. Evidently, this would necessitate greater collaboration and synergy between the teacher training institution and other stakeholders such as the schools of placement and other professionals who participate in the practical field-based exercise. One respondent suggests that:

> Schools need to be adequately consulted, co-operating teachers met with and the importance of their assistance made clear. The college needs to find out what actually takes place in the classroom in order to create instruction which would benefit student teachers when they return to the classroom. (Teacher #047)

There is consensus among program graduates, school principals, district education and curriculum officers that the practical teaching model must also allow sufficient time for teachers to engage in continuous critical reflection of their practice. Moreover, teachers who have prior teaching experience at special education centers should be allowed the opportunity to complete their practicum at a special education school.

*Call for Sound Assessment Strategies*

Respondents make a clarion call for more meaningful formative assessment that are more practical in nature. They indicate that assessment should mirror instruction and provide opportunities for teacher candidates to deepen their learning and explore the practicality of the theoretical knowledge gained in real classroom situations. The need for variety in monitoring and

246

assessing the learning and growth of teacher candidates is the suggestion made by the majority of respondents.   For group assignments, it is suggested that group members be held accountable for their individual contribution towards the completion of a group task.   In that way, grading would be fair as it would reflect the quality of work put in by each group member. Furthermore, respondents suggest that assignments should be better coordinated and integrated to avoid duplication, repetitiveness and frustration.  They are of the view that  fewer assignments would allow them to better manage the demands of their training, personal and family life.

*Call for Teaching Learning Resources and Financial Support*

In an effort to enhance teacher preparation and make the professional experience more rewarding, respondents express the need for better learning resources such as internet technologies, photocopying machines, printers, whiteboards, and projectors.   Support services particularly for teacher candidates who are new to the teaching profession are requested. This is illustrated in the suggestion made by one respondent: "cater to the needs of student teachers with no prior teaching experience by providing support services since the programme seems more beneficial to those persons coming from a classroom setting" (Teacher #100).   According to some respondents, the learning environment should be made more conducive. This will help teacher candidates  better cope with the demands  of their training as well as enhance their emotional stability.  Furthermore, the provision of "a small allowance during practical teaching" (Teacher #046) and teaching resources according to respondents will help to alleviate the financial burden faced by some teacher candidates.   In one teacher's verbatim response, financial support "would help with purchasing awards or tokens for students and printing of lessons plans and unit plans".
(Teacher #009)

247

**4.7 Research Question 5**

    (a) What forms of support are provided to  newly-trained teachers to enhance their level of effectiveness in the classroom?

    (b) What possible factors negatively impact teachers' classroom practice following initial training?

The researcher was primarily concerned with the dimensions of administration and the school that are critical in contributing to the success of the professional learning experience of teachers post training.  In other words, how are newly trained teachers or program graduates supported during their early years in the application of their professional learning? Data gleaned from semi- structured interviews held with a sub sample of program graduates (N=16) was triangulated with qualitative data obtained from 14 principals, six district education officers and two curriculum officers to address this research question. Thematic analysis of the data revealed several salient themes  related to various forms of support provided to teachers as well as the factors that negatively impact the teachers' instructional practice.


*Provision of Resources for Active Learning*

From the interview teachers identified both electronic and non-electronic resources that are made available at their respective schools to facilitate the implementation of the pedagogical content knowledge learned during their professional experience. Science kits, Language Arts games, computer labs, computers, books, television, projector, and other ancillary resource materials needed for lesson planning and execution are identified by participants and validated by school principals.  According to one teacher,  "whatever we need for science we have it. Every topic I have taught for Science if I needed any apparatus and material or carry out a lab

activity, I have no difficulty getting them right here"(Teacher#008). One teacher from a different school and district indicates that in "as much as we do not have a lab in our school, we have computers, projector, television" (Teacher #052). The teacher indicates that she makes learning more interesting, appealing and meaningful to students by frequently projecting YouTube videos on various concepts and invites students to watch, discuss and create different representations of their understandings based on what was portrayed. At another school, although the computer lab is usually overbooked, the teacher explains how she often improvises, "I don't like going to the lab. I bring my computer to the classroom; we look at videos especially for abstract concepts to facilitate their understanding and then do games and activities". (Teacher #014)

School principals and district education officers express the view that while some teachers do procure additional resources to enhance their teaching, much more can be done particularly given the fact that they receive a Teacher Materials Allowance (TMA) by the Ministry of Education at the beginning of each academic year.

*Teacher Professional Development*

Conducting workshops for newly-trained teachers seems to be commonplace in many schools and across education districts. Teachers identified workshops that they have participated in following their initial teacher training despite the fact that they have had no follow up sessions. One teacher explains the fun and interesting activities learned at one workshop she attended at the beginning of her teaching career:

> the workshop with the Saint Lucia Teachers Union. It was about phonics, hands on
>
> activities, the things you can do in the classroom, inclusion of songs to teach difficult

topics. We did an aspect on Mathematics, the most common reasons why students fail mathematics, using songs, poems, games in content areas. (Teacher#013)

Another teacher shares her experience of little engagement during a Math workshop:

I think I have been to one Math workshop but there was no follow up. We were just given the curriculum. They said based on the breakdown of the curriculum everything is right there so with the activities and so on, we just follow that. (Teacher #012)

Another teacher confirmed her attendance at a reading and writing workshop but indicated that to her recollection there has been no follow up despite the expressed intention of the facilitators. Sharing of knowledge acquired at workshops or grade level meetings is encouraged as part of teachers' ongoing professional development. According to one teacher:

When I was the science coordinator, I went to a science meeting and when we had our professional development session whatever I learnt there or any teacher who attended any workshop during the term would have to come and report and give the strategies they learnt so that everybody else can use it or adapt it. (Teacher #030)

It seems clear that most teachers interviewed engage in specialized teaching of the core subjects (Language Arts, Mathematics, Science, Social Studies) and participate in professional learning communities [PLCs] in their respective education district. At these professional learning community sessions which happen once weekly, teachers who teach similar grades come together to plan for instruction, discuss strategies for addressing problematic areas for students, share ideas and success stories. According to one teacher during PLCs, "we highlight the problem areas – the topics that give students problems across the board and try to see how we can tackle these" (Teacher #014).                    Another teacher who recognizes that one size does not

250

always fit all states that the "PLC is used to share ideas. One method may work for one teacher, and it may not work for another". (Teacher #013)

Fifteen (15) out of the sixteen (16) teachers interviewed concurred that their school principals and more experienced teachers tend to provide instructional support in the areas of lesson planning and implementation. Occasionally, principals observe teachers' lessons and provide constructive feedback and encouragement. One school principal used the metaphor of "throwing the cow over the cliff" (Principal #03) to encourage teachers to abandon teaching methods that are obsolete and no longer effective and to think of new ideas and more innovative ways to motivate and teach today's diverse groups of children.

Factors that Negatively Impact Teachers' Practice

Analysis of the qualitative data revealed the following theory-driven themes that speak to the various dimensions of primary schools and the education system on a whole that sometimes thwart the implementation of teachers' new learning gleaned from their professional learning experience or initial training and which negatively impact their classroom practice.

*Conflict in Practice*

Although this is not an impediment that runs across schools and education districts, in a few cases teachers noted conflict between the approaches to which they were exposed at the initial teacher training institution and those being practised at schools particularly with respect to certain subjects. One teacher recounts her experience teaching Language Arts at two different schools:

251

For me in one school what I learnt, it was somewhat conflicting because the way I was

taught to implement certain strategies for Language Arts when I got to that school it was

somewhat different and that is for one particular school. For the other school it was the

same. (Teacher #012)

It was the opposite for the teaching of Science as noted by one teacher: "I have only been teaching

Science here and exactly what I was taught at College, the way we do Science is exactly what

happens, a lot of hands on". (Teacher #00)

One curriculum officer confirms a lack of synergy between the active-based learning

approach to teaching Social Studies being advocated by the Ministry of Education and the

teacher-centered content focused approach currently practised by some program graduates.

*Students' Misbehavior*

Teachers remark that students' undesirable behaviors make it very difficult to implement

some of the strategies learnt during initial training in the classroom setting. According to

respondents students' behavioral issues make it difficult to implement their lessons as planned

since most of their instructional time is spent on correcting students' misbehavior. A few school

principals confirm student misbehavior as a major setback and hindrance to student learning,

implying that the home and community to a large extent contribute to the problem.

According to one school principal:

the homes and the parents don't make it much easier for you in that anytime

you call them in to really talk to them about issues or behavior that impacts

negatively on the learning of their children they tend to be personal as if you

stepping on their toes. (Principal #01)

It is not surprising that  both program graduates and school principals recognize the need for teachers to receive additional training in dealing with disruptive student behaviors and more effective classroom management strategies.

*Lack of Instructional Support from Principal*

At one school, it appears based on the data, that the teacher receives very little instructional support from the principal to promote lesson effectiveness during her early years in the teaching profession. In the teacher's own words, "I did not get any instructional support from my principal. However, a few teachers from my grade offer a few suggestions I could use to enhance my lessons" (Teacher #022).  When asked whether initiatives implemented in the classroom are supported by the principal, the same teacher affirmed,  "I am not sure as my principal has never come to my class to observe any of my teaching" (Teacher #022).  Given the significant role that school principals play in helping new staff members transition smoothly post initial teacher training, it is quite unfortunate that this teacher seemed to have been missing out.

*Examination Pressures*

The exam-driven nature of the education system compounded by the need for schools to reach the national mean appears to be one reason why some teachers particularly those assigned to Grades two, four and six find it difficult to implement more student-centered strategies gleaned from their professional experience in a way that makes the teaching learning experience more engaging and meaningful to students. One teacher comments:

> It's the way the education system is structured. So, when we come back, we have so many
>
> pressures, exams, all different things, who meet the mean, they don't have time for

253

all of this – hit the books, let's try to get the mean so we can get the good name.(Teacher #030)

With reference to assessment, another teacher in support asserts:

The different forms of assessment we learnt at teachers' college we cannot use it because at the end of the day, you have to get the students where they need to be for that one particular exam to reach the mean. (Teacher #052)

**4.7 Evaluation of Findings**

The findings of this mixed method study have been presented in the previous section of the chapter. Now, the researcher returns to the literature and theoretical framework to compare and contrast and see where the findings of this study fit into existing literature and are situated in the theoretical principles and constructs used to frame the study. The purpose of this section, therefore, is to evaluate the main findings.   The study's results are briefly evaluated and interpreted from a stakeholder, social cognitive and systems theoretical standpoint according to the five research questions and key program components explored in this study.

Teachers' Perceived Level of Satisfaction with Initial Training  and Effectiveness in the Classroom

A primary objective of this research was to determine whether the two-year initial teacher training program is living up to its billing. To achieve this objective, it was necessary to find out from the participants themselves their thoughts and reactions to the professional experience, and the extent to which they are satisfied with the training received.  The high level of satisfaction (M=104.98 or 84%; Std = 14.070) with the two-year initial teacher training evinced by the quantitative data suggests that overall, respondents are pleased with or regard the training received as positive (Jareno et al., 2021; Leong et al., 2021).  This means that the teachers strongly believe that the goal of the initial training program which was to equip them as future teachers with the relevant competencies, a sound grasp of subject content to teach at the primary school level, appropriate teaching approaches and strategies and a fairly good understanding of what their role as teachers entails (JBTE, 2013) has, to a large extent been met.  Respondents reported being most satisfied with the theoretical component of the program and opportunities

provided for (1) peer-collaboration (M=4.57); (2) integration of technology into teaching (M=4.21); (3) creating instructional materials (M=4.16); (4) and fostering their critical thinking considering their new learning (=4.32). A key aspect of the 'process' of teacher education which speaks to the classroom environments that course instructors create and maintain to foster meaningful collaboration, interaction and learning, gives credence to the theoretical principles of systems thinking and a social cognitive theory (Gonzalez-DeHass & Willems, 2012). The findings of this study are compatible with the quantitative results obtained by Ranjbari et al. (2020) and Sahoo and Sharma (2018) regarding the theoretical dimension of the teacher training program. Also, in regard to the peer-collaboration encouraged during training as well as the provision of constructive feedback, the findings echo the results obtained by Leong and colleagues (2021) as being significantly associated with satisfaction.

Contrastingly, respondents seem least satisfied with the strategies used by their course instructors during course delivery (M=3.69) and opportunities to apply new learning in real classroom environments (M=3.87). Moreover, respondents perceive opportunities provided for lesson planning and implementation (M=3.65); and for discussing solutions to address challenges, they are likely to face in authentic situations (M=3.72), inadequate. The instructional strategies employed by course instructors during training as well as the kinds of activities designed to promote student application of these strategies also relate to 'process' and the overall classroom climate which in the end, influence 'output' or the quality of teachers and their instruction. The findings of this study in regard to the methodology employed by course instructors are inconsistent with the views expressed by surveyed pre-service teachers in Jareno et al.'s (2021) study. In terms of respondents' satisfaction level with the practical component of their training, the current findings are also incompatible with previous empirical results obtained

by Ranjbari and colleagues (2020) and Sahoo and Sharma (2018). In both studies preservice teachers expressed high satisfaction levels with the pedagogical training and preparation they received for the teaching profession. A possible explanation for the perceived lack of preparation in pedagogy might be due to the limited exposure to the instructional experience that candidates traditionally receive from micro teaching sessions. During micro teaching student teachers get countless opportunities to plan and deliver lessons in pairs to get a feel of what it means to teach and apply some of their theoretical knowledge. The feedback received from their peers assist in reflection and future planning. Moreover, the limited opportunities to experience real teaching in schools is perhaps another reason for program graduates' low satisfaction with the practical component of the training program. Nonetheless, the practicum which is believed to come in a bit too late in the initial training program, afforded opportunities for practice in primary school settings.

The high level of satisfaction as perceived by teachers is validated by the views of the school principals, district education and curriculum officers. A sound grasp of subject-matter, positive attitude and creativity displayed by teachers in designing classroom environments and instructional materials is testament to teachers' great pleasure with the theoretical aspect of their initial teacher training.

Teachers' overall satisfaction is closely tied to how they appraise their initial preparation (Jareno et al., 2021; Sutherland et al., 2021) and their level of satisfaction with the professional training received can, to a large extent, influence their self-confidence, efficacy, and overall performance on the job. Statistically, the findings show that respondents perceive their level of classroom effectiveness following their formal training to be high (Mean =78.87; Std =8.065). Despite their perceived limited opportunities for practical teaching opportunities, respondents are

of the view that the training received has contributed to their ability to plan and deliver classroom instruction that is more student-centered and cater to diverse student needs. Teachers' perceived level of effectiveness following their initial teacher training was confirmed by school principals, district education officers and curriculum officers who work directly with teachers observing their lessons and monitoring their teaching practice. They are among the best sources of evidence to indicate whether or not teachers' classroom practice is indeed having a positive impact on students' academic life. Capturing the voices of these key school officials shed light on the impact of the initial training program is consistent with the theoretical framework but more specifically a stakeholder's theory. Seen as key stakeholders in the professional development of teachers, school principals, district education and curriculum officers reported a general satisfaction with the teaching performance of the majority of the teachers, highlighting notable teacher strengths. The high level of motivation that teachers display, their positive attitude towards children and the profession (Htang, 2017), willingness to try out new ideas, and their passion are essential dispositions (Mpofu & Nthontho, 2017) that newly-trained teachers need to become excellent classroom practitioners. Other strengths which include teachers' pedagogical knowledge and ability to plan and deliver effective lessons have been documented in the literature (Cetin & Sadik, 2020). However, teachers' perception regarding their ability to effectively cater to the diverse needs of their students was not supported as most school principals and district education officers including program graduates themselves note differentiation as one of the areas requiring additional training and support. Although school principals noted room for improvement, they are of the conviction that the teachers' instructional practices are influencing students' learning and behavior in positive ways. In sum, teachers' perceived level of satisfaction and effectiveness regarding the initial teacher training is congruent

with previous empirical evidence (Afalla & Fabelico, 2020; Darling-Hammond, 2017; Jareno et al., 2021; Paposa & Mohait-Kumar, 2019; Sutherland et al., 2021).

Relationship Between Initial Training and Teachers' Level of Satisfaction and Effectiveness in the Classroom

Although not widely investigated, this study attempted to determine if a relationship exists between the two-year initial training (independent variable) received by program graduates and their perceived level of satisfaction and classroom effectiveness (dependent variables). Pearson bivariate correlation test results indicate a moderate positive relationship (r=0.540; p<.001) between training and program graduates' perceived level of satisfaction. The findings correspond to previous research conducted by Paposa and Mohait Kumar (2019) that demonstrates a positive correlation between training and program graduates' level of satisfaction with the professional development experience.

Program quality is also measured against how respondents perceive the training to have contributed to their level of effectiveness in their respective classrooms. The results of the Pearson correlation test indicate the existence of a moderate to high positive relationship (r=0.687; p<.001) between training and respondents' perceived level of effectiveness. The statistical findings support previous empirical investigations that have confirmed a positive relationship between training and teacher performance and classroom effectiveness (EL Alfi, 2019; Gautam & Ramashia, 2017; Nazar & Nordin, 2020; Neville et al., 2019; Soe, 2018) as well as students' learning outcomes and behavior (Abdul & Awan, 2019). This seems to suggest that as training gets better, respondents are of the view that their level of performance on the job is more positively impacted.

Program Challenges and Measures To Address Them

Notwithstanding the perceived high levels of satisfaction and effectiveness following training, respondents identified several deficiencies associated with the various program components that according to them, may account for some of the challenges they encountered during their two-year professional experience. Additionally, suggestions for addressing challenges were elicited from program graduates, school principals, district education and curriculum officers. Qualitative data analysis revealed several themes under each *a priori code* or program content regarding challenges and suggested measures that can be taken to address those challenges. The researcher took the decision to combine research questions three and four to facilitate the evaluation of the findings more logically and to avoid duplication since the two research questions go hand in hand. Therefore, as the challenges are evaluated, so too are the suggestions for addressing them.

*Program Curriculum*

The findings of this study suggest that the initial training program is quite compact and theoretical in nature. Program graduates reported having to take too many courses and cover too much content within a short period of time (three semesters) and at the end, leaving them with little time for absorption, comprehension, and application of their new knowledge. It is not surprising why some course instructors spend much of the instructional time covering large amounts of content rather than providing opportunities for teacher candidates to meaningfully interact with content and discuss how they can possibly teach related content to their future students. Interestingly, but also not surprising, the findings confirm the observations made

261

locally by both certified teachers and teacher trainers in Simon's (2014) qualitative study regarding the undue emphasis placed on theoretical content in the Associate Degree in Education program.  From an international standpoint, the findings of the current study are compatible with that of Erisen and Katmer-Bayraki (2016); Ranjbari and colleagues (2020); and Redman (2015) which confirm an  overemphasis on the theoretical dimensions of teaching in some teacher education programs at the expense of practice. Similar observations have been made regarding alternate teacher certification pathways (Huffman, 2021; Uzeirli & Kilicoglu, 2021).

The lack of classroom and cultural relevance reported in some courses according to the respondents, is another curricular-related challenge that has made it difficult to engage in culturally responsive and differentiated instruction.  This finding is confirmed by school principals and district education and curriculum officers who identified teachers' inability to cater to the diverse learning needs of students through differentiated instruction. This was noted as an area that many teachers struggle within their classrooms. Unsurprisingly, the finding confirms the lack of adequate attention given to inclusive education in the Associate Degree in Education program (Hodge, 2017; Lubin, 2020). Another plausible explanation is that some of courses do not prepare teacher candidates to teach all learners particularly those with certain disabilities. Consistent with this finding, teachers in  Hodge's (2017) study cited insufficient attention given to inclusive education and its related instructional practices during their ADE initial training as a main barrier to effectively meeting the needs of all students in their classrooms.  A third reason might be that course instructors do not make a deliberate attempt to teach trainees how they can incorporate into classroom practice, learners' varied home background experiences, knowledge, and personal interests  in practical ways that make teaching and learning more relevant and meaningful to them. Once teacher candidates have

262

covered content related to differentiated instruction as is done in one course, it is anticipated that trainees will incidentally translate that knowledge into practice, an expectation that is very often not met. Hence, the great difficulty experienced by new teachers in dealing with disruptive children and those with exceptional learning needs is understandable given this finding. Other studies (Dube, 2020; Hastings, 2021; Pritchard, 2017; Ulla, 2016; Van Buren et al., 2016) have reported similar challenges faced by pre-service teachers in teaching diverse student populations.

The lack of attention given to primary school curricula in the initial teacher training program is another major challenge identified by program graduates. They request time during program delivery to develop familiarity with the national curriculum that they will be delivering, a similar appeal made by both certified teachers and college-based teacher educators locally (Simon, 2014). It is only when future teachers are given explicit training in and exposure to national curricula in the various core subject areas of Mathematics, Language Arts, Science and Social Studies that they will develop familiarity with its structure and goals; better understand and implement them more satisfactorily during their practice. Additionally, curriculum training will expose future teachers to the subject-specific approaches being promoted; content standards and attainment targets for specific grades; as well as the instructional sequence and guidelines for each grade level. However, if teacher candidates do not receive explicit training in understanding and using national curricula, it is very likely that they will encounter further challenges when planning for and implementing instruction during their practical teaching assignments. Bagherzadeh and Tajeddin (2021) in their study found weaknesses in curricular knowledge of a group of Iranian teachers during their practice and call upon teacher training institutions to close the curricula knowledge gap.

263

To address the challenges associated with the teacher education curriculum, program graduates, school principals, district education and curriculum officers make a clarion call for the revamping of its program to show a clear balance between theory and practice and a strong commitment to preparing high quality teachers who can deliver high quality instruction (AACTE, 2018; Levine, 2006; OECD, 2017b). An extension of the initial teacher training program to three or four years is proposed to allow future teachers sufficient time to grasp content, develop adequate pedagogical competence and promote effective teacher training.

Also, the curricular should be revised and updated to reflect the needs of 21$^{st}$ century learners, goals of the primary school curriculum and an explicit focus on curriculum training.  One of the ways by which the latter can be most successfully achieved is through course instructors' utilization and incorporation of curricula guides into all methods courses following curriculum training.  In an effort to respond more appropriately to contemporary classroom issues and students' diverse needs as well as enhance teacher candidates' readiness and effectiveness for teaching at the primary level, it is suggested that the Department of Teacher Education include specific courses in conflict management, inclusive education, working with families, emotional intelligence and classroom management as part of its curriculum.  The findings of this study join previous calls for reform in teacher education curricula (Bagherzadeh &Tajeddin, 2021; Levine, 2006; Ranjbari et al., 2020; Sahoo & Sharma, 2018), an essential part of the 'input' of teacher education.

*Program Delivery*

One critical aspect of 'process' speaks to the various methodologies employed by college-based teacher educators, the available support structures as well as the classroom

264

environment created in preparing teacher candidates for their professional practice. Another aspect of 'process' speaks to the opportunities provided during course delivery to facilitate the application of theoretical knowledge acquired to practice through micro teaching sessions. The findings of this study reveal that the methods used by most college-based teacher educators in preparing teacher candidates leave much to be desired. All program graduates, principals, district education and curriculum officers indicate that they expected college-based teacher educators to model some of the strategies and teaching methods that teacher candidates are required to implement in their classrooms. The role that college-based teacher educators play in the preparation of future teachers goes way beyond simply imparting subject matter knowledge to showing (by doing) teacher candidates how to teach. Teacher educators should serve as models of appropriate teaching behaviors, attitudes and evidence-based teaching practice for teacher candidates (Lofthouse, 2018; Parker et al., 2019; Tanguay et al., 2018).

However, despite the calls made for teacher educators to adapt their teaching methods to ensure that future teachers develop pedagogically, the expectation that program graduates and school officials have in that regard, has not been met by the collective. The findings of Baskan and Ayda (2018) among other empirical studies confirm the failure of teacher educators to practice what they preach. One of the main propositions of the social cognitive theory emphasizes the role of modeling and observation of a teaching strategy or method in contributing meaningfully to teacher candidates' understanding of the instructional strategy and decisions made regarding the future application of the strategy. Hence, the challenges faced by teacher candidates principally those with no prior teaching experience are legitimate and understandable.

Furthermore, many teacher educators, according to the findings, failed to vary their teaching strategies to ensure depth of learning or provide opportunities for classroom application

265

of theoretical knowledge. Consistent with this finding, results obtained from Basit and Khushid (2018) indicate that prospective teachers are dissatisfied with the teaching strategies used by their teacher educators to teach them. These traditional teacher-centred methods in preparing prospective teachers fail to prepare teacher candidates pedagogically for the teaching profession. The 'talk and chalk' or lecture style used predominantly during classes has contributed to the lack of understanding of course related concepts and teaching strategies by many teachers in training. The choice of teaching methods to a large extent, also reflects the instructors' limited knowledge and competence in teacher education practices as well as administrative and institutional barriers such as course density, time constraints or lack of resources as articulated by Reupert and colleagues (2010). This particular finding comes as no surprise given the previous lamentations and criticisms of past and current teacher candidates, albeit mostly undocumented, regarding teacher educators' teaching methodologies. More recently, researchers such as Alsalmah and Callinan (2021), and Leong et al. (2021) appeal to instructors to promote more effective student participation through their employment of multiple methods during their delivery. The diversity in methods not only galvanizes teacher candidates' interest, but more importantly, contributes to their deeper understanding and retention of instructional provisions.

Although the views of teacher educators were not captured in this research, it is important nonetheless to interrogate whether all teacher educators received an orientation to teacher education at the time of their appointment, as is the norm for new teachers who join the teaching profession. Do college-based teacher educators really understand what it means to be a teacher educator or what their role entails? Do they engage in or recognize the need for ongoing exploration of their practice in a bid to enhance their teaching and professional development? Tack and Vaderlinde (2016) argue that if teacher educators promote and support the professional

266

learning of their candidates, then their own growth as life-long learners and professionals ought to be of paramount importance.

One measure that can be taken to address problems related to  program delivery is for college-based teacher educators to adopt a culturally responsive pedagogical approach (Jacobs et al., 2020; Wachira & Mburu, 2019) which considers teacher candidates' learning styles; intellectual capabilities and past accomplishments; values their prior experiences as students and or teachers; their previous assumptions about teaching; their cultural and linguistic backgrounds; and their knowledge of children, as conduits for preparing future teachers more effectively. Engaging in culturally responsive pedagogy is viewed as an imperative for high-quality teacher preparation today. Consequently, the need for teacher educators to rethink their methods of delivery in preparing teacher candidates more successfully for the realities of today's increasingly diverse classrooms is of ultimate importance.

In addition to adopting a culturally responsive pedagogical approach in the delivery of teacher education programs, all study participants want to see more constructivist teaching methods used during teacher preparation. They want to see a lot more variety in teaching methods to cater to teacher candidates' varied learning styles and professional needs.  All study participants would like to see college-based teacher educators practice what they preach by modeling the teaching strategies that teacher candidates are expected to implement during practical teaching and upon their appointment to the teaching profession.  Moreover, program graduates, and in particular those who had no prior teaching experience at the time of their pursuit of initial teacher certification, suggest the need for course instructors to strike the balance between theory and practice during course delivery. One way this can be done is by designing course assignments that are more practical and field-based.   The myriad of opportunities

267

afforded to future teachers to engage in a cycle of planning, teaching and reflecting based on their interaction with children in various classroom settings will prepare them more satisfactorily for the realities of the classroom.

Inarguably, in order for teacher educators to transform their practice, it is incumbent upon them to stay current in their field through engagement in continuous professional development. Providing a model of professional practice is an imperative for preparing future teachers. The findings resonate with the conclusion drawn by Applegate et al. (2020); Joseph and Mitchell (2019); Orakci (2020); Sharkey (2018); and Tack et al. (2018) urging faculty members to regularly update their skills and knowledge in order to enhance teaching quality.

*Insufficient Practical Teaching Opportunities*

The structure and duration of the teaching practicum emerges as the most frequently cited deficiency for program graduates. Participants' concerns regarding teacher candidates' engagement in the Practicum only near the culmination of their two-year formal training are consistent. This 10-week culminating experience just before teacher candidates exit the walls of teacher education institutions has been criticized as being inadequate and ineffective (Hodges & Baum, 2019; Simon, 2014). Evidently, the importance of future teachers spending quality time in real classrooms, working and interacting with children of diverse abilities and needs in various school settings, is well acknowledged (AACTE, 2018; Okogbaa, 2017).

Moreover, most respondents express the view that due to the practicum's exam-driven nature, the time allotted did not afford them adequate opportunities to hone their teaching skills (Araya et al., 2020) particularly those with no prior teaching experience. Principals, district education and curriculum officers echo the same sentiments regarding the need for additional

268

267

formative assessment during practical teaching. This finding is not surprising given that the initial teacher training program offered in Saint Lucia does not adequately emphasize practice- based teacher preparation. It appears that greater emphasis is placed on equipping graduates with more discipline specific content and knowledge of theories as has been observed by Sutherland and colleagues (2021) despite the fact that teacher training colleges have been encouraged to tweak programs to meet their respective contexts and professional needs of teacher candidates.

Additionally, teacher candidates want to plan lessons, create instructional materials, experiment with various teaching approaches and strategies and generally want to get a sense of what 'good' teaching feels, sounds and looks like in real classroom settings. Lesson planning is a complex process that requires time, scaffolding and constructive feedback. Limited opportunities for planning lessons and engaging in practical teaching afforded during the professional experience according to program graduates did not allow them sufficient time to apply the theoretical knowledge gained to develop their pedagogical skills more efficaciously. It appears from the findings that micro-teaching, an essential technique in developing teachers' pedagogical skills is perceived to be underutilized. Findings reported by MindBloom Consulting (2017); and Younus et al., (2017) confirm a weakness in the pedagogical domain as teacher candidates believed that their teacher education programs did not allow sufficient opportunities for practice in real classroom settings. Likewise, in Sahin-Taskin's (2017) study, pre-service teachers reported not being granted enough time to gain experience and become acquainted with their students' needs and expectations so they can plan more effective lesson plans. First year teachers in Pritchard's (2017) study requested additional opportunities to observe the instructional practice of skilled teachers and support in planning lessons that are culturally responsive.

269

To address the challenges faced with poor pedagogical skills as a result of teacher candidates' limited opportunities for practical teaching, a restructuring of the practicum component and the implementation of field-based practicum model is proposed. This practicum model will allow teacher candidates a lot more time to refine their teaching skills throughout the training as opposed to the 10-week uninterrupted teaching practice that culminates the program. In addition, when the practicum model is interspersed throughout the program duration or done in phases, teacher candidates will be afforded multiple opportunities to plan and implement lessons in different classroom settings and interact with children of varied abilities prior to the final practical teaching assessment. Such integrated field-based practicum model that embeds clinical practice throughout teacher education programs will contribute to a better-high quality clinical experience (AACTE, 2018; Henning et al., 2019; Okogbaa, 2017) that will result in stronger pedagogical competence and high levels of teacher self-efficacy. To illustrate, pre-service teachers in a study conducted by Ranjbari et al. (2020) expressed adequate preparation in pedagogy following modifications made to their previous ineffective teacher education curriculum in an English as a Foreign Language (EFL) context. Iranian EFL teachers, student teachers as well as teacher educators are of the view that the incorporation of more practicum courses in a revised pre-service teacher education curriculum lays a stronger foundation in preparing teachers of English who are more linguistically and pedagogically competent. Moreover, spending more quality time in real classroom settings  under the guidance of school-based teacher educators or mentors (Okogbaa, 2017) means more instructional support and constructive feedback especially with regard to  classroom management and a range of student centred instructional strategies  which also translates into more opportunities for growth.

*Inadequate Mentoring During Practicum*

Mentoring is a significant part of initial teacher preparation programs, and one key role of the mentor is to provide quality supervision and formative feedback to the mentee or teacher candidate on his or her ability to plan, teach and assess students' learning; create and maintain a supportive learning environment for all students (Akram, 2019; Department of Education, 2016; Lafferty, 2018; Nel & Marais, 2021). During the practical teaching, both co-operating teachers and college supervisors    function as mentors. The pedagogical support and useful feedback provided by college-based teacher educators together with school-based mentors promote the overall growth of teacher candidates and help to shape their future instructional practices. Some respondents perceive their mentors' feedback and support to be beneficial (Brown et al., 2020; Cheng et al., 2018; Jones et al., 2018; Nel & Marais, 2021). Many express the view that their co-operating teachers and some college supervisors did not provide adequate pedagogical support, guidance, and feedback to improve their teaching skills during the clinical period. This finding is in alignment with the perspectives of novice teachers in previous research (Petrovska et al., 2018; Pritchard, 2017; Younus et al., 2017). Student teachers in Cheng et al.'s (2018) qualitative study reported that several institute supervisors seldom contacted or visited them during school placements and were not sufficiently helpful. In Fletcher et al.'s (2021) study, some student teachers reported a lack of professional commitment by their mentors and little time for professional dialogue and feedback as major challenges encountered during their practicum at primary schools in New Zealand. The findings also suggest that respondents who lacked prior teaching experience seemed mostly dissatisfied with the quality of supervision received. For many, the absence of meaningful feedback (Araya et al., 2020; Pritchard, 2017) coupled with infrequent visits by college supervisors during the clinical period appeared to be their main

271

source of frustration and anxiety throughout the practicum. The findings in part, echo the sentiments expressed by student teachers in previous studies (Jones et al., 2018; Moosa & Rembach 2018; Superville, 2017) regarding the quality of support received from their co-operating teachers; and the need for more frequent contacts and greater attendance of mentors at classes (Petrovska et al., 2018; Younus et al., 2017).  The findings further support  the inference made by Gonzalez-Toro and colleagues (2020) that the type of feedback received from co-operating teachers and college supervisors are sometimes perceived as valuable and positive and other times ineffective and demotivating. As a key player in the professional growth of future teachers, the infrequent visits and inadequate mentoring of college-based teacher educators will palpably compromise the quality of the teachers' teaching performances (Cheng et al., 2021). Nel and Marais (2021) referred to the provision of feedback as a "wicked" problem that needs to be resolved urgently to ensure that future teachers are given the best opportunities to learn from their practice.

It was interesting to note that only one participant identified the modeling of lessons by  a co-operating teacher as one way by which the teacher candidate was supported pedagogically. The absence of teacher modeling of good lessons during the clinical period might possibly explain the reason why the majority of program graduates felt ill-prepared to teach an entire class on their own particularly since they had no prior teaching experience. Modeling good instructional practices and providing high-quality coaching (Department of Education, 2016; Lofthouse, 2018) during field-based assignments exemplifies one significant way by which mentors or co-operating teachers respond to the needs of teacher candidates.

Based on the findings, it seems clear that respondents desire for co-operating teachers to be more strategically screened and trained particularly in the provision of constructive feedback.

272

Empowering co-operating teachers through mentoring workshops will not only familiarize them with their roles as partners and key stakeholders in the professional development of new teachers, but more importantly, their active engagement in such training sessions will teach them how to mentor teacher candidates during the practical teaching experience through lesson modelling and coaching (Lafferty, 2018).   They will also be able to fulfill their professional expectations   in encouraging and supporting the development and progress of teachers candidates.   In lending support Dudick (2016) in a qualitative study, found that new teachers perceive their instructional practice to be positively impacted and transformed due to the quality time spent together with their mentors observing actual lessons, and engaging in joint lesson planning and preparation, as well as the constructive feedback received.

*Assessment*

The type, quantity and quality of assessment used to monitor teacher candidates' progress and growth over time, appears to be a major program shortcoming.  Assessment is perceived to be a bit too traditional in the preparation of teachers, a similar observation that has been made by other scholars in the literature (Doman, 2018; Pitsia, et al., 2021). While end of semester examinations are appropriate in measuring teacher candidates' content knowledge, they are not effective in assessing the application of course material in practical ways. This finding is consistent with one of the inherent limitations of summative assessment in terms of its inadequacy in measuring students' learning in authentic ways, and the tendency for teachers to implement more teacher centred approaches in instruction (Pitsia et al., 2021; Ramsay-Jordan, 2020).

Evidently, the regurgitation  of course content learnt during the end of semester

273

272

examination as done by some program graduates in this study comes as no surprise given its drawback for encouraging rote memorization (Doman, 2018).

Furthermore, some coursework assignments are perceived to be too many, challenging, weighty and can be disadvantageous to some teacher candidates especially when completed as a group. Program graduates acknowledge the value of incorporating various forms of assessment in teacher preparation courses.  However, they believe that the number and complexity of some coursework assignments not only contribute to their frustration but make it extremely difficult to meet deadlines or spend quality time with their family.  Another important research finding points to the lack of modeling of various forms of assessment.  Having knowledge of a variety of assessment techniques does not mean that teacher candidates fully understand how to assess their future students using those different types of assessment. In other words, exposure or knowledge does not automatically translate into enactment in classroom practice.  If teacher candidates do not experience the practical application of some of the assessment forms to which they were exposed during training, either directly through modeling or vicariously through observation of other teachers' practice, then implementing them to collect information on their future students' learning, becomes challenging.

In an effort to monitor and evaluate teacher candidates' learning and progress throughout the teacher preparation process, teacher education institutions are being cautioned against the extensive use of traditional forms of assessment mainly in the form of end of semester written examinations. The exam-driven nature of the ADE program has been documented (Simon, 2014). In this study, respondents make an urgent request for the adoption of sound assessment strategies that are varied to measure the learning, skills, pedagogical knowledge, and teaching dispositions of teacher candidates more effectively. Their call for college-based teacher

274

educators to consider quality and authenticity of course assignments rather than quantity, as confirmed in a study by Orakci (2020) seems to highlight the value of performance-based assessment (Collins & Church, 2018; Doman, 2018; Restrepo & Bolivar, 2020) which allow teacher candidates to apply their new learning in more practical ways in real classroom settings throughout the duration of the program. Furthermore, fewer quality assignments will not only minimize teacher candidates' level of apprehension but more notably increase their satisfaction levels which in turn can positively impact their teaching performance. Some of the program graduates in this research wanted to see their course instructors demonstrate, through course delivery, the 'how' of some of the assessment procedures they were being encouraged to use during their practical teaching assignments. The need for modeling sound assessment practices is critical to developing future teachers' assessment literacy. Two clear illustrations of this explicit assessment instructional approach is the incorporation of learning journals in an assessment and testing course by Restrepo & Bolivar (2020) and the exploration of flipped authentic assessment in courses that were delivered via a flip approach (Doman, 2018). In both situations, pre-service teachers expressed their intention to utilize the technique in assessing their future students. These two illustrations underscore the significance of modeling in teacher preparation programs.

*Teaching Learning Resources and Financial Support*

Program graduates identified the lack of finance in purchasing and obtaining some of the instructional materials required for the practical teaching period as a drawback. The unavailability of needed instructional materials at the school of placement compounded the situation and adversely impacted their practicum experience and performance. In an effort to

275

enhance teacher preparation and make the professional experience more rewarding, respondents express the need for better learning resources such as internet technologies, photocopying machines, printers, whiteboards, and projectors.    Support services particularly for teacher candidates who are new to the teaching profession are requested.    This finding echoes the sentiments expressed by English as a Foreign Language pre-service teachers and the gaps that must be addressed to ensure the effective implementation of teacher education curricula (Ranjbari et al., 2020).   Iranian pre-service teachers like the program graduates in a Saint Lucian context, make an appeal for more facilities,   appropriate instructional materials and course related resources to foster their learning and promote practical application of theory during teacher preparation.

Supporting Teachers Following Initial Training

Beyond the walls of pre-service teacher education institutions and during the first few years of teaching, new teachers require additional support, encouragement, and ongoing professional learning opportunities (Graham et al., 2020; OECD, 2019; Osamwonyi, 2016), in order to successfully apply the innovative ideas and strategies learnt during training and to improve the quality of their teaching (Evagorou et al., 2015; Nazar & Nordin, 2020; Sawyerr, 2018; Uysal, 2012). The findings of this study demonstrate that majority of the program graduates are provided with various forms of support following their two-year initial training. Specifically, respondents mentioned receiving (a) some resources at their schools to enhance teaching and learning; (b) job-embedded scaffolding and mentoring; and (c) opportunities for engagement in continuous professional development. Correspondingly, in Cheng et al.'s (2018)

276

qualitative study, schools and school administrators were found to act as supports, resource provider and mentors to new teachers.

Additionally, the professional training provided to new teachers through their attendance at workshops is in keeping with induction programs described in the literature (El Afi, 2019). However, the nature and effectiveness of such workshops is questionable. The fact that program graduates indicated not having had any follow-up to workshops held for new teachers or received any kind of job-embedded support based on their learning at workshops, suggests that the induction program needs to be more structured and sustained. The possible lack of structure and sustenance of the induction program at primary schools or education districts might perchance explain the reason some teachers have no recollection of their attendance at workshops held for new teachers.  This finding is a bit puzzling given the importance of induction programs in facilitating the smooth transition of newly qualified teachers to the classroom (Reitman & Karge, 2019; Sawyerr, 2018; Soe, 2018). The adequacy of these support mechanisms for optimum growth and instructional effectiveness, is questionable. However, this is an issue that is beyond the scope of this study.

The establishment of professional learning communities (PLCs) in some schools seems to be having a more positive impact on teachers' instructional practice according to the program graduates as opposed to the traditional one-shot workshop attended during the school year. Research evidence suggests that regular seminars, workshops or professional meetings designed specifically for new teachers tend to be beneficial(Kearney, 2017; Redding et al., 2019). Program graduates spoke favorably about the weekly grade-level meetings which offer a forum for examining their students' deficiencies or common learning needs, plan, discuss and share strategies that have worked for others in addressing students' instructional needs.  The findings

277

are congruent with the views expressed by new teachers who commented on the learning gained through their mentors' support, and the opportunities provided to collaborate, share resources  and expert ideas (Block, 2017; Brown et al., 2020; Cheng et al., 2018).  The finding also amplifies the observation made by Aaltonen (2019) and Mintzes and colleagues (2013) regarding the impactful nature of professional development that is data-driven and  grounded in teachers' day-to-day instructional practice. Evidently, program graduates' engagement in PLCs seems to support the assertion that teachers are best positioned to determine what strategies may or may not work for them (Darling-Hammond et al., 2017) when they engage in collaborative analysis of their students' work and deficiencies.  Not only are teachers' instructional practices positively impacted but  also their willingness to try out new ideas and strategies (Aaltonen, 2019).

Supporting and providing feedback to new teachers based on lesson planning and implementation as well as evaluating through regular classroom visits, forms a critical part of the role of instructional leaders and other professionals  involved in the continuous professional development of recent graduates (Oduwaiye et al., 2017; Redding et al., 2019).   Almost all program graduates admitted to having received feedback from their school principals and senior teachers and to a lesser extent district education officers and curriculum officers.  The quality and nature of the feedback that the teachers received based on their observed practice is critical to their growth and professional development.   Teachers are constantly encouraged to metaphorically "throw the cow over the cliff" by constantly searching and implementing innovative methods, and ways to enhance their teaching. The findings of this current study underscore the importance of ongoing capacity building opportunities along the in-service teacher education pathway to ensure instructional effectiveness (Bennett, 2019; Sawyerr, 2018; Soe, 2018; Suleiman et al., 2017).

278

Notwithstanding the various dimensions of the school environment that make it possible for new teachers to apply their pedagogical knowledge and skills to their classroom practice, it is recognized that system-wide institutional factors may impede or thwart teachers' willingness and attempts to adopt student-centered strategies. The findings of the study seem to suggest that pressures to prepare students for district or national examinations force new teachers to revert to the traditional teaching methods as opposed to implementing student-centered strategies gleaned from their professional experience. Program graduates who are assigned to examination classes reported engaging mostly in teacher centered-instruction and find it difficult to employ various forms of assessment in accountability-driven schools. Previous empirical investigations (Masood & Hameed, 2019) have found examinations to act as a control mechanism over teachers' instructional practice and a barrier to implementing student-centered pedagogies to which they were exposed during formal training. The findings of a mixed method study conducted by Khalid and colleagues (2021) indicate that a group of 22 Bahrain beginning teachers were more likely to practise methods such as lectures and memorization to teach critical thinking due to their constant pressure to complete the curriculum. Thus, these findings suggest that school realities seem to be a contributing factor to program graduates' suspension of some student- centred pedagogies to which they were exposed during training and returning to the traditional methods of teaching (El-Saway, 2018).

Another critical barrier reported by respondents is student misbehavior which according to school principals, poses a major challenge for many program graduates. The finding is compatible with other studies (Dube, 2020; Marcias & Sanchez, 2015; Uysal, 2012) that have identified classroom management as a persistent challenge faced by new teachers. Evidently, effective classroom management represents an area in need of additional training and support

279

(Dube, 2020; Hastings, 2021; Oduwaiye et al., 2017; Rife Oman, 2019). Despite the various classroom management strategies learnt during teacher preparation, it appears that they are not effective in dealing with all children.

In regard to subject-specific instructional approaches, there appears to be a mismatch between what program graduates were exposed to during their initial training and what is practiced at schools or promoted by the Ministry of Education in the areas of Language Arts and Social Studies. This concern has been expressed by certified teachers and teacher trainers in the past. According to participants in Simon's (2014) qualitative research, the approaches employed by teacher candidates in implementing the Language Arts curriculum were very often inconsistent with the methodology rooted in the teacher education curriculum. This reality shock that many teachers experience as they transition into the profession seems to suggest a gap between what they learnt at Teachers' Training College and their actual teaching practice (Bano et al., 2019; Cheng et al., 2018; El-Sawy, 2018). It is not surprising that all the program graduates interviewed agreed that the two-year initial training did not adequately prepare them for the realities of school.

**4.9 Summary**

Data obtained qualitatively from open-ended questions and interviews were integrated and triangulated with quantitative data to provide a more comprehensive understanding of the impact of the initial teacher training program from multiple perspectives and stakeholders. The five research questions examined have been adequately addressed by the richness of the data gleaned.

The results obtained following the analysis of data gleaned from both quantitative and qualitative methods are presented in this chapter followed by an evaluation of key findings. To

280

evaluate the research results, it was necessary for the researcher to return to the scholarly literature and theoretical framework to compare the current findings and to see how these results are supported. Additionally, juxtaposing the study's findings with the literature unveiled a few inconsistencies for which plausible explanations were given. The research results were presented in accordance with the five research questions addressed in the study. Analysis of the data revealed the following key findings:

1. Respondents are generally satisfied with the level of initial training received.

2. Respondents perceive their level of effectiveness in the classroom to be high.

3. There is a moderate positive relationship between initial training and program graduates' perceived level of satisfaction and effectiveness respectively. Therefore, both null hypotheses were rejected.

4. Respondents encountered several challenges relating to program delivery, program content and structure: assessment and practicum during their initial teacher training.

5. Some suggestions for improving future training for teacher candidates include screening and training of mentors for practicum; adopt a more practice-oriented practicum model; restructure the initial training program in both curriculum and duration; adopt a more constructive approach to program delivery and a heavy emphasis on alternative forms of assessment.

6. The availability of resources for student active engagement at the various schools; instructional support; opportunities for teachers to engage in professional development activities such as the establishment of professional learning communities, and workshops make it feasible for teachers to apply their knowledge and strategies learnt from their training to their classroom practice.

281

7. Examination pressures, student misbehavior, limited instructional support and conflicting practice make it difficult for program graduates to implement learning from their professional experience in their classroom practice.

These main findings are expounded in the section which follows.

Research Question 1

What are teachers' perceived levels of satisfaction with the training received and their effectiveness in the classroom following their initial training?

Perceived Level of Satisfaction

The findings revealed an overall high level of satisfaction (M=104.98 or 84%; Std = 14.070), an indication of program graduates' general pleasure with the initial teacher training received.  Consistent with results obtained by Ranjbari and colleagues (2020) and Sahoo and Sharma (2018) the findings of this study show that teachers seem mostly satisfied with the theoretical component of their training, one aspect of input.  School officials identified teachers' theoretical knowledge as an observable strength post training.   On the other hand, a low satisfaction level was obtained for the practical dimension of their training.   There is a perceived lack of preparation in pedagogy and variety in program delivery methods by teacher educators, two critical aspects of process.   Program graduates perceive their learning during training to be appropriately assessed (M=4.08; Std=.752), however, they expressed a displeasure with the quality of course assignments (M=3.86; Std=.795), the adequacy of feedback based on these assignments (M=3.83; Std=.928) and the appropriateness of semester examinations in fostering the application of theoretical knowledge in practical ways (M=3.86; Std=.968).  Consistent with a social cognitive (Gonzalez-DeHass & Willems, 2012) and systems (Koral-Kordova et al., 2018; Leischow & Milstein, 2005) theoretical perspectives, the findings revealed that the classroom environments that course instructors created and maintained to foster meaningful collaboration, interaction and learning; the strategies employed by course instructors during program delivery; the opportunities provided  to promote student application of these strategies; the quality and usefulness of feedback; as well as the methods used to assess teacher candidates'

learning and teaching performance, all influence their perception of their two-year initial teacher training in terms of the 'process' and overall classroom climate.

## Perceived Level of Effectiveness in Classroom

Notwithstanding the overall weak pedagogical dimension of training, program graduates perceive their level of effectiveness to be moderately high (Mean =78.87; Std =8.065). They believe that the training received has contributed to their ability to plan and deliver more student-centered and differentiated instruction. School principals and other officials likewise reported general satisfaction with teachers' performance as they hold the view that the instructional practices of the majority of program graduates are positively impacting students' learning and attitude towards school. However, their views on teachers' ability to cater to student diversity through differentiated instruction, are not generally in harmony with the perceptions of program graduates.

## Research Question 2

What is the relationship between initial training and participants' perceived level of satisfaction and effectiveness in the classroom?

Consistent with previous research (Paposa & Mohait Kumar, 2019) findings obtained from quantitative analysis reveals the existence of a moderate positive relationship between training and program graduates' perceived level of satisfaction (r=0.540; p<.001) and a moderate to high positive relationship (r=0.687; p<.001) between training and level of effectiveness (Gautam & Ramashia, 2017; Neville, 2020). Based on the results, both null hypotheses were rejected.

Research Question 3

What are the challenges associated with the initial training program?


Qualitative analysis of open-ended and interview responses unveiled a myriad of deficiencies associated with program input and process that graduates perceive may help to explain some of the challenges encountered by them particularly during practicum and classroom practice, post training. One of the main shortcomings of the program is its compactness and overemphasis on theory. The highly theoretical nature of the program leaves very little time for absorption and comprehension of material as well as opportunities for teacher candidates to translate theoretical knowledge acquired into practice (Erisen & Katmer-Bayraki, 2016; Huffman, 2021; Ranjbari et al., 2020; Redman, 2015; Uzeirli and Kilicoglu, 2021). The lack of classroom and cultural relevance of the initial teacher preparation curriculum, its limited focus on differentiated instruction, and inclusive education are identified as other deficiencies in program input. Hence, the difficulties many teachers face in adapting instruction to meet the diverse needs of students in their classrooms (Dube, 2020; Hastings, 2021; Pritchard, 2017; Ulla, 2016; Van Buren et al., 2016) are not surprising given this gap in the curriculum.

Program delivery

Two important dimensions of program delivery speak to the methodologies and resources employed by college-based teacher educators in preparing teacher candidates, and the opportunities provided to meld theory with practice. Consistent with previous research (Baskan and Ayda, 2018; Scales et al, 2014), the findings of this study confirm the failure of teacher educators to practice what they preach or to accommodate teacher candidates' diverse learning styles and training needs through their use of various learner-centred instructional strategies and methods (Basit and Khushid, 2018).

Insufficient Practical Teaching Opportunities

The structure and duration of the practicum appears to be the greatest deficiency of the teacher training process. All study participants are of the view that the practicum comes in too late in the program and that prior to the practicum teacher candidates should be given multiple exposure in real classroom settings under the supervision of mentors. 10 weeks allotted for the practicum is believed to be inadequate as program graduates reported insufficient opportunities to improve their pedagogical skills (Araya et al., 2020) during the clinical period and prior to grading. The perceived underutilization of micro teaching as an effective technique in developing teachers' lesson planning and teaching skills is another limitation of the practical component of initial training.

*Mentoring*

In alignment with previous research, (Araya et al., 2020; Petrovska et al., 2018; Pritchard, 2017; Younus et al., 2017) the findings of this study show that some school and college-based teacher educators failed to provide adequate pedagogical support, guidance, and feedback to teacher candidates during the clinical period. Infrequent class visits and observation of lessons (Petrovska, et al., 2018; Younus, et al, 2017) by some college-based teacher educators was one problem encountered by teacher candidates and signals a flaw in selection and or assignment of college-based teacher educators for the practicum. Additionally, the quality, nature and meaningfulness of feedback provided by school and college-based teacher educators differed (Fletcher et al., 2021; Nel and Marais, 2021) considerably.

*Assessment*

The findings of the study revealed that end of semester examinations are not only inadequate in measuring teacher candidates' learning and growth but promote regurgitation of

286

content (Doman, 2018) presented during lectures.  Respondents complained about their college-based teacher educators' tendency to use mostly lectures and traditional approaches in the delivery of courses (Pitsia et al., 2021; Ramsay-Jordan, 2020).  They also complained about the:

(a) lack of variety in assessment methods used to monitor and measure their growth as future teachers; (b) the number of course assignments; (c) extensive use of group tasks; (d) and the disconnect between some coursework assignments and actual practice (Orakci, 2020).  These complaints underscore the need for performance-based assessment (Collins & Church, 2018; Doman, 2018; Restrepo & Bolivar, 2020).  The lack modeling of assessment procedures during course delivery can influence future teachers' understanding of these procedures and how they are implemented in real classroom contexts. Therefore, in an effort to further develop teacher candidates' assessment literacy course instructors are encouraged to model sound assessment practices (Doman, 2108; Restrepo & Bolivar, 2020) during teacher preparation.

Research Question 4

What measures can be taken to address the challenges associated with the initial training program?

Program graduates and school officials made suggestions that speak to various ways by which program components, mainly input and process can be strengthened to produce better quality output. In regard to input, the initial teacher training curriculum needs to be redesigned to make it more culturally relevant and responsive to the realities of today's classroom.  The revised curriculum should   reflect an explicit focus on inclusive education and emphasize other aspects of curricular knowledge such as classroom management, differentiation, lesson planning, familiarity with the school curriculum, and building home-school partnerships (Department of

287

Education, 2016). To improve their competence, it is suggested that college-based teacher educators stay current in their field through their engagement in continuous professional development.

In terms of process, course instructors need to adopt a culturally responsive pedagogical approach (Jacobs et al., 2020; Wachira & Mburu, 2019) vary their instructional strategies and engage in more demonstration lessons to show trainees how to teach or apply strategies. They need to practice what they preach. The suggestion to carefully screen and train classroom-based teacher educators for their mentoring role is reported (Department of Education, 2016).

Program graduates and school officials (principals, district education and curriculum officers) alike suggest that the practicum be extended and interspersed throughout the duration of training or be done in phases to allow teacher candidates more opportunities to plan and implement lessons in various classroom settings and with different children.

There is an urgent request for course instructors to vary their assessment methods and to consider quality and authenticity of course assignments rather than quantity (Orakci, 2020). It is suggested that more performance-based tasks be used to assess teacher candidates' learning and growth. Finally, it is recommended that such a revised program be extended to three or four years.

288

Research Question 5

1. (a) What forms of support are provided to  newly-trained teachers to enhance their level of effectiveness in the classroom?

(c) What  possible factors negatively impact teachers' classroom practice following initial training?

Qualitative findings revealed that newly-trained teachers are provided some instructional resources that help to galvanize students' interest, cater to varied learning styles and promote

active student engagement and meaningful learning – a reflection of what program graduates were taught during their formal training. Additionally, teachers regard the instructional support and mentorship provided by experienced teachers and their principals as critical to their growth and development, as feedback received is perceived to propel them to continually try out alternative methods and activities to promote the active learning of all students and to enhance teacher instructional effectiveness. Teaching resources, pedagogical, emotional and other forms of jobembedded support provided to teachers at their schools are necessary ingredients for their successful application of innovative ideas and strategies learnt from initial training to practice (Graham et al., 2020; OECD, 2019; Osamwonyi, 2016). Furthermore, the participation of newlytrained teachers in school and district-wide workshops and established professional learning communities (PLC's) fosters collaboration, team planning and teaching, sharing of resources, teaching methods, and discourse on strategies for addressing students' learning challenges. These forms of capacity-building (Suleiman et al., 2017) and ongoing professional learning opportunities (Aaltonen, 2019; Block, 2017; Brown, Friesen et al., 2020; Darling-Hammond et al., 2017; El Afi, 2019; Mintzes et al., 2013) create safer environments which encourage the application of best practices gained during their initial teacher training.

The findings also identified some system-wide institutional and teacher factors as barriers to teachers' application of student-centered strategies gleaned from their professional training, thereby negatively impacting their classroom practice. Examination pressures (Masood & Hameed, 2019); constant pressure to complete curriculum (Khalid et al., 2021); student misbehavior (Gan, 2013; Marcias and Sanchez, 2015; Uysal, 2012), limited classroom management skills of some teachers (Dube, 2020; Hastings, 2021; Oduwaiye et al., 2017; Rife

Oman, 2019), limited mentoring, and inconsistencies in subject-specific approaches (Simon, 2014) negatively influence program graduates' instructional practices.

To conclude, the findings of this study are to a large extent in harmony with existing literature. For the most part, the findings provide empirical validation for the criticisms and previous observations made by teacher candidates, teacher educators and other stakeholders regarding program components that need strengthening. In the final chapter, the study's implications are discussed in light of the theoretical approaches used to guide the study. Potential limitations and recommendations for practice and application are also explored.

<div align="right">290</div>

## Chapter 5: Implications, Recommendations, and Conclusions

### 5.1 Introduction to the Section

Teacher quality depends on the quality of formal training prospective teachers receive prior to their entry into the teaching profession (pre-service) coupled with the pedagogical support provided while in service. Along the pre-service teacher preparation pathway model, college-based teacher educators utilize existing resources in the delivery of various courses within the walls of teacher education institutions and collaborate with other key stakeholders and professionals in the preparation of teacher candidates. The opinions, critiques, and perspectives of these stakeholders in the teacher education process regarding program input, process and output serve as meaningful feedback that teacher education institutions can utilize to identify possible gaps and make necessary modifications to various program components in a bid to enhance their effectiveness and overall program quality (Feuer et al., 2013; Kinkead-Clarke, 2015; Warrican, 2015). It is for this reason that institutions that prepare prospective teachers for classroom practice have been called upon throughout the literature to evaluate and redesign their programs. However, despite the call, many are slow to engage in systematic enquiries. One such institution is the Department of Teacher Education and Education Leadership (DTEEL) which, in collaboration with the Eastern

Caribbean Joint Board of Teacher Education (ECJBTE) has been offering an Associate Degree in Education (ADE) for more than a decade to potential primary and secondary school teachers. While some form of document analysis has been done by course instructors, this review has only focused on one minute part of program input and failed to provide a comprehensive picture of the overall impact of the program particularly in terms of how well it prepares teachers for schools and the extent to which they are satisfied with the professional experience. Although, still in its embryonic stage, a new bachelor's in

education (B.Ed.) degree program is now being offered to prospective primary school teacher candidates. Admittedly, the new program is informed by stakeholders' observations and criticisms which have deemed some parts of the ADE program ineffective. The researcher contends that such a vital initiative should be substantiated by the kind of data that would help to determine program impact and identify gaps and components which require strengthening.

Without strong empirical evidence gleaned from program graduates and other key stakeholders locally, it is likely that critical program shortcomings and gaps may be overlooked.

The overarching purpose of this concurrent triangulated mixed methods study was to evaluate the initial teacher training program with a view to determine its impact on program graduates' perceived level of satisfaction with the training received and level of effectiveness in the classroom post training. In keeping with Guskey's (2016) evaluation model, the researcher found it necessary to investigate the kinds of support structures that are available at schools and provided to newly-trained teachers to assist them through their early years in the profession and enhance their level of classroom effectiveness. Conversely, possible factors that negatively impact the teachers' classroom practice were explored. One main reason for program evaluation is to identify deficiencies or gaps in a bid to improving overall program quality. Hence, it was

necessary for the researcher to examine the challenges associated with the initial training program as well as suggestions for addressing these challenges, as perceived by program graduates, principals, district education and curriculum officers. Moreover, the dearth of research evidence to confirm a relationship between training and teachers' perceived level of satisfaction with the training received and effectiveness in the classroom is another reason for conducting this investigation. To achieve the research purpose, data were collected from a

sample of 112 program graduates using an adapted Likert scale questionnaire survey, interviews

and open-ended questions. Quantitative data collected was adequate to respond to the first two research questions. Qualitatively, data gleaned from open-ended questions and interview responses of participating school principals, district education officers and curriculum officers corroborated data gathered from program graduates. This was used to determine the extent to which the objectives of the initial training program are met; how well program components are fulfilling the professional needs of teacher candidates; and to provide a more in-depth understanding of the initial training from diverse perspectives, all in keeping with the theoretical framework which guided the study.

Throughout this investigation, the researcher ensured that the ethical integrity of the study was maintained and the trustworthiness of the data secured. Data were collected upon approval received from the University's Ethics Review Committee (UREC) and permission granted by the Ministry of Education in Saint Lucia to conduct research in public schools.

Detailed information about the study was provided to respondents and consent forms were filled out and signed in most cases, to demonstrate the willingness of all respondents. Additionally, faceto-face semi-structured interviews were conducted with teachers and school principals who confirmed their availability and willingness to respond to interview questions for the research.

Participants' identity and confidentiality of their responses were preserved.

In the previous chapter, data garnered from both quantitative and qualitative methods were integrated and presented in accordance with the five research questions the study sought to address. Furthermore, the main research findings were evaluated and interpreted in light of the theoretical principles and major tenets of a stakeholder, social cognitive, and systems theory used to build a strong theoretical foundation for the study. Returning to the literature was a necessary step as it allowed the researcher to compare and contrast the findings of the current study with

293

that of previous research to see where the findings were supported or conflicted. Another important reason for making connections with the broader literature and theoretical framework was to examine how the study's findings fit into the main theoretical constructs and concepts upon which this research was grounded. Where results seemed to have been in conflict with existing literature, potential explanations were provided.

In this final chapter, the researcher's primary purpose is to situate the research results into context and provide a description of how those results have adequately addressed the research problem and the research questions which the study examined. A description of how the study results fill the existing gaps in the literature, add to theory and support the theoretical framework identified in this investigation, is given. A summary of the main findings derived from an analysis and interpretation of the quantitative and qualitative data begins the chapter followed by a few study limitations. Next, the chapter discusses the findings in relation to the theoretical framework described in chapter two shadowed by an exploration of the implications of the study's empirical findings. Based on the results, some tentative recommendations for application and further research are proposed. A recapitulation of the study's major findings, its trustworthiness, and significance conclude the chapter and the dissertation report.

Summary    of    Research    Findings

Research Question 1

(a)    What are teachers' perceived level of satisfaction with the training received ?

(b)    What are teachers' perceived level of effectiveness  in the classroom following

their initial teacher training?

1. Level of satisfaction with initial training is generally high

2. Teachers are satisfied with the theoretical component of the program

3. School officials reported rich pedagogical content knowledge of teachers

4. Teachers are not satisfied with the practical component of the program and methods used by course instructors during program delivery

5. Teachers expressed displeasure with the assessment of their learning in terms of assignment quality and appropriateness

6. Level of effectiveness is perceived to be moderately high

7. School officials reported general satisfaction with teachers' performance

8. School officials' views on teachers' ability to provide differentiated instruction differ from teachers' perception

Research Question 2: What is the relationship between teachers' level of satisfaction with the initial training received and their effectiveness in the classroom?

1. There is a moderate positive relationship between initial training and teachers' perceived level of satisfaction with the training received

2. There is a moderate to high positive relationship between initial training and teachers' perceived level of effectiveness in the classroom

3. Both null hypotheses were rejected

Research Question 3: What are the challenges associated with the initial teacher training program?

1. Program is too theoretical and compact

2. Curriculum lacks classroom and cultural relevance

3. Insufficient emphasis on differentiated instruction and special needs education

4. Course instructors' failure to practice what they preach during course delivery

5. Insufficient practical teaching opportunities to bridge the theory-practice divide

6. Practicum period is too short to demonstrate growth prior to grading

7. Inadequate support and feedback from mentors and clinical supervisors

8. Lack of variety in assessment methods

9. Training does not prepare teachers for school realities

Research Question 4: What measures can be taken to address the challenges associated with the initial training program?

1. Redesign curriculum to make it more culturally relevant and responsive to school realities

2. There should be an explicit focus on inclusive education, differentiation, classroom management, curriculum training, lesson planning

3. Course instructors need to adopt more constructivist teaching methods; model teaching strategies being advocated

4. Mentors or co-operating teachers should be carefully screened and trained for their roles

5. The practicum period and program duration should be extended

6. Course instructors should use more performance-based assessment

7. Course instructors should model sound assessment practices during course delivery

Research Question 5

 (a) What forms of support are provided to newly-trained teachers to enhance their level of effectiveness in the classroom?

(d) What  possible factors negatively impact teachers' classroom practice following initial training?

Support provided to newly-trained teachers  to enhance their level of effectiveness in the classroom include:

1.   the provision of resources for active learning

2.   instructional support and feedback provided by principals and other teachers

3.   encouragement

4.   participation in professional development – professional learning communities (PLCs), workshops

Factors that negatively impact teachers' classroom practice include:

1.   examination pressures

2.   student misbehavior

3.   limited mentoring

4. teachers' limited classroom management skills

## 5.2 Study Limitations

Although this concurrent triangulation mixed methods research yields some results that are noteworthy, they should be considered against some potential limitations that may influence the interpretation of the study's results.

One important caveat for interpreting the research findings is that the study is limited in scope due to its focus. This mixed method study is limited to the Associate Degree in Primary Education program only and does not cover the program for secondary school students. It means therefore, that the generalizability of the study's findings is limited to only teachers who met the eligibility criteria and does not extend to all graduates of the ADE program. The use of a much larger population and sample would help to widen the scope and perhaps reveal a broader perspective and comprehensive understanding of the impact of the initial teacher training program.

Secondly, and related to the first, the data obtained in response to the fifth research question represent only the views and perspectives of a sub sample (N=14 teachers) from the entire population validated by 24 school directorates namely school principals, district education officers and curriculum officers. The relatively small number of teachers who participated in the interview potentially restricts the generalization of the results to other program graduates across the eight education districts in Saint Lucia. Perhaps the inclusion of more teachers from each education district in the interview would have possibly provided a broader picture of the kinds of support or lack thereof that teachers receive to facilitate their transition from initial training to actual practice as well as ensure their continuous professional development and instructional effectiveness.

The researcher hoped that principals of schools to which all research participants taught, would have taken part in this research study.   It was important to capture the voices of most, if not all these principals as they would have been able to provide useful information based on their interactions with and observations of the teachers' lessons.   Following numerous attempts to contact and encourage their participation, only 16 principals took time to share their perspectives on the initial teacher training program and its impact on the teachers' instructional practice. This was done by responding to semi-structured interview questions  through face-to-face or open-ended questions via email.  Consequently, the views of these principals cannot be used to confirm or validate the perceptions of teachers at all primary schools represented in the research.

**5.3 Implications**

In the ensuing section, the researcher discusses some important implications of the study with regard to practice, theory and policy. This is done with reference to the scholarly literature as well as the theoretical underpinnings in which this research is rooted.

The current study was undertaken in response to the numerous calls for reform in teacher education and to evaluate programs that prepare teachers for classroom practice.  A stakeholder theory, Bandura's social cognitive theory and a systems theoretical perspective were aptly suited for conducting this research. A stakeholder and systems theory in particular situate teacher education not as an institution that functions autonomously but as a system that requires the collaboration of multiple environments and stakeholders to effectively fulfill its mandate (König and Mulder, 2014; La Paro et al., 2018; Mark et al., 2005; OECD, 2019) and ensure its effective operations.  For teacher education to be fully understood, it must interact with environments such as schools, education districts and ministries of education in an effort to achieve the common objective of teacher effectiveness. Likewise, for evaluations of such programs to be

comprehensive it stands to reason that capturing the voices of various stakeholders in related environments is essential. Secondly, data gathered from key stakeholders involved in the teacher preparation process facilitated the triangulation and corroboration of data thus contributing to the trustworthiness of the results. Not only did the data respond adequately to the five research questions examined but it also contributed to the achievement of the research objectives and purpose.

Another strength of the study lies in the diversity of perspectives obtained to develop a better understanding and appreciation for the operations of teacher training institutions and the process involved in preparing future teachers. Initial claims regarding the quality of training offered in the ADE program are either confirmed or countered. One significance of the research is that it bridges the existing research gap. Teacher educators and organizations that support the professional development of teachers now have empirical data which they can utilize to re(shape), design or re-engineer teacher training in Saint Lucia and the wider region particularly in terms of its input and process.

Furthermore, situating this study in the principles, constructs, concepts and tenets of a stakeholder, social cognitive and systems theory proved to be quite beneficial in numerous ways. The theoretical framework served as a useful guide which assisted the researcher in positioning this research in established theories, and this contributed to the meaningfulness and generalizability of the findings. Additionally, every aspect of the research process was linked in some way to the theoretical framework. For instance, the choice of research approach and design, data collection methods and sources, the kinds of data gleaned as well as the data analysis

techniques employed were all guided by the theoretical framework which evidently served as the focus for the research and the problem under study.

In keeping with a stakeholder and systems theory, the findings of this mixed-method concurrent triangulation research design have several practical implications for various elements or stakeholders in the teacher education system as well as for teacher education policy.

Implications for Department of Teacher Education and Joint Board of Teacher Education

One of the major contributions of this research is that it provides much needed empirical evidence on the impact of the two-year initial teacher training program, how program graduate themselves perceive the professional experience in terms of its various components. Given that the Associate Degree Program had not previously undergone any kind of rigorous evaluation, the data is critical as it will evidently   help to inform the redesign of and development of new programs to ensure more effective teacher preparation in Saint Lucia and across the English- speaking Caribbean.   Thus, the findings of this study pose curricular implications for all four program components examined:   program structure and content, program delivery, practicum and assessment.

*Program Structure/Content*

The findings of the current study confirm previous empirical studies (Erisen & Katmer-Bayraki, 2016; Redman, 2015) which speak to the need for balance between theory and practice in teacher preparation.  The heavy theoretical base of the Associate Degree Program as perceived by program graduates and other school officials must be addressed in teacher education curricular if the training programs are to prepare prospective teachers who will demonstrate rich pedagogical content knowledge as well as strong pedagogical skills.

The lack of classroom and cultural relevance reported in some courses and the limited focus on differentiation help to explain the reason for the great difficulty experienced by new

teachers in dealing with disruptive children and those with exceptional learning needs.  With increased student diversity in today's classrooms, future teachers must be prepared to create favorable learning environments for diverse student populations (Darling-Hammond, 2017; Taylor et al., 2016) and employ various strategies for establishing positive relationships with the families of their charges (Knight-McKenna et al., 2017). They need teacher educators (both school and college-based) to demonstrate culturally responsive teaching methods (Lambert and Smith, 2016) within the walls of teacher education institutions and during their field experiences at schools. Consequently, a clear focus on inclusive education and culturally responsive pedagogy should no longer be considered an option for teachers in training but an imperative component of teacher education curriculum today.

School principals, district education officers, curriculum officers and program graduates themselves express a need for additional support and training in differentiating instruction. Surprisingly, program graduates' perception of their ability  to differentiate instruction (M=4.06, Std = 0.774); and employ a range of resources to cater to student diverse learning styles (M =4.31, Std = 0.644) received high ratings.  The researcher cannot fully explain the reason for the conflicting results obtained but to suggest that perhaps teachers have varying levels of confidence in planning and executing differentiated lessons particularly in ways that would result in active participation and meaningful   learning by all students in the classroom.  Perhaps an entire course should be devoted to differentiated instruction  coupled  the integration of various techniques for working with diverse learners in  all courses.  A similar consideration can be given to address the

lack of training in national curricular that future teachers are required to implement in school settings.

*Program Delivery*

An important feature of a culturally responsive pedagogy entails the engagement of teacher candidates in a range of collaborative and interactive strategies that allow for the exploration of practical solutions to challenges they are likely to face in real classroom settings. This studentcentric constructivist approach facilitates teacher candidates' sound grasp of theoretical knowledge as opposed to mere regurgitation of material obtained from copious lectures, that according to the respondents are utilized by many teacher educators to cover course content.   In addition to culturally responsive teaching, a socio emotional learning framework (DonahireKeegan et al., 2019) that teacher education programs can utilize to prepare teachers in a manner that equips them to cater to the socioemotional needs of diverse student populations should be considered.

From a social cognitive theoretical standpoint, it appears that some aspects of the 'process' particularly as it relates to the methods used by course instructors in the delivery of courses, are flawed.  Not only do respondents call for more opportunities for practical teaching in real classroom settings, but also expect their instructors to practice what they preach. The same methods and strategies employed by course instructors to equip teacher candidates with content knowledge or the 'what' of teaching, may not be as effective when teaching them 'how' to teach. Similarly, program graduates desire for their course instructors to model sound assessment practices as it is critical to developing their assessment literacy (Doman, 2018).  In keeping with Bandura's Social Cognitive theory, teacher candidates can demonstrate better pedagogical skills when they observe their instructors' explicit modelling of various teaching strategies and

approaches during course delivery. In light of this, one major implication of this study points to the need for teacher education programs to review or strengthen its policy on program delivery to ensure an explicit emphasis on teacher modeling of instructional strategies and sound assessment

practices throughout teacher preparation. Regular program monitoring is necessary to ensure adherence and provide opportunities for professional development in areas where some teacher educators require professional training.

*Practicum*

The findings also has implications for the practical component of the program in terms of the model used, its structure and duration.  Program graduates value the opportunities provided during the practicum to transfer theory into practice. However, they expressed strong displeasure with its structure claiming that the practicum came in too late in their training. Also, the 10 weeks allotted to the practicum is perceived to be too short as according to the respondents did not give them sufficient time to grow and develop better planning and teaching skills (Araya, et al., 2020). School principals, district education and curriculum officers share the same view.

An urgent call for the reconceptualization and reimagining of the practicum is made.  A more effective field-based practical teaching model that allows teacher candidates more opportunities and experiences in diverse classroom settings, as well as sufficient time for engagement in continuous critical reflection of their practice, is necessary.  With increased practical teaching opportunities, teacher candidates get to know their charges better in terms of their learning styles, interests, experiences, strengths and needs and are better able to make sound instructional decisions to cater to student diversity. Such practical teaching model that puts learners at the center of instruction; acknowledges their cultural and linguistic backgrounds and experiences in all aspects of learning, is consistent with a cultural relevant pedagogy (Lubin et al.,

2020). Pre-service teachers in a study conducted by Stites et al. (2018) hold a similar view and perceive themselves as needing additional development to be fully prepared to plan and

implement instruction that meets the needs of all students. It is through teacher candidates' extended immersion in authentic classrooms and their observations of exemplary instructional practices (Easley, 2020) that they best learn and implement teaching approaches and behavior modification strategies; assess the efficacy of these instructional provisions; and make necessary adjustments to enhance teacher performance and improve student learning outcomes.

Another important implication derived from the research findings speaks to the support and mentorship provided to teacher candidates during their clinical and practicum period. The findings suggest that it is possible that many co-operating teachers do not fully understand their role or lack mentoring skills, and as a result fail to provide the kind of pedagogical support and guidance needed for teacher candidates to demonstrate improvement in their teaching practice. The traditional term, 'co-operating teacher' used over the years should be replaced by a more expansive concept (classroom-based teacher educator) with a clear delineation of their institutional and pedagogical roles in the professional development of new teachers. This would therefore mean that a more structured and systematic approach must be employed by teacher training institutions in selecting classroom teachers to function as mentors since teacher candidates need classroom-based teacher educators to model good teaching (Dudick, 2016). The findings further propel the Department of Teacher Education in Saint Lucia to move beyond the ineffective one half-day meeting for co-operating teachers to a more structured training and possibly shortterm courses for mentors to equip them with the skills and tools needed to fulfill their role more effectively during clinicals and the practicum period.

*Assessment*

Another component of the teacher education program for which the findings have implications is assessment.   The findings indicate some gaps in the assessment methods

advocated in the various courses, teacher educators' actual assessment practice and the Joint Board of Teacher Education in measuring the learning, skills, pedagogical knowledge, and teaching dispositions of future teachers.   The use of the semester examination is believed to be inadequate; encourages rote memorization and regurgitation of information (Doman, 2018); and contributes to college-based teacher educators' tendency to adopt teacher-centred approaches in the delivery of courses (Pitsia et al., 2021; Ramsay-Jordan, 2020). This finding may help in reviewing existing assessment policy and regulations at both the Joint Board and college-wide level.   It also has implications for curriculum or course development particularly in terms of the methods to be used by course instructors to assess and monitor learning and teacher candidates' professional growth. The current 60/40% ratio allotted to coursework assignments and final examination respectively might need to be revisited to show a much greater emphasis on formative assessment that is accompanied by meaningful and timely feedback throughout the duration of the program.   Having a course outline or syllabus does not mean that teacher educators will actually employ the methods outlined to assess teacher candidates, therefore it is important that the Department of Teacher Education develop structures to monitor course delivery and assessment practices to ensure alignment.

Implications for Teacher Educators

There is mounting research evidence which points to the need for programs to prepare teachers who are more culturally responsive to their students' diverse learning styles, needs,

interests, talents, cultural and linguistic backgrounds. However, it is very unlikely that such a goal can be realized if teacher educators themselves are not culturally responsive in their practices during initial teacher preparation.  Teacher candidates  need to observe how their

course instructors consider their prior knowledge, beliefs and previous assumptions about teaching; their learning styles, needs  and diverse cultural experiences in the teaching learning process.  If teacher educators  fail to incorporate different strategies that match teacher candidates' varied learning styles and validate their experiences, it becomes extremely difficult for the latter to plan and deliver classroom instruction that caters to the diverse needs and styles of their future learners.   Since college-based teacher educators were not invited to participate in this study, it is not possible to draw conclusions beyond the scope of the sample. However, based on the data, it can be surmised that college instructors need some training in teacher education and culturally responsive pedagogy either prior to appointment or on the job, to better understand and implement their role as professionals and teacher educators. Another way of ensuring teacher educators' professional development is by becoming a teacher educator- researcher, one of 3 typologies of teacher educator researcher disposition conceptualized by Tack and Vanderlinde (2016).  By investigating their own practice, college-based teacher educators can develop a better understanding of how their student teachers respond to and are affected by their teaching. In turn, they can use the findings to transform their methodologies, and to strengthen areas that can more effectively support teacher candidates (Tack and Vanderlinde, 2016). This practical implication is in keeping with the competencies that teacher educators must possess (AACTE, 2018)  if they are to remain current in their practice and prepare future teachers more successfully.

The provision of effective and meaningful formative feedback is ubiquitously acknowledged as an essential ingredient in teacher mentoring and the teaching learning process

in general.  Program graduates' differing views about the frequency, type, quality and usefulness of feedback received from both college supervisors and classroom-based co-operating teachers

during the practicum possibly signal some inconsistencies that need to be urgently addressed.  It cannot be taken for granted that all college supervisors or classroom-based teacher educators have knowledge of various mechanisms to give feedback to teacher candidates in ways that will benefit their lesson planning and implementation and ultimately contribute to their effectiveness. For feedback to be effective and fulfill its purpose during the clinical and practicum, it is necessary that both college-based and school-based teacher educators develop and utilize a more dialogic approach to the provision of feedback.

One finding that resonates in this research is the call made for college-based teacher educators to vary their teaching methods and to practice what they preach.  The need for modeling cannot be overemphasized.  In an effort to increase future teachers' likelihood of implementing student-centered pedagogies, to develop their understanding of those strategies and how they can be applied in real classroom settings, teacher educators need to make a paradigm shift and model the approaches they advocate during teacher preparation.

Implications for School Principals, District Education Officers and Curriculum Officers

Newly- trained teachers require various levels and forms of support to help them transition from being teacher candidates to full time classroom teachers.   The tendency for program graduates to shove aside some of the best practices learnt during initial training when appointed in teaching positions can be linked to previous observations made (Dube, 2020; Marcias and Sanchez, 2015). This  confirms that the ideals of teacher preparation are often replaced by the harsh realities of school life.  The apparent disconnect between what is learnt

during initial teacher preparation; expectations of newly-trained teachers and what is encountered in the real classroom (Bano et al., 2019) must be addressed at a system wide level.

It is for this reason among others that researchers have advocated for strong induction support programs that are ongoing, collaborative and reflective of best practices with varying episodes of follow up sessions (Kearney, 2017; Knight-McKenna et al., 2017). As a matter of fact, for new teacher induction programs to be effective, schools and education districts must collaborate to develop policies on new teacher orientation, new teacher induction, and continuous professional development of new teachers (Department of Education, 2016; Kearney, 2017).

Implications for Policy in the Teacher Education Process

The findings of this mixed method research also have implications for policy development and implementation at a system-wide level. Consistent with the theoretical framework upon which this mixed method research was grounded, an implication of the research results speaks to the establishment and maintenance of effective systems of partnership among teacher training institutions, the Ministry of Education, schools, departments of education as well as other stakeholders that are deemed to have an interest in the training and professional development of teachers. This implication is also seen as an imperative for the re-engineering of teacher education in producing better quality teachers for schools (Department of Education, 2016; Fletcher et al., 2021). One way by which this partnership can be built is for these stakeholders to jointly develop and implement policies that clearly articulate and embrace the interconnectedness of all key players in the process and how working together will contribute to the attainment of the aims and objectives of each individual element or stakeholder as well as the overarching vision of the education system.

Effective mentoring is crucial to helping teacher candidates develop sound pedagogical skills and appropriate teaching dispositions that are essential to the teaching profession. Program

graduates in this research, indicated that the support received from some of their mentors (co-operating teachers and some college supervisors) was inadequate, meaningless and demotivating. Corroborated data suggest that program graduates encounter some challenges associated with classroom management, differentiated instruction and lack of instructional support that negatively impact their teaching practice. These challenges can be addressed if policy guidelines are developed to allow for effective mentoring at each of the four phases which follow. Policy documents can address (a) mentoring for teacher candidates, (b) orientation for newly-trained teachers, (c) induction for newly-trained teachers, and (d) professional development for newly-trained teachers. Each policy document can be prefaced by a clear policy statement, rationale and goal and include elements of the best practices for professional development. With practicum being an integral part of the teacher preparation process and its dependence on schools and education districts, it is critical that close partnerships are cultivated. This move will not only create more synergistic connections among other key stakeholders but will inform the teacher education curriculum and calendar to that it coincides with the regular academic year of the public school system.

The identification and selection of school-based teacher educators or mentors should be a joint responsibility of the teacher education institution school principals, district education officers and subject curriculum specialists.

## 5.4 Recommendations for Application

Based on the findings of the current study, the researcher finds it appropriate to make some plausible recommendations for teacher education policy makers and programs.

Considering the findings of the current study regarding the program's perceived compact nature, weak pedagogical base and the numerous challenges encountered by teacher candidates during their professional experience, it is necessary that initial teacher training be extended to 4 years with a year-long internship. As such, the proposed length of the program will be in alignment with the duration of effective training programs in many OECD countries. Level of certification should now move beyond the Associate Degree to a bachelor's in education degree.

Changes in the initial teacher training program curriculum are recommended to respond to various socio-economic, emotional, cultural pressures and educational challenges facing teachers today. The program curriculum can be strengthened to reflect culturally responsive and inclusive education; differentiated instruction; and building effective home-school connections. For instance, the teacher training institution can form partnerships with some community-based organizations and groups of which children are part to gain an insight into their funds of knowledge and cultural experiences learners bring into the classroom. Also, a clear focus on training in national curricula is an imperative to develop teacher candidates' knowledge and understanding as they transition to the classroom. Forging stronger ties and connections with the Curriculum and Materials Development Unit (CAMDU) of the Ministry of Education and curriculum officers will help to ensure that teacher candidates are more knowledgeable, confident and better prepared to implement the national curriculum, adapt instruction and employ recommended approaches and strategies that cater to student diversity and meaningful learning for all.

311

Furthermore, the transformation in education and instruction brought about by the COVID-19 pandemic makes it more urgent for the program to revisit the stand-alone Information and Communication Technology (ICT) course to explore various technology- mediated teaching learning platforms. If teachers are required to integrate 21$^{st}$ century literacies and various teaching platforms in instruction during their field-based assignments, it stands to reason that teacher preparation reflects the very same modalities not only for instruction purposes but to demonstrate and discuss various virtual platforms and activities that teacher candidates can utilize to deliver instruction to their students.

The completion of numerous courses in the primary program in three semesters followed by a 10-week teaching practice at the end of the training and just prior to graduation is not only perceived as fragmented but obsolete and ineffective as revealed by the results of the current research as well as other researchers in the scholarly literature. The majority of the participants including principals and district education officers express the view that the 10-week practicum is insufficient for teacher candidates to demonstrate strong pedagogical skills. Consequently, a full year internship characterized by an integrated, field-based clinical practicum model is recommended as a more effective approach to produce teachers who are competent,

pedagogically sound, and culturally responsive in their teaching. To illustrate, during the first 3 years, college-based teacher educators can develop coursework assignments that are connected more intimately with clinical experiences. Teacher candidates can be allowed countless opportunities to work with various groups of children at different schools during their field experiences, try out various teaching techniques, assessment and classroom management strategies, engage in critical reflection in light of the learning exposed in their courses and evaluate the applicability of the strategies in the various contexts. In this model of internship,

312

clinical experiences begin in the first year, continues into the second and third year and culminates in a year-long immersion in year four. Such practice-based model of internship which represents a departure from the norm requires teacher education programs to form closer partnerships with education districts, the ministry of education, schools and other key stakeholders in developing an extended internship program.

As newly-trained teachers transition to their first year in the teaching profession, and to facilitate their application of the theoretical knowledge gained during their two-year professional experience, it is strongly recommended that continuous support be provided.  This type of support goes beyond the traditional one or two-day orientation, to an intensive strong induction or mentoring program that lasts for an entire year or more.  The recommended induction program should mirror some of the best practices in teacher professional development such as:

(1) training in instruction and national curriculum

(2) assignment of subject-specific mentors or coach

(3) time for sharing and reflection

Given the fact that mentors or school-based teacher educators play a significant role in the professional growth of newly-trained teachers, it is necessary that  institutions that provide initial teacher training  collaborate with principals, district education officers and other  primary stakeholders to develop and adopt a more rigorous and methodological approach in preparing mentors.  This method will ensure high quality placements as opposed to the haphazard assignment during their field-based practical episodes. The approach can entail initial interviews with the classroom teachers identified by the school principal and other school directorates followed by periodic classroom observations. The purpose is to select a cadre of teachers who are both willing and committed to serve as mentors; who demonstrate patience, good

313

interpersonal and communication skills; whose instructional practices reflect exemplary teaching; and who hold views about teaching that align with the expectations of the program. These learnerrelated, self-related and profession-related teaching dispositions according to Mpofu and Nthontho (2017) are necessary for mentors to demonstrate to new teachers. Upon selection and prior to practicum, mentors should participate in a formal mentoring program that focuses on various dimensions of the instructional process such as lesson planning and delivery, provision of constructive feedback; classroom management strategies, and differentiated instruction. The program should also train mentors to cultivate positive relationships with newly- trained teachers and various ways by which the latter can work with families. In order to allow exemplary teachers sufficient time to perform their mentoring role more effectively, a reduced workload and some sort of reward or incentive are recommended. Since attention is increasingly being paid to mentor preparation, it is imperative that teacher training programs and school administrators invest sufficient time and resources in supporting the growth of mentors.

The researcher strongly recommends that the teacher education institution strengthens partnerships with school districts and departments of education (curriculum officers- subject specialists). These partnerships provide a professional platform for key stakeholders to engage in critical dialogue regarding expectations of teacher candidates. This is to ensure alignment of expectations between school administrators and directorates with benchmarks or ideals of the initial teacher education institution. Such collaboration is critical particularly during the proposed full year internship where teachers will be required to hone their pedagogical skills through their immersion in the practical teaching experience during which time, they receive feedback from both classroom and college-based teacher educators as well as other professionals in the teacher education process.

314

## 5.5 Recommendations for Future Research

This study raises several opportunities for future research that can potentially shed further light into the input, process, and output of teacher education system.

First, this study, being the first comprehensive empirical evaluation, sets the stage for evaluation of other programs that are being offered whether jointly or exclusively by the Department of Teacher Education in Saint Lucia. For instance, a similar study can be undertaken to examine the perspectives of secondary school graduates who have completed the ADE program. Their views and perspectives, combined with those of the primary school teachers, will provide additional feedback, more depth and validation regarding the impact of the ADE program and in a more holistic way.

Similar to other studies, levels one to four of Guskey's (2016) evaluation model as expounded in chapter two, were examined in this research. Level five which focuses on the impact of training on students' learning outcomes would require obtaining information from students' academic records, report books, work samples and conducting interviews with students. Also, observations of teachers' instructional practices would require more time and the researcher's presence in the classroom. Ideally, feedback obtained from all five levels would be useful in completing the evaluation cycle. However, given the focus of the current investigation and time constraints, this was not possible. Further research is necessary to explore teachers' instructional practices to obtain a more realistic picture of how their practice, post initial training, impacts students' academic achievement more holistically.

A comparative study can be undertaken to examine the instructional practices of program graduates who had teaching experience prior to formal teacher training and those who did not. Data can be used to establish a relationship between input (prior teaching experience) and output

315

(teachers' instructional effectiveness).  Such data could reveal vital information to inform entry requirements for teacher training as well as the necessary support to facilitate the transition of newly-trained teachers from initial training institutions to the real classroom.

Another recommendation for further research is to determine the perspectives of university or college-based teacher educators for a broader understanding of the challenges they face during teacher preparation as well as their professional needs.  Capturing the voices of course instructors and college adjunct staff, as other primary stakeholders in the teacher education process is critical to understanding their andragogical practices and their impact in preparing future teachers.

The apprenticeship model of practical teaching is pervasive in teacher training programs across the globe.  In this model as mentioned in chapters one and two, inexperienced teachers are assigned to a more competent teacher to provide the guidance, support and mentoring that is necessary for the new teacher to function in the classroom.  It is well established that experienced mentors play a quintessential role in the professional development of new teachers and in building their teaching efficacy for classroom success. However, the findings of this study suggest that perhaps the objectives and expectations of teacher education officials regarding the current mentoring program are not being fully realized.   Hence, a descriptive survey can be conducted to determine whether the current mentoring approach is effective.   Additionally, the views, experiences and challenges school-based teacher educators encounter as mentors during the practical teaching period can be explored.  Evidently, such a study will garner significant data that will inform the selection and recruitment of school-based teacher educators, another important primary stakeholder. Furthermore, the data can point to how the mentorship program can be strengthened to better prepare future teachers.

316

Mentor feedback has been perceived as the foundation of pedagogical learning however, it must be useful, constructive and corrective to ensure teachers' growth and confidence in their ability to teach while still enrolled at pre-service institutions and when appointed to the teaching profession.  The findings of this study confirm program graduates' need for more constructive feedback to develop their pedagogical skills and promote deeper critical reflection of various dimensions of their lessons.   However, those conversations that are held between mentors (co-operating teachers) and mentees (teacher candidates) have not been examined in a local context to determine their effectiveness in teacher training and professional development. In light of this, an investigation into the nature of mentor-mentee conversations that occur before and after lesson observations during field-based assignments will yield invaluable insight into the manner in which feedback is provided to teacher candidates, the quality of the feedback in promoting teacher development, and how the professional conversations can be improved.

Supporting  program graduates as they transition from initial teacher training to practicing teachers, needs to be more thoroughly investigated with a larger sample. Based on the findings of the study, it appears that the one-off workshop approach used to induct new teachers upon their entry into the teaching profession warrants empirical investigation.  A large-scale study can be conducted to determine the perceptions of newly-certified teachers of the induction programs used at schools and education districts in Saint Lucia, how these programs impact their teaching practice and suggestions for improvement.

317

## 5.6 Conclusions

The Department of Teacher Education and Education Leadership (DTEEL) in Saint Lucia like several other teacher training institutions in the Caribbean and internationally, are continually being called upon to engage in teacher education reform in light of the huge emphasis placed on

program quality and its influence on the classroom performance of program graduates; increased accountability;  introduction of new learning standards for elementary students;  and revised accreditation standards for teacher education globally. It has been clearly established that programs that prepare and train teachers must undergo systematic evaluations to judge their complete worth and to determine the extent to which program goals and objectives have been met. The DTEEL has embarked upon some level of reform by offering a bachelor's degree in primary education. However, the Associate Degree in Education Program, as far as the researcher is aware had not undergone any systematic evaluation.

Therefore, this mixed methods concurrent triangulation study sought to evaluate the initial teacher training provided to teachers who successfully completed the program during the period 2012-2019. The aim was to encourage the program graduates to reflect and share their views and perspectives on their professional experience in terms of the various courses taken, the delivery of the courses, assessment of their learning, and the practicum. This was used to determine their perceived levels of satisfaction with and effectiveness in the classroom following initial or preservice training.   One dependent and two independent variables were identified in this study. The independent variable, initial training, is described as a process of education and skill development that pre-service teachers undertook as part of their formal teacher education process in the Associate Degree in Education Program.  Level of teacher satisfaction, a dependent variable was determined by measuring program graduates' perceptions of the extent to

318

which they think that the training provided met their expectations and training needs with respect to four main program components: program content, delivery, assessment, practical teaching.

The second dependent variable, level of teacher effectiveness, measured the quality of the initial teacher training program in terms of how program components contributed to the teachers' perceived effectiveness or success in their respective classrooms.

Additionally, program graduates were asked to indicate the ways in which they felt the program was deficient and did not meet their training needs. Suggestions for enhancing the readiness and effectiveness of future primary school teachers were also requested. Research evidence confirms that new teachers need continuing support when appointed because they would not have acquired and developed all the competencies and pedagogical skills within the walls of initial teacher training institutions. It was necessary that the study also captured the various ways that these teachers are supported at their schools and education districts to facilitate the application of their theoretical knowledge gained from initial training to their classroom practice.

Upon obtaining approval from UNICAF's Research and Ethics Committee (UREC), the study was conducted with strict adherence to ethical guidelines as described by Creswell & Creswell (2018). This included obtaining informed consent from all participants, protecting their identities, and respecting their freedom to withdraw from the study at any given point during the data collection process. Debriefing forms were emailed to obtain approval to use the data for the research. A validated questionnaire survey was used to obtain quantitative data from 112 program graduates while qualitative data were gleaned from open-ended survey questions and focus group interviews held with 14 teachers, 16 school principals, six district education officers and 2 curriculum officers. The study supports the views espoused by many researchers

319

regarding the efficacy of a mixed-methods design in providing a more holistic and comprehensive understanding of the phenomenon being examined. Admittedly, combining quantitative data with

qualitative data turned out to be quite time consuming. However, the results confirm the suitability of a mixed methods triangulated research design in providing data that is both robust and trustworthy in responding to the five research questions explored in this study.

In this study, respondents perceive their initial training to be highly satisfactory overall, and as expected, the Pearson bivariate correlation analysis shows a moderate positive correlation between initial training and respondents' perceived level of satisfaction with the training received. This is consistent with previous finding (Paposa & Mohait Kumar, 2019; Sahoo & Sharma, 2018). School principals and other school officials are also generally satisfied with the training noting areas of major strengths including rich pedagogical content knowledge, positive attitudes towards teaching, high levels of enthusiasm exhibited by newly-trained teachers. Although their ratings regarding the teachers' readiness to teach differ, an overall Mean of 6.71 or almost 70% confirm teachers' perceived level of satisfaction with the program. Nonetheless, quantitative data revealed perceived deficiencies in the pedagogical and delivery components.

Despite the program's perceived weak pedagogical dimension, the findings show a positive correlation between initial training and respondents' level of effectiveness in their classrooms (Gautam & Ramashia, 2017; Neville, 2020). A few factors which contributed to teachers' perceived level of effectiveness were echoed by school principals and other participants. School principals, district education and curriculum officers felt that newly-trained teachers take initiatives in ways that are believed to positively influence their students' behavior

320

and learning. While some school principals expressed high satisfaction with the performance of some of the teachers at their school, others expressed mixed views about their level of effectiveness. All teacher participants completed initial training and have been holding teaching positions at an infant or primary school for more than a year (on average) at the time of data

collection.  Quite interestingly, this finding might very well signal positive program impact but can also acknowledge other environmental factors that may have interacted with formal training to positively influence the classroom teachers' instructional practice.  The significance for teacher education institutions to collaborate and partner with key stakeholders is underscored. Moreover, the researcher hypothesized the non-existent of a relationship between initial training and teachers' perceived levels of satisfaction and effectiveness in the classroom. Both hypotheses were rejected as the findings revealed a positive moderate to high relationship respectively.

Like previous investigations, the findings of the current study show that the program is too theoretical, compact and lacks a strong pedagogical base. The lack of classroom and cultural relevance perceived in some courses; insufficient attention given to inclusive education and curriculum training;  course instructors' failure to model the strategies they advocate; inadequate mentor support and feedback  during  the clinical period; lack of variety in assessment methods; and the program's failure to prepare future teachers to effectively deal with the  realities of school are some major deficiencies perceived by program graduates, all of  which are endorsed by school principals and education officials.

Suggestions for addressing the challenges or limitations were also solicited from all study participants.  Qualitative findings point to the need to revamp teacher education curriculum to show a balance between theory and practice; an explicit focus on culturally responsive

321

pedagogy;  training  in  national  curricula;  inclusive  education;  classroom  management; differentiated instruction; home school partnerships; as well as other areas that teachers require further training.

In terms of course delivery, it is suggested that college-based teacher educators adopt more constructivist approaches and model teaching and assessment strategies they advocate. To ensure that teacher candidates are better prepared pedagogically, the practicum should be restructured and extended to allow more time to interact with and teach children of varied abilities in different classroom settings.  Mentors should be carefully screened and trained to perform their roles more effectively during the practicum.  Finally, program graduates want their course instructors to use more performance-based methods to assess their learning and growth as future teachers.

With reference to the need to provide new teachers with ongoing support and encouragement particularly during their first few years on the job (Darling-Hammond, 2017) the findings indicate that most program graduates are given some instructional materials and support to enhance the teaching learning process and participate in professional learning communities at their schools and education districts.  Contrastingly, students' diverse needs, their misbehavior, and the exam-driven nature of some schools (Bano et al., 2019) make it difficult for new teachers to apply student-centred teaching strategies into their practice. There is consensus that the two-year initial training does not adequately prepare teachers for the realities faced in today's schools.

The study's findings provide both theoretical and practical implications for teacher education, school administrators and policy makers on the kinds of restructuring and adjustments

322

that the Department of Teacher Education in Saint Lucia and by extension others in the Eastern Caribbean need to make to improve teacher quality and respond more adequately to the professional needs of future teachers. The findings provide strong support for the use of a stakeholder, social cognitive and systems theoretical paradigm in conducting empirical investigations particularly those that evaluate professional development programs.  Based on the

findings, it can be concluded that the main deficiencies in various program components and in teacher preparation overall can be overcome by cultivating positive professional relationships and partnerships among key stakeholders or elements in the teacher education process.

The findings of this current study add to the existing literature related to the evaluation of teacher training programs in the region and international sphere, particularly given the three theoretical perspectives adopted in this research. The study has provided pertinent and invaluable data that can help to reshape and reengineer teacher education in St Lucia and across the Englishspeaking Eastern Caribbean. More specifically, the findings, coupled with recommendations for reform in program curricula, course delivery methodologies, program duration and structure, practical teaching model, and assessment practices all serve to initiate much critical discourse that is necessary for the strengthening of program components and the development of policy and practice in teacher education.

Based on the results, the Department of Teacher Education is now challenged to engage in systematic evaluation of its programs in a bid to assess their impact and determine whether the stated goal of teacher education is being met, to what extent and to identify possible ways of strengthening areas of deficiency. Backed by strong empirical evidence as opposed to mere observations, the results of this study will inform the tweaking of or refinement of the new bachelor's degree in primary education. Ultimately, the goal is to design a teacher preparation

323

program that is more rigorous theoretically and pedagogically; culturally relevant and responds to the ever-changing needs of teacher preparation and the increasing demands of the teaching profession. Of course, the reform in teacher education in Saint Lucia from its inception in the 1960s and onwards are notable and attempted to address the myriad of challenges that the

discipline and the education system faced at the time.   However, while some of these challenges have been addressed,   teacher effectiveness   and student academic performance remain a monumental challenge for the education system. A quality education system depends on high-quality teaching  that translates into an acceleration in students' learning outcomes and overall academic success.   High-quality teachers is contingent on high-quality teacher preparation and professional development.  Therefore, the feedback received from program graduates and other stakeholders should be used by the Department of Teacher Education to inform curricular changes and adjustments that are necessary to improve the quality of teacher preparation on the whole.   It is in light of this that the researcher believes that the value and significance of this research will not be fully realized unless the findings are shared with some key stakeholders.

Therefore, it is the researcher's intention to make an oral presentation of the research findings to the Department of Teacher Education as well as submit an electronic copy of the entire report for the library's online database.  A hard copy of the dissertation will also be presented to the Ministry of Education while a summary of the findings, forwarded to research participants via electronic mail.

324

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Appendix       A

REAF Form

UNICAF

| UNICAF UNIVERSITY RESEARCH ETHICS APPLICATION FORM DOCTORAL STUDIES | UREC USE ONLY: Application No: Date Received |
|---|---|

Student's Name:   Angelina Phera Polius

Student's E-mail Address:  pherapolius@hotmail.com

Student's ID #:  R1611D1962729

Supervisor's Name:  Dr. Ysuf Suleiman

University Campus:   Unicaf University Malawi (UUM)

Program of Study:    UUM: EdD - Doctorate of Education

Research Project Title: The Impact of a Training Program on Teachers' Perceived Levels of Satisfaction and Effectiveness at Primary Schools in Saint Lucia

1. Please state the timelines involved in the proposed research project:

Estimated Start Date: June  2019          Estimated End Date: August 2020

2. External Research Funding (if applicable):

   a. Do you have any external funding for your research?

      ☐ YES      ☑ NO

      If YES, please answer questions 2b and 2c.

   b. Please list any external (third party) sources of funding you plan to utilise for your project. You need to include full details on the source of funds (e.g. state, private or individual sponsor), any prior / existing or future relationships between the funding body / sponsor and any of the principal investigator(s) or co-investigator(s) or student researcher(s), status and timeline of the application and any conditions attached.

   c. If there are any perceived ethical issues or potential conflicts of interest arising from applying or and receiving external funding for the proposed research then these need to be fully disclosed below and also further elaborated on, in the relevant sections on ethical considerations later on in this form.

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## 3. The research project

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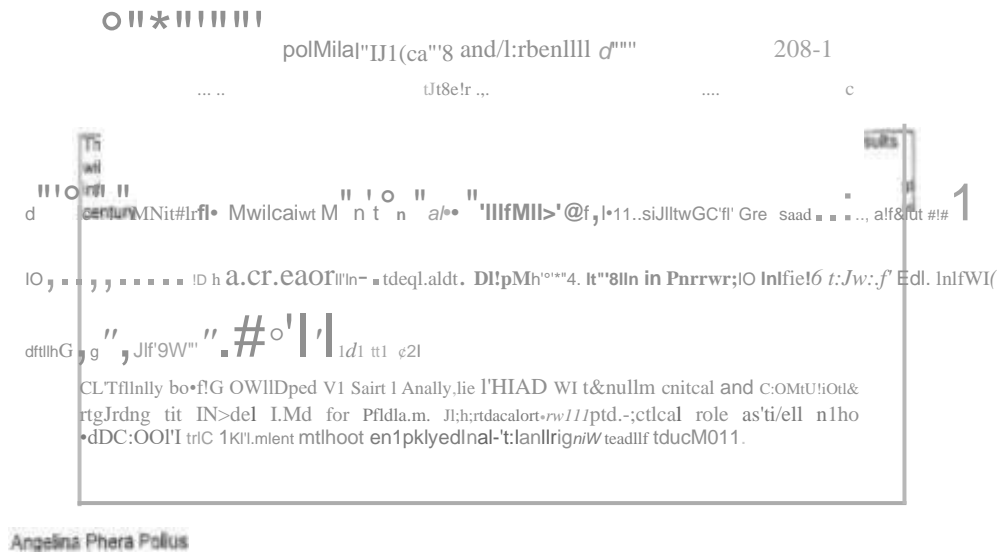
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Angelina Phara Pollus          R161101962

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student's Name:  ngetina Ptiera PolJus

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Da!o of Application: Maron 28,*2020*

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9. Further documents

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Angelina Phera Pal!us       R161101962

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Angelina Phera Polius                                                t                                    R161101S62

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Angelina Phera Polius    R161101952

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* Maturity age is defined by national regulations in laws of the country in which the research is being conducted.

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**5. Particioants:**

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·range    From                   To @]

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• Inclusio    ta | eachers who have successfully completed the 2 year initial trair

• Ex lust0cnten | Those who completed the Primary program but currently teach at a secondary

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Other relevant information (maximum 100 words):

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4. **Project execution:**

a. **The following study is an:**

☑ experimental study (primary research)

☐ desktop study (secondary research)

☐ desktop study using existing databases involving information of human/animal subjects

☐ Other

If you have chosen 'Other' please Explain:

b. **Methods. The following study will involve the use of:**

| Method | Materials / Tools |
|---|---|
| ☑ Qualitative | ☐ Face to Face Interviews Phone |
| | ☑ Interviews |
| | ☐ Face to Face Focus Groups |
| | ☐ Online Focus Groups |
| | ☐ Asynchronous Focus Groups |
| | ☐ Other * |
| ☑ Quantitative | ☑ Face to Face Questionnaires |
| | ☐ Online Questionnaires |
| | ☐ Experiments |
| | ☐ Tests |
| | ☐ Other * |

*If you have chosen 'Other' please Explain

Angelina Phera Pollus          R1611D1962

Appendix        B

UREC  Approval



UNICAF UNIVERSITY

**UREC's Decision**

| Name of Participant: | Angelina Phera Polius |
|---|---|
| Title of the Research project: | The Impact of Training Program on Teachers' Perceived Levels of Satisfaction and Effectiveness at Primary Schools in Saint Lucia. |
| Date: | 11.01.2019 |

Comments

Approved without revision or comments.

The student is advised to ask participants for their exact age and years of experience and then separate them into groups for statistical analysis.

Approved with comments for minor revision.

Student should also complete the list in REAF document.

**The student can proceed with her research project as it is approved by UREC.**

Not approved with guidance comments for moderate revision and resubmission.

Not approved with guidance comments for major revision and resubmission.

Appendix        C

Informed Consent

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## Informed Consent Form

### Part 1: Debriefing of Participants

Student's Name:     Angelina Phera Polius

Student's E-mail Address:    pherapolius@hotmail.com

Student ID #:    R1611D1962729

Supervisor's Name:    Dr. Ysuf Suleiman

University Campus:    Unicaf University Malawi (UUM)

Program of Study:    Doctorate of Education

Research Project Title:    The Impact of a Training Program on Teachers' Perceived Levels of Satisfaction and Effectiveness at Primary Schools in Saint Lucia

Date:

Provide a short description (purpose, aim and significance) of the research project, and explain why and how you have chosen this person to participate in this research (maximum 150 words).

The study aims to evaluate the initial teacher training program that teachers successfully completed during the period 2013–2015. It seeks to determine the impact of the training on teachers' perceived levels of satisfaction and effectiveness. Only teachers who have completed the 2-year training program and teach at a primary school in Saint Lucia will be eligible to participate in the study. The results will help to review the content, structure and delivery of existing programs or inform the development of new ones particularly the Bachelor's Degree in Primary Education Program that is currently being developed in Saint Lucia. Finally, the results will stimulate critical discourse and conversations regarding the model used for practicum, teacher educators' new pedagogical role as well as the selection and recruitment methods employed in appointing new teacher educators.

The above named Student is committed in ensuring participant's voluntarily participation in the research project and guaranteeing there are no potential risks and/or harms to the participants.

Participants have the right to withdraw at any stage (prior or post the completion) of the research without any consequences and without providing any explanation. In these cases, data collected will be deleted.

All data and information collected will be coded and will not be accessible to anyone outside this research. Data described and included in dissemination activities will only refer to coded information ensuring beyond the bounds of possibility participant identification.

I,    Angelina Phera Polius    , ensure that all information stated above is true and that all conditions have been met.

Student's Signature:    APolius

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## Informed Consent Form

## Part 2: Certificate of Consent

### This section is mandatory and should to be signed by the participant(s)

**Student's Name:** Angelina Phera Polius

**Student's E-mail Address:** pherapolius@hotmail.com

**Student ID #:** R1611D1962729

**Supervisor's Name:** Dr. Ysuf Suleiman

**University Campus:** Unicaf University Malawi (UUM)

**Program of Study:** Doctorate of Education

**Research Project Title:** The Impact of a Training Program on Teachers' Perceived Levels of Satisfaction and Effectiveness at Primary Schools in Saint Lucia

I have read the foregoing information about this study, or it has been read to me. I have had the opportunity to ask questions and discuss about it. I have received satisfactory answers to all my questions and I have received enough information about this study. I understand that I am free to withdraw from this study at any time without giving a reason for withdrawing and without negative consequences. I consent to the use of multimedia (e.g. audio recordings, video recordings) for the purposes of my participation to this study. I understand that my data will remain anonymous and confidential, unless stated otherwise. I consent voluntarily to be a participant in this study.

Participant's Print name: 

Participant's Signature: _____

Date:

### If the Participant is illiterate:

I have witnessed the accurate reading of the consent form to the potential participant, and the individual has had an opportunity to ask questions. I confirm that the aforementioned individual has given consent freely.

Witness's Print name: 

Witness's Signature: _____

Date:

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Appendix D

Level of Satisfaction and Effectiveness Questionnaire

Thank you for agreeing to participate in my research.

The purpose of this survey is to find out your perceptions of the Initial Training Program that you completed at the Division of Teacher Education and Educational Administration. You are not required to write your name on the paper. Be reminded that the information you provide will be kept confidential and will be used solely for the purpose of the research. Please respond to the statements and questions as honestly as possible as false information can affect the accuracy and validity of the research results.

**SECTION A: Demographic Information**
Place a tick in the appropriate box or indicate your response by writing on the line provided.
1.  Age: ………………….. years

2.  Gender: Male ☐    Female  X    ☐

3.  Graduation year:……December …..

4.  Name of school at which you currently teach ………………………………….

5.  Grade level currently being taught …………….

6.  Grade levels previously taught …………………………

7.  Did you have any teaching experience **before** receiving formal teacher training?

    Yes ☐            No ☐

8.  How long have you been teaching? ………………

9.  Highest Level of Education:  Associate Degree………….   Other:……………………

**SECTION B: Perceived Impact of the Initial Training Program**

Reflect on the Teacher Training Program that you completed in Primary Education. This will include classes in Educational Psychology, Math, Language Arts, Social Studies, Science, ICT as well as the Practical Teaching Component. Rate each Part using the 5- point scale provided. <u>Part 1: Level of Training</u>

In Part 1 of Section B, I want to find out how you perceive the training you received during the 2 years. To what extent do you agree with each of the following statements about the level of training received?

[1] SA-Strongly Disagree  [2] D-Disagree  [3] U-Undecided  [4] A-Agree  [5] SA-Strongly Agree

| NO | Statements | 1 | 2 | 3 | 4 | 5 |
|---|---|---|---|---|---|---|
| 1 | The 2-year training boosts my confidence in my ability to teach | | | | | |
| 2 | The training gave me a strong desire to try out new ideas and strategies in my future classroom | | | | | |
| 3 | The training made me more knowledgeable about the primary school curriculum goals | | | | | |
| 4 | Following the training, I developed a better understanding of my role as a primary school teacher | | | | | |
| 5 | The training made me more aware of the characteristics and needs of my students | | | | | |
| 6 | The training gave me a better understanding of what it means to differentiate instruction to meet the varying needs of my students | | | | | |
| 7 | The training increased my understanding of the different ways that students learn | | | | | |
| 8 | The training equipped with a variety of instructional strategies to promote active student learning and engagement | | | | | |
| 9 | The training exposed me to different ways to assess my students' learning in the subjects I teach | | | | | |
| 10 | The training adequately prepared me to teach all subjects at the primary level | | | | | |
| 11 | The training did not play a significant role in helping me adjust to my role as a new teacher | | | | | |
| 12 | Following the training, I felt well-prepared to teach  at the primary level | | | | | |
| 13 | The content knowledge I gained during the training was adequate to teach primary school children | | | | | |
| 14 | The training increased my knowledge of how to deal with students' learning styles | | | | | |

| 15 | During training, I learned how to vary instruction to better meet the needs of students | | | | | |
|---|---|---|---|---|---|---|

| 16 | I developed a more positive attitude toward teaching following the training than before | | | | | |
|---|---|---|---|---|---|---|
| 17 | The training increased my knowledge of best practices in each subject area | | | | | |
| 18 | The training equipped me with ways to better organize and manage my classroom to make it more supportive of students' learning | | | | | |
| 19 | Even after doing the ICT course during the training program, I still struggle with using technology to enhance my teaching | | | | | |
| 20 | The training exposed me to different methods of diagnosing students' learning needs | | | | | |
| 21 | The training program did not prepare me well to deal with the many challenges I face in the classroom | | | | | |
| 22 | The training was a key factor in helping me adjust to the teaching profession | | | | | |
| 23 | I believe the training prepared me well to teach concepts and skills to children at the primary level | | | | | |
| 24 | The 2-year training prepared me adequately to integrate different technologies into my teaching | | | | | |
| 25 | The 2-year training improved my ability to better manage student behavior for effective learning | | | | | |

## PART 2: Perceived Level of Satisfaction

The items in Part 2 seek to obtain information regarding your **level of *Satisfaction* with the Training Program in terms of its Content & Structure, Practical Teaching, Delivery and Assessment.**

**Use the scale below to rate your level of Satisfaction.**

**VD [Very Dissatisfied -1]    D [Dissatisfied -2]    SS [Somewhat Satisfied-3] S[Satisfied -2]    VS [Very Satisfied - 5]**

| NO | Statements | 1 | 2 | 3 | 4 | 5 |
|---|---|---|---|---|---|---|
| | | | | | | |

| 26 | The program was well organized | | | | | |
|----|---|---|---|---|---|---|
| 27 | The content of the different courses was relevant to my classroom needs | | | | | |
| 28 | A variety of teaching learning approaches and strategies were used in the delivery of the program | | | | | |
| 29 | The program offered up-to-date information about teaching | | | | | |
| 30 | My learning in the various courses was appropriately assessed | | | | | |
| 31 | During the program I was encouraged to participate in several engaging activities | | | | | |
| 32 | The resources and materials such as handouts, PowerPoint, articles, books, videos etc. used during classes were adequate | | | | | |
| 33 | The course lecturers made the atmosphere comfortable to share and discuss my learning, understanding and experiences | | | | | |
| 34 | The program offered adequate opportunities for me to plan and teach lessons in an effort to develop my practical teaching skills | | | | | |
| 35 | I was encouraged to discuss and find solutions to real-classroom problems | | | | | |
| 36 | I was given opportunities to implement what was learnt during the program in real classroom settings | | | | | |
| 37 | I was encouraged to collaborate with my fellow peers/colleagues | | | | | |
| 38 | Student-centered approaches and strategies such as those I was expected to implement during practical teaching sessions, were often modeled by the course lecturers | | | | | |
| 39 | I was encouraged to think critically about my experiences in light of my new knowledge | | | | | |
| 40 | I was given opportunities to create materials to be used during practical teaching | | | | | |
| 41 | The program provided me with opportunities to integrate technological tools into my teaching | | | | | |
| 42 | Teaching practice gave me lots of opportunities to apply what I learned to the real classroom | | | | | |

394

| 43 | The support and feedback received from my co-operating teacher during practical teaching were adequate | | | | | |
|----|---|---|---|---|---|---|
| 44 | The support and feedback received from my college supervisors were adequate | | | | | |
| 45 | The 10 weeks of practical teaching gave me adequate time to better my teaching skills | | | | | |

| NO | Statements | | | | | |
|----|-----------|---|---|---|---|---|
| 46 | The program afforded me opportunities to discuss classroom management strategies with my peers | | | | | |
| 47 | Teaching practice equipped me with the necessary skills to plan and execute effective lessons to foster student learning | | | | | |
| 48 | The feedback provided based on coursework assignments was adequate | | | | | |
| 49 | Course assignments deepened my understanding of key course-related concepts | | | | | |
| 50 | The number of assignments to be completed per course was adequate | | | | | |
| 51 | End of semester exams allowed me to apply the theoretical knowledge gained in a practical way | | | | | |

### Part 3: Perceived Level of Effectiveness in the Classroom

**As you reflect on your courses and experiences in the training program, to what extent do you think the program has contributed to your effectiveness in the classroom? Indicate the extent to which you agree with each of the following statements.**

**[1] SA-Strongly Disagree    [2] D-Disagree    [3] U-Undecided    [4] A-Agree    [5]  SA-Strongly Agree**

| NO | Statements | 1 | 2 | 3 | 4 | 5 |
|----|-----------|---|---|---|---|---|
| 52 | I can now effectively diagnose my students' learning needs | | | | | |
| 53 | Knowing my students' weaknesses makes me better able to assist them | | | | | |
| 54 | I can now use different strategies to better manage my classroom so as to minimize classroom disruptions and student misbehavior | | | | | |
| 55 | My lessons now include more fun activities which enable students to participate | | | | | |
| 56 | My lessons now include more cooperative group learning activities | | | | | |
| 57 | I can now plan and implement effective lessons | | | | | |
| 58 | I now consider my students' learning needs and styles more when planning and teaching my lessons | | | | | |
| 59 | My lessons are now more enjoyable | | | | | |
| 60 | I now use a variety of materials and resources to cater to students' different learning styles | | | | | |
| 61 | I have successfully improved my students' ability to read | | | | | |
| 62 | My effectiveness in the classroom is only as a result of my 2-year teacher | | | | | |

| | training | | | | | |
|----|---------|---|---|---|---|---|

| 63 | I have successfully improved my students' ability to write | | | | | |
|---|---|---|---|---|---|---|
| 64 | I have successfully improved my students' ability to compute and solve math problems | | | | | |
| 65 | I have successfully improved my students' ability to understand concepts that they had misconceptions about | | | | | |
| 66 | I can now develop my own games and activities to teach various concepts | | | | | |
| 67 | I think my students are making satisfactory progress at this level | | | | | |
| 68 | As a result of my teaching, there has been an improvement in my students' learning | | | | | |
| 69 | I have successfully been able to differentiate my teaching to cater to students' needs | | | | | |
| 70 | I think my training played a significant role in contributing to my effectiveness in the classroom | | | | | |

**SECTION C**

**As you continue to reflect on your two-year teacher training experience, kindly indicate the ways in which you felt that the program was deficient and did not meet your training needs. Your suggestions for addressing the shortcomings will help to improve the overall quality of future programs. Write your responses on the lines provided.**

**Program Challenges**

1. What do you think are some of the shortcomings of the program in each of the following areas?

   a. Practical Teaching

   …………………………………………………………………………………………

   …………………………………………………………………………………………

   …………………………………………………………………………………………

   …………………………………………………………………………………………

   b. Delivery of Courses

   …………………………………………………………………………………………

   …………………………………………………………………………………………

   …………………………………………………………………………………………

   …………………………………………………………………………………………

c. Content of the Program/Nature of Courses

…………………………………………………………………………………………………

…………………………………………………………………………………………………

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…………………………………………………………………………………………………

d. Assessment

…………………………………………………………………………………………………

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## **Suggestions for Improvement**

1. What do you think can be done to address some of the shortcomings listed above?

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2.  What other aspects of teaching/training do you think that the program should address to enhance teacher readiness for teaching at the primary level?

    …………………………………………………………………………………

    …………………………………………………………………………………

    …………………………………………………………………………………

*Thank you for your Participation*

Appendix E

Interview Protocol:  Program Graduates/Teachers

Thank you for taking time to complete the questionnaire. This interview is being conducted to obtain information that could not possibly be gathered via the questionnaire. First of all, I want to obtain a deeper insight into your views on the practical teaching exercise. Secondly, I want to capture your views on the kinds of support that you are given at your school to improve your classroom practice. I also want to hear from you the factors which make it a bit difficult to transfer your new learning to your professional practice.

Let me remind you that all responses will be kept confidential and anonymous. I want to emphasize the need for you to be honest in your responses as false information can affect the accuracy and validity of the research results.

To begin, I would like to obtain some information regarding your age, years of teaching experience, grade level  taught, your academic qualification etc.

**Section: Demographic Information**
Place a tick in the appropriate box or indicate your response by writing on the line provided.

10. Age: ………………….. years

11. Gender:  Male ☐     Female  X    ☐

12. Graduation year:………

13. Name of school at which you currently teach ……………………………………….

14. Grade level currently being taught …………….

15. Grade levels previously taught …………………………

16. Did you have any teaching experience **before** receiving formal teacher training?

Yes ☐                 No ☐

17. How long have you been teaching? ………………

18. Highest Level of Education:  Associate Degree………….  Other:……………………

**Section B: Interview Questions**

### A. *Comments on the Practical Teaching Experience*
1. Do you think that the time for teaching practice was adequate? Why or why not?
2. Comment on the frequency and quality of feedback provided by (a) your co-operating teachers and (b) college supervisors during the practical teaching period
3. In what areas did you desire more support or training to positively impact student learning?
4. What is your overall impression of the 10-week practical teaching exercise- do you think it is coming in too late in the training? Explain

### B. *Other Challenges*
What do you think are some of the deficiencies or shortcomings of the program in each of the following areas?
Delivery of Courses
Content of the Program/Nature of
Courses Assessment

### C. *Support Provided to Newly Trained Teachers & Factors that Negatively Impact Practice*
*I now want to find out your views on the kinds of support you are given at your school to improve your level of effectiveness in the classroom as well as the factors (if any) that negatively impact your classroom practice*
1. Please share some of the strategies or interventions you have implemented in your classroom to:
   a. manage student behavior
   b. promote students' positive attitude toward school
   c. improve student literacy and numeracy
   d. enhance student academic performance [have students completed any projects?]

2. Are the initiatives taken by you supported by your principal? If yes, in what way? If no, why?
3. What resources are made available at your school to facilitate the implementation of strategies or student-centered learning activities to which you were exposed during your two-year teacher training?
4. Do you find it difficult to implement some of the strategies learnt during training in your own classroom? If yes, what makes it difficult?
5. Is sufficient time for sharing and reflection set aside at your school? Are there professional learning communities [PLCs] established at your school? If yes, what do you do during meetings?
6. What kind of instructional support does your principal or other teachers at your school provide you in an effort to enhance lesson effectiveness?

7. What professional development activities have you participated in following your program? Was there any follow up? What further support was provided following this professional development activity?

Appendix F

Interview Protocol: School Principals

Thank you for agreeing to participate in my research. In an effort to determine the impact of the 2-year Primary Teacher Training Program it is important that your voices be heard particularly as you are directly involved in observing teachers' instruction and supporting them with a view to contributing to their effectiveness. Therefore, the following questions are geared towards capturing your views on the strengths and limitations of the training program, the teachers' readiness to teach at the infant/primary level and suggestions for improving the overall quality of the training program.

To begin, I would like to obtain some information regarding your age, years of experience as a principal/teacher as well as your academic qualification.

## Section A: Demographic Information

Place a tick in the appropriate box or indicate your response by writing on the line provided.

19. Age: ………………….. years

20. Gender: Male ☐    Female  X   ☐

21. Name of school managed by you, as Principal…………………………………….

22. How long have you been the principal of this school? ………………

23. How long have you been in the Teaching Service ? …………………..

24. Highest Level of Education:  Bachelor's Degree ……………. Diploma…………………

Masters ………………… PhD ……………………. Other:……………………

## Section B: Interview Questions

1. What are some of the strengths you perceive in the teachers who have graduated from the Primary Program?

2. In what areas do you think the teachers have the greatest challenges in teaching at the infant/primary level?

3. On a scale of 10 with 1 being the lowest and 10 the highest, how prepared do you think these program graduates were for teaching at the primary level? Explain

4. What changes do you observe in teachers' attitudes toward teaching, their willingness to try out new strategies and level of motivation, at the time of appointment following teacher training; and a year or two later?

5. Do the teachers take initiatives in ways that positively impact students' learning? For example, Do they:
   - advocate more time for teaching a specific subject area?
   - procure additional resources/equipment?
   - undertake projects that are in keeping with best practices in the subject/ willingness to engage students in projects/activities?

   Provide some examples of such initiatives

6. How are the graduates' initial training impacting students' achievements and or behavior at your school?

7. What do you think are some of the deficiencies or shortcomings of the program in each of the following areas?
   a. Practical Teaching
   b. Delivery of Courses
   c. Content of the Program/Nature of Courses
   d. Assessment

8. In what areas do you think the teachers need more support and training to positively impact student learning?
9. What support is provided to the teachers at your school to enhance their teaching performance?
10. What other aspects of teaching do you think that the training program should address?

Appendix G

Open Ended Questionnaire: Principals, District Education & Curriculum Officers

Thank you for agreeing to participate in my research. In an effort to determine the impact of the 2-year Primary Teacher Training Program it is important that your voices be heard particularly as you are directly involved in observing teachers' instruction and supporting them with a view to contributing to their effectiveness. Therefore, the following questions are geared towards capturing your views on the strengths and limitations of the training program, the teachers' readiness to teach at the infant/primary level and suggestions for improving the overall quality of the training program.

To begin, I would like to obtain some information regarding your age, years of experience as a district education officer as well as your academic qualification.

## Section A: Demographic Information

Place a tick in the appropriate box or indicate your response by writing on the line provided.

1. Age: ………………….. years

2. Gender:  Male ☐      Female  X   ☐

3. Name of Subject Area OR Education District  supervised  by you

   ………………………………….

4. How long have you been Curriculum/Education Officer? ……………………………….

5. How long have you been in the Teaching Service ? …………………..

6. Highest Level of Education:  Bachelor's Degree ……………. Diploma…………………

   Masters ………………… PhD ……………………. Other:……………………

## Section B: Questions

1. What are some of the strengths you perceive in the teachers who have graduated from the Primary Program?

2. In what areas do you think the teachers have the greatest challenges in teaching at the infant/primary level?

404

3. On a scale of 10 with 1 being the lowest and 10 the highest, how prepared do you think these program graduates were for teaching at the primary level? Explain

4. What changes do you observe in teachers' attitudes toward teaching, their willingness to try out new strategies and level of motivation, at the time of appointment following teacher training; and a year or two later?

5. Do the teachers take initiatives in ways that positively impact students' learning? For example, Do they:
   - advocate more time for teaching a specific subject area?
   - procure additional resources/equipment?
   - undertake projects that are in keeping with best practices in the subject/ willingness to engage students in projects/activities?

   Provide some examples of such initiatives

6. How are the graduates' initial training impacting students' achievements and or behavior in your district?

7. What do you think are some of the deficiencies or shortcomings of the program in each of the following areas?
   a. Practical Teaching
   b. Delivery of Courses
   c. Content of the Program/Nature of Courses
   d. Assessment

8. In what areas do you think the teachers need more support and training to positively impact student learning?
9. What support is provided to the teachers in your district to enhance their teaching performance?
10. What other aspects of teaching do you think that the training program should address?