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TRANSFORMING TEACHERS' INSTRUCTIONAL PRACTICES THROUGH CLINICAL SUPERVISION

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The current research being reported on employed a Clinical Supervision (CS) model as a conceptual framework to design and implement CS interventions to develop teachers' pedagogical and instructional skills with three teachers in two secondary schools in Trinidad and Tobago over a six-month period. Data collection methods included: classroom observations, questionnaires, interviews and journals. The findings showed that the CS intervention that focused on building a collaborative and collegial relationship with the teachers, to develop their skills, attitudes and competencies, enabled them to learn and improve their pedagogical and instructional practices within the complex classroom environments. Teachers indicated that the collaborative process allowed them to reflect and improve their practice with assistance and guidance from their supervisors, whom they regarded as mentors. The study is significant as it validates CS as a viable and sustainable teacher CPD strategy.

Introduction

In the quest for quality education in Trinidad and Tobago (T&T), the professional development of teachers is critical. The supervision of teachers by administrators and senior colleagues can provide a vital medium for the continuous process of teacher development. "Supervision is the function in schools that draws together the discrete elements of instructional effectiveness into whole-school action" (Glickman et al., 1998, p. 6). The end result of this action should ultimately translate into improved instruction and the creation of an effective learning environment.

There is a need for research to be done on clinical supervision as an intervention to help improve the pedagogical and instructional skills of teachers of secondary schools in Trinidad and Tobago (T&T). Some international and regional education systems have pre-service teacher preparation programmes for persons desirous of teaching in secondary schools. Within the context of the T&T education system, there is no such pre-service professional preparation to teach in secondary schools. What

exists in T&T is a postgraduate in-service teacher preparation programme, offered by the University of the West Indies, School of Education (UWISoE) called the Diploma in Education (Dip. Ed.) Programme which provides initial teacher professional preparation for teachers who are already teaching at secondary schools. As a result, in many schools in T&T, novice teachers are assigned classes to teach, without having the requisite knowledge and pedagogical skills to engage in effective instruction. Fortunately, some schools have new teacher orientation programmes during which some pedagogy, instructional design and delivery are explored.

Clinical supervision is a developmental process that seeks to build teachers' instructional and pedagogical knowledge and skills through reflective practice. In this regard, clinical supervision can be seen as continuous professional development, as it seeks to engage teachers in a process of learning and relearning with a view to changing their beliefs, attitudes, values, understandings, and professional practice for the benefit of improving their students' learning (Darling-Hammond, Newton, & Wei, 2010; Day, 1999; Griffin, 1983; Guskey, 2002; Hopkins & Harris, 2001; Steadman, Eraut, Fielding, & Horton, 1995).

The Nature and Purpose of Clinical Supervision

The research is situated within the domains of clinical supervision, school improvement, continuing professional development and teacher education. The review, therefore, draws on literature across these domains as they apply to the current research.

Sergiovanni and Starratt (2007) define clinical supervision as a "face-to-face contract with teachers with the intent of improving instruction and increasing professional growth" (p. 23). Research in the field of clinical supervision in the past has revealed very little about its effect on teachers' pedagogy, classroom performance and their perceptions towards clinical supervision. Within the last decade, studies have been conducted in this field to demonstrate the merits of clinical supervision.

Clinical supervision was conceptualised by Robert Goldhammer (1969) and Morris Cogan (1973) at the Harvard School of Education. This grew out of their dissatisfaction with existing approaches to supervision, which they deemed inadequate for the professional development of teachers. These pioneers developed models of clinical supervision for improving classroom teaching and learning, and relationships between teachers and supervisors (Glanz, 2004). Goldhammer (1969) developed a

five-stage model while Cogan (1973) developed an eight-phase model. Building on the work of Cogan and Goldhammer, other educators developed alternative models of clinical supervision with the purpose and principles of the original models as the foundation (Hopkins, 1989). These models focus on "the teacher's actual classroom instructions and includes the teacher as an active participant in the supervisory process" (Acheson & Gall, 2003, p. 6).

Gall and Acheson (2011) later developed a three-phase model which consists of a planning conference, classroom observation and a feedback conference. In this model, the planning stage comprises the following: identifying areas of instruction for improvement, identifying actions for improving the teacher's instructions; assisting in goal-setting for the lesson; arranging a time for classroom observation; and discussing the data collection instrument. In the observation stage, the lesson is observed and information related to the objectives set, is recorded. The feedback conference focuses on meeting with the teacher to analyse together the data recorded, and arrive at decisions towards an improvement plan for teacher development (Grizzard, 2007).

The Benefits of Clinical Supervision

There are many benefits to clinical supervision: it facilitates professional development; is a continuous process for improving teacher performance; assists in improving pedagogical skills; and allows administrators to become involved indirectly in the quality of education that students receive (Grimmett & Grehan, 1990; Johnson, 2001).

Harris (1998) identifies clinical supervision as one of the supervision models that facilitates the development of professionalism. Many other authors also hold the position that instructional supervision is closely connected with professional development (Sergiovanni & Starratt, 2007; Hawley & Rollie, 2007: Zepeda, 2007; Veloo, Komuji, & Khalid, 2013). According to Day (1999, p. 4):

> Professional development consists of all natural learning experiences and those conscious and planned activities which are intended to be of direct or indirect benefit to the individual, group or school and which contribute, through these, to the quality of education in the classroom. It is the process by which, alone and with others, teachers review, renew and extend their commitment as change agents to the moral purposes of teaching; and by which they acquire and develop critically the knowledge, skills and

> emotional intelligence essential to good professional thinking, planning and practice with children, young people and colleagues through each phase of their teaching lives.

A review of research piloted by Blumberg (1980) on the effects of clinical supervision on various outcomes, concluded that clinical supervision impacts positively on teachers and students. Specifically, with respect to teachers, clinical supervision was found to improve their attitude towards the clinical supervision process itself; communication skills between teachers and supervisors; self-growth and efficacy; higher-order thinking skills and reflection on classroom practice. Little (1981) states that administrators who frequently observe others teaching provide useful evaluation of their teaching. Therefore, supervisors can observe and diagnose instructional problems that their supervisees may have and thus be able to tactfully remedy these problems.

In a study by Braithwaite (1995), it was found that participants were dissatisfied with traditional-oriented supervision and "conceptualised supervision and evaluation as a continuous process for improving teacher performance" (p. 1). Additionally, Jim Nolan, Brent Hawkes and Pam Francis (1993), conducted a review of research involving six case studies of clinical supervision with in-service teachers. All the case studies showed "positive changes in teachers' ability to think productively about their instruction and improve their instruction" (Acheson & Gall, 2003, p. 17).

Furthermore, Tucker and Stronge (2005) indicated that pedagogical decisions made by teachers; that is, teachers' planning, instructional delivery and assessment, directly affected student learning. Supervisors working closely with teachers to improve student learning, assisted teachers in improving their pedagogical skills (Grimmett & Grehan, 1990; Blasé & Blasé, 1999). It must be noted that outcomes obtained depended on the quality of clinical supervision provided for teachers. Primarily, the effects were positive when supervisors were knowledgeable in techniques of clinical supervision or when the supervisory process was extended over a period of time (Acheson & Gall, 2003). Still, whether these benefits occur within the T&T context is yet to be investigated and the results documented; hence, the significance of this study.

Challenges to Conducting Clinical Supervision

There are challenges to clinical supervision: defensive reactions by teachers; adaptation to suit individual needs; supervisors' knowledge of techniques to be used during clinical supervision, and finding time for supervision. Generally, researchers support the view that the clinical supervision process may assist in improving teachers' classroom instructions, but it is important to note, however, that many teachers behave defensively when faced with supervision. In a study by Glatthorn (2007) on supervisory behaviour and teacher satisfaction, it was noted that improvement in performance was dependent upon the teacher's attitude towards supervision. According to Glatthorn (2007), unless teachers viewed supervision as a means of enhancement both to themselves and their students then the supervisory process would not produce the desired results. This conclusion is also supported by Acheson and Gall (2003) who stated that, "teachers might react positively to a supervisory style that is more responsive to their concerns and aspirations" (p. 6). The process of clinical supervision must be customised to suit the needs of each teacher. "Supervisory practice must be adapted to the need of the individual teacher if the teacher is to develop to the point of becoming a reflective practitioner" (Goldsberry, 1998, p. 428). Additionally, since the building of trust is valuable to the success of the process, any shortcuts can fracture whatever trust exists. Still, Goldsberry (1998) submits that clinical supervision can improve teachers' attitudes, practices and instructional skills. Furthermore, the role of the supervisor may be misunderstood by both parties, which can lead to a less than collaborative and productive process. According to Smyth (1984), the teacher should have total control over the supervision process. Supervisors may disregard this notion proposed by Smyth and seek more control in the clinical supervision process, thereby alienating and discouraging the novice teacher.

Undoubtedly, there is no straightforward response to address the limited time designated for clinical supervision in schools. Time constraints that may arise out of scheduling conflicts and heavy teaching loads are two dominant issues that hinder a fluid clinical supervision process. Both supervisors and teachers could find it difficult to plan and prepare for each session due to these factors. Fullan and Miles (1992) highlighted that "every analysis of the problems of change efforts that we have seen in the last decade of research and practice has concluded that time is the salient issue (p. 746)." Additionally, they posited that: "time is energy. And success is likely only when the extra energy requirements of change are met through the provision of released time or through a redesigned schedule that includes space for the extra work of change" (p.

746-747). The latter has implications for increased resourcing, which can include increased monetary allocations. Consequently, if more school administrators used clinical supervision as a means of sustained professional development, adjustments will have to be made in resourcing, staffing, timetabling and teaching workloads to address the issue of time constraints.

Based on the above discussion, the clinical supervision model has been regarded as an effective substitute that promotes professional development and improvement in classroom practice in a non-threatening environment. However, the need for trained personnel to implement this model is equally important. Thus, for schools to be effective, professional development, improvement of teachers' pedagogy and student learning should be closely meshed.

Methodology

The study utilised the action research paradigm, as it allows for persons to engage in systematic enquiry to plan an intervention or way forward to achieve specific goals (McNiff, 2013; Mills, 2000; Stringer, 2007). The intervention involved using clinical supervision as a Continuing Professional Development (CPD) tool to develop teachers' pedagogical skills over a six-month period. The study was conducted with three teachers in two secondary schools in Trinidad. The aim of the study was to determine whether clinical supervision could be used as a viable CPD procedure to improve teachers' pedagogical and instructional practices. For the purposes of this paper, the schools will be described as Case 1 and Case 2. The research question which guided the study was: To what extent can implementing an intervention using clinical supervision improve the pedagogical and instructional skills of selected secondary school teachers in two schools in Trinidad?

The teachers who implemented the interventions did so as a prerequisite of an in-service initial teacher preparation programme in which they were involved. The University of the West Indies, St. Augustine, School of Education (UWISoE) conducts the programme These particular teachers were enrolled in the Educational Administration cohort which ran for a duration of nine months. Over the nine months, teachers were exposed to a number of courses, including foundational courses in philosophy, psychology, sociology, language in education, health and family life education, curriculum and technology integration, action research, and assessment of and for learning. They were also involved in specific training on the nature and purpose of clinical

supervision, and how to conduct it, which included, but was not limited to, engagement in elements of teaching and learning, lesson planning and writing learning objectives.

Procedure

A tutor from the UWISoE staff supervised and monitored each teacher implementing the intervention during the clinical supervision process. The procedure involved a number of phases. Firstly, the teachers implementing the intervention selected teachers from their schools who would be their supervisees in the clinical supervision process. They explained to the prospective supervisees the nature of the clinical supervision, the length of time they would be engaged in it and, through discussion, arrived at consensus with the supervisees about the pedagogical areas they would focus on for development over the six-month period. Secondly, the implementing teachers wrote up a clinical supervision proposal which outlined the nature and purpose of clinical supervision, the schools' backgrounds and those of the supervisees, the pedagogical areas for development, a data collection plan and the persons with whom the implementers would collaborate. Thirdly, the clinical supervision proposals were reviewed, amended where necessary and approved by the UWISoE tutors, and the plan for monitoring the implementation process was discussed by the implementers, tutors and supervisees. The monitoring process involved tutors visiting the implementers and observing them conduct clinical supervision with their teachers, after which the implementers and tutors would reflect, evaluate the process and make recommendations for improving as the process moved forward.

Sampling: Case 1

In this study, the intention was to use a sample of two supervisees who taught the first-form year group. However, due to scheduling conflicts, only one supervisee participated. Nevertheless, the use of one supervisee in no way compromised the rigour and validity of the study. It meant that the study became a single case, and the observations, reflections and discussions throughout the intervention provided depth. The participating supervisee was an untrained teacher with a BSc Degree, who had less than one year of teaching experience in the classroom. Following discussions between the supervisor and supervisee, it was agreed that the intervention would occur over a period of six months, during which 12

observation sessions would be conducted. The supervisee's Form One Integrated Science class was used for each session. A teaching period of 40 minutes per session was used.

Sampling: Case 2

The supervisees for this study comprised two new teachers, one male and one female, just out of university, with no formal teacher training. This was their first teaching appointment and both participants had less than three years teaching experience. The male supervisee possessed a BSc in Mathematics whilst the female had a BSc in Chemical Engineering with a minor in Mathematics. During the intervention, each supervisee was observed for six sessions each over a five-month period. The intention was for each supervisee to be observed for twelve sessions, but circumstances within the school environment did not permit this to occur. Despite this change, the validity and credibility of the study were not compromised as supervisees were available to participate fully in the planning, observations, reflections and discussions, and rich data were gathered throughout the intervention. The male supervisee used his Form Five Additional Mathematics class with a 70-minute teaching period for each session, while the female supervisee used a Form One Mathematics class with three 70-minute and three 35-minute periods for the six sessions, based on the class time-table.

Data Collection and Analysis

Data collection methods included classroom observations, questionnaires, interviews and journals. During the interventions, data were collected via journals kept by the supervisees, and field notes from the observations of the supervisors. After the intervention, data were collected using interviews with supervisees (Case 2) to accumulate their experiences of the process of clinical supervision. During the reconnaissance phase, for Case 1, questionnaires were administered to a sample of teachers to gain an understanding of teachers' perceptions of clinical supervision at the school. In Case 2, during the reconnaissance phase, questionnaires were given to the supervisees to explore their initial perceptions of clinical supervision. In Case 2, questionnaires were also used during the intervention to capture the supervisees' perceptions of the clinical supervision process, as well as their reflections on their current instructional practices. Numerical data from the questionnaires were analysed using the Microsoft Excel programme to generate descriptive

statistics, and the non-numerical data collected from observation field notes and journals were analysed using content and thematic analyses.

Reconnaissance

Case 1

A reconnaissance phase was undertaken prior to the intervention in order to find out the degree to which clinical supervision was practised and to determine teachers' perception of clinical supervision at the school. During this phase, a questionnaire was used to gather data to determine the perceptions of clinical supervision at the school from ten Form One teachers. The ten teachers selected taught a variety of subjects and had five to ten years of teaching experience. Additionally, an interview was conducted with a school's vice-principal who offered insights on the practice of clinical supervision at the school and its importance. Deeper expositions of the findings from this reconnaissance phase are presented in the findings section for Case 1 of this paper.

Case 2

Participants in this research were exposed to one session of clinical supervision with the principal and heads of departments, three months prior to this intervention. They were chosen after collaboration with the school principal who indicated that they needed help to improve their performance in the classroom, after observation of one clinical supervision session. During the reconnaissance phase of the research, a questionnaire was administered prior to the clinical supervision period, to explore teachers' initial perceptions of the process of clinical supervision.

The Interventions

Each implementer targeted different pedagogical skills to improve, based on the needs of the supervisees.

Case 1

The intervention was implemented with the intention to help improve the pedagogical skills and teaching strategies of a novice Form One teacher at School 1, by conducting clinical supervision. At a meeting with this teacher, the details of the clinical supervision process were outlined and explained, prior to the start of the intervention. The pedagogical skills and teaching strategies to be developed and assessed were also discussed, and it was agreed that the intervention would occur in sessions over a period of six months using the same Form One Integrated Science class for each session. In Case 1, the pedagogical skills

targeted were as follows: classroom management, time management, positive reinforcement and non-verbal intervention. The ability of the teacher to utilise group work, simulation, brainstorming, student activity, questioning and technology as teaching strategies was also assessed. It was also indicated that there would be three visits by a UWISoE tutor to assess, guide and document the progress of the clinical supervision process.

During the intervention process, data were collected using observation instruments designed specifically for each pedagogical skill, and teaching strategy, and documentation in the form of reflective journals from both the supervisor and the supervisee, charted the progress of the supervisee. These were later used to determine if the intervention was successful.

Case 2

After two potential mathematics teachers were identified to participate in this study, both teachers consented to be a part of the programme. During discussions, each teacher identified key areas where they needed assistance in pedagogy and instructional strategies. In Case 2, the pedagogical skills targeted were lesson design, classroom management, questioning skills and student motivation. The intervention was initiated with a questionnaire to assess the supervisees' perceptions of the process of clinical supervision and its usefulness as a tool to improve the pedagogical and instructional practice of teachers. After two clinical supervision sessions, another questionnaire was administered to capture teachers' perceptions of the process as well as their reflections on their instructional practice. Finally, at the end of the clinical supervision period, the supervisor conducted an interview with each teacher to assess whether there were any changes in their perceptions of clinical supervision and to collect data on the impact of this intervention on their pedagogical and instructional practices.

Findings

Case 1

Findings from the reconnaissance, which sought to determine the perception of clinical supervision at the school and the manner in which it was being practised, revealed that 20% of teachers disagreed that clinical supervision was practised at the school, while 50% were undecided; 20% agreed and 10% strongly agreed that it was being practised. In terms of teachers' perceptions of clinical supervision, the findings showed that 30% felt that clinical supervision helped to create better professional teachers, 50% were undecided and 20% felt that clinical supervision did not help

create better professional teachers. Additionally, an interview was conducted with a vice principal who confirmed that clinical supervision was indeed consistently practised at the school, and fulfilled the mandate prescribed by the Ministry of Education, which was once per term per teacher. The vice principal also confirmed that the clinical supervision practised at the school was conducted using a three-phase process: a pre-conference, observation and post conference.

The findings of the reconnaissance phase revealed that although clinical supervision was practised to some degree at the school, it was not done consistently enough to offer a viable and accurate answer to the research question. Thus, the intervention discussed in this study was undertaken in order to answer the research question. In an attempt to address the consistency issue, the method of clinically supervising the same teacher for twelve sessions over a six-month period may offer a more accurate answer to the research question.

In answering the research question, data were gathered from the analysis of the supervisor's and the supervisee's journals. It was found that clinical supervision can stimulate professional growth in a novice Form One teacher. The teacher was able to utilise new instructional strategies, such as simulation and group work as highlighted in this excerpt from the supervisee's journal: "It was the first time I used simulation as a teaching strategy and I found that it worked well and the students seem to respond well to it; it brought energy to the class and an excitement to learning." This evidence is confirmed in the supervisor's journal: "The simulation exercise was executed well; the students responded well and learning occurred. It shows that the supervisee adapted well to a new teaching strategy."

Additionally, the supervisee's pedagogical skills, such as lesson planning, improved during the course of the supervision period as documented in both the supervisor's and the supervisee's journals. The supervisee stated, "Although it can be cumbersome and time consuming, I am beginning to see the value of writing lesson plans especially in the listing of the objectives." This is supported by this excerpt from the supervisor's journal: "The lesson plan indicated improved understanding of key terms such as cognitive, psychomotor and affective as well as learning objectives."

The findings showed that teachers' time management skills also improved during the intervention. In the second session's journal entry, the supervisor recorded, "It was noticeable that the supervisee exceeded the allotted time for the teaching period for the second time in two

sessions; this resulted in a rushed closure." However, by the tenth session the supervisor commented, "There was a marked improvement in the time management of the lesson as students were given sufficient time to ask questions, and there was a proper closure to the lesson." This is also acknowledged in the supervisee's journal where she documented: "I have learnt the value of time and the importance of an effective closure; to enforce anything after the bell sounds is fruitless."

The supervisee's classroom management skills also improved. As indicated in her journal, "Classroom management is less of a challenge for me now, and the students are more absorbed in the lesson." This was also supported in the supervisor's journal for the seventh session, where the supervisor stated, "It seems that the improved lesson plans have resulted in better classroom management as the teacher is more organised while the students are more engaged. This is promising, especially with such a large class."

The supervisee also expressed appreciation for, and satisfaction with the new strategies learnt and confirmed her intention of using these strategies in future lessons as evident in this excerpt from the supervisee's journal: "I do think that simulation is an effective teaching strategy and do plan to use it in future lessons." This is also reflected in this extract from the supervisor's journal where it was indicated: "She also expressed interest in other teaching strategies and confirmed her willingness to continue with the process." The journals reflected clear growth and improvement in the pedagogical and instructional skills of the supervisee. The evidence of the supervisee's intention to use the newly learnt strategy in future lessons, her interest in other strategies, and her willingness to continue with the process may also suggest some degree of appreciation and commitment to the process.

Case 2

During the reconnaissance phase, data were collected via a questionnaire regarding the perceptions of two teachers of the process of clinical supervision, since they had been exposed to clinical supervision previously. Data collected revealed that the teachers found clinical supervision to be time consuming, and that it required much planning. There were also the perceptions of "uncertainty" and "nervousness" of being observed. They were also aware that the process was about using "observations to make improvements", and it "corrects errors in teacher practice." Therefore, it can be assumed that the procedure for clinical supervision previously done, was of an acceptable standard.

In response to the research question posed, data were derived from questionnaires, field notes and the interviews. Implementation of clinical

supervision posed several challenges. The teachers expressed the view that the process of clinical supervision posed challenges during the period. Time was a major challenge even though lessons being observed were a part of their planned list of lessons for the term. Both teachers taught for 29 periods each week with 11 free periods, which could be used for supervision of other classes as the need arose. They found that time for planning and preparation was very limited.

Additionally, they felt that clinical supervision entailed "extra work". The writing of a lesson plan for each lesson was a challenge since this was not the norm. Also, Teacher A was not familiar with the pedagogical skills for completing this task. The teachers' regular method of planning was making notes, using the textbook and employing any strategy they found suitable while teaching in the classroom.

Teachers also indicated that they had feelings of "anxiety" and "nervousness" while under observation in the classroom. It was felt that "there was an added pressure on the teacher while being observed." Teachers also expressed the concern for students' reaction to a clinical supervision setting. A lack of equipment at the school was also a challenge at times. Ultimately, despite challenges faced, the teachers found that preparing lesson plans before teaching: 'delivered the content in a more efficient way," and it "encouraged diligence and greater organisation." Teacher A commented:

> *Now I have an idea how to structure my lessons to actually get the point across, but before it was difficult. But I have a better idea of what is needed for the lesson plan. If I have to go home and do one, it's not a challenge.*

Both teachers found the process of clinical supervision helpful in facilitating their professional development, and suggested that "clinical supervision be held more frequently" as a regular part of the school's routine practice, because "you are pushed to correct and pushed to improve." Methods and strategies with which they were unfamiliar, were adopted from the literature provided, with the guidance of the supervisor. The teachers' comments below are testimony to their pedagogical and instructional growth as a result of their engagement in the clinical supervision process. Teacher A indicated:

> *I learned useful techniques to ask questions and control misbehaviour. Clinical supervision encourages diligence and greater organisation.*

Teacher B stated:

> *The information the supervisor gave was very beneficial. I would not have known of these different techniques or philosophies, so it was greatly appreciated that more content was given to guide me, for example, Bloom's Taxonomy, wait time and the use of praise.*

With no formal teacher training, pedagogy was developed through trial and error, and sporadic advice that the teachers occasionally received from other teachers. Clinical supervision provided an avenue for teachers to access help in areas that they perceived to be weak. The teachers felt that they benefitted from the literature shared with them on various topics, and also from the pre- and post-conferences held. From the data collection instruments, responses indicated some improvement in pedagogical and instructional skills. Improvement in teachers' pedagogy was found in areas of organisation, selecting appropriate materials, methods of teaching, and lesson planning. This is evident from the responses given by the teachers. Teacher A:

> *The class is much more behaved since using the information researched... I have a better idea of what is needed for the lesson plan... It has improved my ability to prepare engaging lessons*.

Teacher B:

> *I learnt how to pose questions and how to encourage students to answer; how to deliver the content in a more efficient way... Using more technology in lessons, stimulated students' thinking and interaction.*

A list of teaching methods and strategies used by teachers was compiled prior to the clinical supervision period. This list was contrasted with a list made after the clinical supervision period. Table 1 displays a comparison of methods and strategies employed by both teachers before and after the intervention.

Table 1. ***Comparison of Methods and Strategies Used by Teachers in Their Instructional Practice***

	Instructional Practice **Methods & Strategies used**	**Teacher A** **Before Clinical**	**Teacher A** **During Clinical**	**Teacher B** **Before Clinical**	**Teacher B** **During Clinical**
1	Lecture	Y	N	Y	Y
2	Teaching notes	Y	N	Y	N
3	Group work	Y	Y	Y	Y
4	Use of textbook	Y	Y	Y	Y
5	Explanations with use of whiteboard	Y	Y	Y	Y
6	Student explanations/presentations	Y	Y	Y	Y
7	Student peer teaching	Y	Y	Y	Y
8	Discussion	Y	Y	Y	Y
9	Worksheets	Y	Y	Y	Y
10	Lesson plan	N	Y	N	Y

11	Set induction	N	Y	N	Y
12	Closure	N	Y	N	Y
13	Questioning	Y	Y	Y	Y
14	Use of wait time	N	Y	N	Y
15	Use of Praise	N	Y	N	Y
16	Use of videos	N	Y	N	Y
17	Use of computer games	N	Y	N	N
18	Animations	N	Y	N	Y
19	PowerPoint Presentation	N	Y	N	Y
20	Use of visualisation	N	Y	N	N
21	Demonstrations	Y	Y	Y	Y
22	Classroom Management strategies	N	Y	Y	Y
	Total Strategies Used	**11**	**20**	**11**	**19**

KEY: Y= yes N=no

The findings of the study, as depicted in Table 1, showed an increased use of methods and strategies employed in instructional practice during the period of clinical supervision. Teacher A employed the 11 strategies in her instructional practice during her years of experience as a teacher, but there was an increase of 9 additional strategies utilised during clinical supervision. Teacher B used 11 strategies but added an additional 8 strategies to his instructional practice.

Results showed a 41% increase in methods and strategies used by Teacher A whilst there was a 36% increase used by Teacher B during clinical supervision. The following are comments by teachers during an interview on the impact of clinical supervision on their methods and strategies:

Teacher A:

It has also encouraged me to source various methods and put them into practice in the classroom.

Teacher B:

I could integrate other teaching methods into my own...personally for me the methods with the use of technology rather than going to class and presenting work in a verbal manner has stimulated me." The findings of this study revealed that even though the process of clinical supervision was perceived as burdensome and time consuming, it facilitated improvement in teachers' pedagogical and instructional skills and professional development.

Synthesis of Findings

In relation to both Cases, 1 and 2, the findings revealed that implementing clinical supervision can improve the pedagogical and instructional skills of teachers, but it requires time for planning and executing within the given school context. With regard to Case 1, during the course of the intervention, a novice Form One teacher at the school under study showed improvement in various areas such as lesson planning and learned new teaching strategies such as simulation, which was successfully utilised in the classroom. The teacher also expressed interest in new strategies and confirmed her willingness to continue with the process. Similarly, with regard to Case 2, the two teachers in the Mathematics department perceived the process of planning for clinical supervision as time-consuming but ultimately improved some areas of their pedagogy and

instructional practice. The findings of the study revealed that for both cases, teachers welcomed the frequency of clinical supervision.

Discussion

This discussion analyses the findings in terms of the research question posed and the literature reviewed for the study. The aim of the study was to determine the extent to which implementing an intervention using clinical supervision can improve the pedagogical and instructional skills of secondary school teachers in two schools in Trinidad. Overall, it emerged that in all three instances, the findings showed that as a result of their engagement in clinical supervision, there was development in the pedagogical and instructional skills of the teachers. These findings confirm that clinical supervision can improve teachers' pedagogical and instructional practice (Gall & Acheson, 2011; Blasé & Blasé, 1999), where the general goal of clinical supervision is to improve teachers' classroom practice.

Still, the research question asks the extent to which improvement can occur. In addressing this latter issue, the findings showed that the extent to which clinical supervision can improve teachers' pedagogical and instructional practices is contingent upon teachers' and supervisors' understanding that clinical supervision is a process and not a one-off event, their dispositions toward the clinical supervision process and the time for proper planning and execution of the process. The study showed that the time involved in planning the clinical supervision process was a challenge due to little or no mentoring of the teachers when they embarked on their teaching career at the school. Therefore, having to plan, conform and structure for clinical supervision would have seemed burdensome and time-consuming. This finding is consistent with Fullan and Miles' (1992) analysis of what works in bringing about change.

The findings of the study indicated that over the intervention period, teachers' disposition to the clinical supervision as a professional development tool grew, and their attitudes toward clinical supervision changed. The study showed that teachers welcomed the frequency of clinical supervision. They felt it provided them with structure and training for development especially for new teachers embarking on a career in teaching or becoming professional teachers. New instructional strategies and pedagogical skills learned and developed by the teacher, as well as the teacher's continued interest in and appreciation of the process during the intervention, are substantiated by studies done by (Goldsberry, 1988; Harris, 1998) where it was revealed that the clinical supervision process

not only improves teacher's practice but attitude as well. Additionally, these findings support Kutsyuruba (2003) who concluded that "beginning teachers desire more frequent use of instructional supervision that meets their professional needs, that promotes trust and collaboration, and that provides them with support, advice and help" (p. 4).

Conclusion and recommendations

The study sought to investigate the extent to which implementing an intervention using clinical supervision can improve the pedagogical and instructional skills of secondary school teachers in two schools in Trinidad. It showed that if done regularly and in a structured way, clinical supervision could facilitate the professional development of teachers, both new and experienced, in developing their pedagogical and instructional skills. Implementation of clinical supervision with well-planned scheduling, using a systematic approach, would be more beneficial than sporadic sessions. This might, however, require further resourcing at the school level, as teachers' workloads would have to be adjusted to afford the requisite time and energy to execute the process effectively. This research in clinical supervision has validated its importance as a legitimate means of professional development of teachers. It is worth noting that the clinical supervision process used in this study is more systematic and developmental than what obtains in most schools in T&T. Thus, it would be worthwhile to conduct further research within the schools in the study and other schools in T&T. Additionally, it would be useful to determine the impact of the change in the teachers' practices on their students' learning. The findings from these studies can be used to make decisions and policies about institutionalising clinical supervision in schools in ways that make its use effective.

The following recommendations were drawn from the findings of the study. Clinical supervision should be implemented on a regular basis as part of the school's routine practices to assist with mentoring and supervision of teachers. Teachers need to be more aware of the goals of clinical supervision in order to alleviate fear of the process and to dissuade the belief that its purpose is solely evaluative and punitive. Furthermore, the responsibility of clinical supervision should be decentralised from the principal to heads of departments. Their weekly teaching loads should be reduced to accommodate the effective management of teacher supervision. The Ministry of Education should facilitate seminars and training workshops periodically to equip Heads of Departments with the skills and

knowledge of clinical supervision to ensure improved practices in schools. Finally, teachers should be held accountable to implement feedback given to them from clinical supervision**.**

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