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**RELATING PROFESSIONAL IN-SCHOOL NETWORKS,  
SCHOOL LEADERSHIP, AND ASSESSMENT DATA  
TO ACADEMIC PERFORMANCE IN  
TRINIDAD AND TOBAGO:  
An Exploration**

*Launcelot I. Brown, Talia Esnard, and Laurette Bristol*

In recent years, researchers have turned their attention to the relationship between teacher social interactions and the successful implementation of reforms. The limited research to date has tended to support this relationship, with some research finding significant correlations between teacher collaboration and student achievement. In this study, we use quantitative and qualitative methods to determine the relationship between within-school networks formed around the interpretation and use of the data on the National Tests Report and student achievement, as measured by the proportion of students meeting or exceeding the proficiency standard on the National Tests. The sample comprised 56 teachers from seven schools within an urban school district. Teachers responded to a social network survey and two dimensions on the OCI. Interviews of 15 principals and five focus groups of 31 teachers provided the qualitative data. Findings suggested that a relationship between schools with high collegial trust exhibited deeper collaborative structures and a higher proportion of students performing at standard on the National Tests. These findings have implications for principals and teachers who will need to find ways to maximize the use of within-school skill sets and expertise, especially in a resource-strapped system.

**Introduction**

In keeping with international trends and the almost universal-wide demand for increased academic achievement levels, especially in the areas of literacy, math, and science, Caribbean governments have been enacting a series of reforms to their education systems with the intent of improving the education outcomes of their student population (Caribbean Education Task Force, 2001; Cassen & Kingdon, 2007; National Center for Education Statistics [NCES], 2011). With this intent in mind, the Government of the Republic of Trinidad and Tobago (GORTT) introduced a number of reform initiatives, among which is the Continuous Assessment Programme (CAP) of which the National Tests

are an integral component (Trinidad and Tobago. Ministry of Education [TTMOE], 1998).

The National Tests are summative assessments taken by all primary level students. Subject areas tested are mathematics and language arts taken in Standard (Std.) 1 (age 7) and Std. 3 (age 9); and science and social studies taken in Stds. 2 and 4. Each school gets a report on each student's performance on the various content strands. From the perspective of the TTMOE, schools are expected to use these data from the assessment to guide their planning, and their curricular and pedagogical decisions in order to positively impact student learning.

Since the introduction of CAP, the GORTT has run a number of professional development workshops for teachers on the interpretation of the data. Yet, the fact that after more than 10 years there is no evidence that schools effectively utilize the data from the report, neither is there evidence that the tests have resulted in increased student achievement (Wayow, 2011), suggests that we should look deeper at what schools actually do with the report. In doing so, we examine the role of the principals and the organizational conditions and structures they put in place to facilitate effective interpretation and use of assessment data. In framing our discussion, we draw on the growing yet limited literature on social networks to examine teachers' professional interactions (Penuel, Riel, Krause, & Frank, 2009); teacher collaboration (Gajda & Koliba, 2008; Goddard, Goddard, & Tschannen-Moran, 2007); teacher learning communities (Stoll & Louis, 2007; Wood, 2007); teachers' social networks (Daly, Moolenaar, Bolivar, & Burke, 2010; Moolenaar, 2012; Moolenaar, Slegers, Karsten, & Daly, 2012); and communities of practice (Wenger, 1998). These studies all suggest a relationship between teachers closely working together and the effective implementation of reform efforts.

Given the limited research internationally, and the absence of research within the English-speaking Caribbean on teacher in-school social networks, we explore, through the use of mixed methods, the relationship between teacher in-school collaboration, principal leadership, and the adoption and use of innovative educational approaches; in this case, assessment data from the National Tests. Therefore, this study seeks to determine whether:

1. there is an intentional formation of within-school social networks in primary schools around the interpretation and use of the data on the National Tests Report;
2. schools use these collaborative networks to inform curricular decisions and teacher pedagogy;

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3. there is a relationship between the principal collegial leadership and teacher professional behaviour and the density of the in-school professional social network;
4. there is a relationship between the within-school networks formed and the proportion of students meeting or exceeding the proficiency standard on the National Tests; and
5. schools/teachers ascribe any importance to the within-school professional relationships.

Our major contention here is that there is a direct or positive correlation between principal collegial leadership, teacher collaboration around assessment data from the National Tests, and school's academic performance as measured by the proportion of students performing at or above proficiency level on the tests.

### **Summative Assessment Feedback**

Implicit in the expectation that schools utilize the information from the National Tests is the assumption that teachers know how to use information derived from assessments. Yet there is little evidence internationally (Heritage, 2007) and locally (Brown, Bristol, De Four-Babb, & Conrad, 2014; De Lisle, 2010) to support that claim. Actually, an increasing number of researchers, in examining schools' and teachers' use of data from large-scale assessments and the "conditions that support their ability to use the data to improve instruction" (Nabors-Oláh, Lawrence, & Riggan, 2010, p. 227), have concluded that there is a need for "structured occasions to turn assessment information into actionable knowledge" (Halverson, 2010, p. 133). Additionally, they argue that there must be in place a robust feedback system (Blanc et al., 2010) which would facilitate the flow of information that supports the curricular decision making by the school administration.

Nabors-Oláh et al. (2010) found that teachers made limited use of the data in making instructional decisions. The teachers used the "assessments to identify areas of emphasis (both content and students), but overall, did not use the assessments to make sense of students' conceptual understanding of the content" (p. 244). However, in fairness to the teachers, they also noted that the data were not suitable for "diagnosing errors in anything beyond a procedural way" (p. 244), as they did not provide the "detailed information needed to diagnose the specific sources of student difficulty" (Looney, 2011, p. 15) and therefore is of limited value in meeting the specific learning needs of individual students. Yet, Brookhart's (2001) reminder that summative

assessments can be used for formative purposes must be given equal consideration. It would be necessary for teachers to recognize the alerts from the assessment as an indication of the need for them to assess their own teaching and, as a result, examine their instructional strategies as they move forward in meeting the learning needs of the students.

Indeed, when summative assessments are used for formative purposes, the focus is on the teacher. Sadler (1989), and Parr, Glasswell, and Aikman (2007) distinguished between students' use of feedback to monitor their own learning and teachers' use of feedback as a means of monitoring their teaching effectiveness. Thus, despite the lack of specificity, the data allow teachers to "look backwards to reflect on the effectiveness of their own practice and forward to work out what needs to be taught or re-taught" (Parr et al., 2007, p. 69). Broadly speaking, the feedback from the assessment alerts the "teacher about current levels of student understanding ... [and] informs what the next steps in learning should be" (Heritage, 2007, p. 142). Teachers in Trinidad and Tobago are expected to use the data from the National Tests Report to identify current levels of student performance, and so determine the next steps in learning.

### **Teacher Collaboration Networks**

Yet, ineffective implementation of reforms is neither a unique phenomenon nor unique to Caribbean governments. Worldwide, many reform efforts have failed to realize the expected results. As such, a growing number of researchers are now investigating the relationship between teacher social interactions and the successful implementation of reforms (Coburn & Russell, 2008; Fullan, 2007; Goddard et al., 2007; Mohrman, Tenkasi, & Mohrman, 2003). This is an important development, and the limited research to date has tended to support this relationship (Goddard et al., 2007). As a matter of fact, Daly et al. (2010) found statistically significant correlations between the density of collaboration among teachers in the same grade level and student achievement scores in literacy, thus corroborating findings by Goddard et al. of the link between teacher collaboration and student achievement.

Indeed, Achinstein (2002) has argued that teachers in collaborative units are more likely to share common values and work interdependently for the purpose of improving student achievement. Extending the argument, Daly et al. (2010) noted that "teachers working in collaboration tend to have a wider skill variety, be more informed about their colleagues' work and student performance, [and] report increased instructional efficacy" (p. 363). These "communities of practice"

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(Wenger, 1998) facilitate the interchange and cross-fertilization of ideas and knowledge, and sharing and development of best practices (Stoll & Louis, 2007); facilitate improved teacher pedagogical practices (Ehrenberg, Brewer, Gamoran, & Willms, 2001); and, as a result, enhance overall teacher knowledge and skills (Black, Harrison, Lee, Marshall, & Wiliam, 2004). The development of professional learning communities (Stoll & Louis, 2007) acknowledges the fact that individual human capital, while critically important to the effectiveness level of the education product, does not operate within a vacuum. The school is also a social organization and teachers interact within the organization, forming networks that could and should be intentionally developed and utilized for advancing student learning. The development and fostering of these within-school social networks bring together the existing social capital of teachers to the benefit of the school.

It is the quality of the interaction, the theoretical perspectives that underpin these relationship networks (Muijs, West, & Ainscow, 2010), and the potential to positively effect reform implementation and teacher effectiveness (Daly et al., 2010; Moolenaar, 2012; Moolenaar et al., 2012) that have been the subject of current research. As postulated by Penuel et al. (2009), embedded within the social network structure is social capital—“the resources and expertise that individuals can access through their ties with others” in the network (p. 129). Therefore, there is the increased probability for the sharing of information, knowledge, and skills and, thus, the potential for improved teacher effectiveness. In the context of Trinidad and Tobago where there is limited external human resources available to schools (e.g., school psychologists, counsellors, qualified special educators, assessment specialists, and other paraprofessionals), the importance of capitalizing on the embedded within-school resources and expertise cannot be overstated.

The evidence that there is a positive relationship between teacher collaboration within communities of practice (Wenger, 1998) and the successful implementation of innovation (Coburn & Russell, 2008), and increased school effectiveness (Penuel et al., 2009) has gained traction. While within the complexity that is schooling it defies logic to select any one thing as the sole or major driver of student outcomes, increased teacher cooperation, collaboration, and collegial support on issues related to teaching and learning (McLaughlin & Talbert, 2006), increased opportunities for assuming leadership on educational issues, the sharing of ideas, and contributing to the decision-making process (Leithwood et al., 2007) are all salient to increased school effectiveness and student outcomes. As Goddard et al. (2007) have shown, teacher collaboration

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has a positive impact on school climate and results in a collective sense of efficacy, which is an important component in effective schooling.

### **The Role of the Principal**

Davis (2013) cites the work of Louis, Leithwood, Wahlstrom, and Anderson (2010), in asserting that “we know that quality principal leadership makes a significant contribution to the organizational conditions and teaching practices that can advance student learning” (p. 1). Hollingworth (2012) makes a similar claim with regard to the implementation of formative assessment in schools. Extrapolating from these assertions, it stands to reason that the principal plays a pivotal role in the extent and, more importantly, the quality of the faculty interaction in the school. Through the position and authority ascribed to the office, it is the principal who is the designated leader and sets the tone that facilitates the climate which fosters collaboration and collegiality. Such a climate is most often supported through the principal collegial relational leadership style that values faculty input and leadership on educational issues important to the school’s effectiveness.

### **The Context**

Trinidad and Tobago (T&T) is a multi-ethnic society, with the predominant ethnicities being of East Indian (35.4%) and African (34.2%) descent (Trinidad and Tobago. Central Statistical Office, 2011). The country is divided into eight educational districts, each headed by the School Supervisor III (SSIII), assisted by SSIIIs responsible for secondary schools and SSIs responsible for primary schools. The Ministry of Education (TTMOE) is the central authority which runs the public education system. In this study we focus on the primary school, within which there are seven levels: First and Second year infants (ages 5-6); the junior department which comprises three grade levels called Standards (Std.) Stds. 1-3, ages 7 to 9 plus; and an upper junior or senior department comprising Stds. 4 and 5, ages 10 to 11 plus years.

In 2001 the government introduced the Continuous Assessment Programme (CAP) and administered the first of the national assessments. There are four performance levels on the assessment: Level 1: below proficient; Level 2: partially proficient; Level 3: proficient; and Level 4: advanced proficiency (TTMOE, 2009). Schools in which more than 30% of students score at Level 1 are identified as in need of Performance Enhancement Programmes (PEP), which are initiatives designed to address the identified areas of weakness.

However, in examining differences between PEP and non-PEP schools, Brown et al. (2014) found non-PEP schools to have significantly higher mean scores on teacher collaboration and on collective decision making within their department. These findings provide the impetus for the conduct of this study. As such, we seek to ascertain the extent to which primary schools utilize collaborative networks within their schools as they plan to meet the academic needs of their students. We recognize that networks can be formal—highly structured—or informal. In this study we focus on the networks that are intentionally formed, with special reference to the use and interpretation of data from the National Tests. Additionally, in recognizing the role of the principal in fostering a climate conducive to teacher collaboration (Hollingworth, 2012), we examine the principal's leadership style and teacher professional behaviours (Hoy, 2003).

## **Methodology**

### **Methods**

This study utilizes both quantitative and qualitative data at different stages of the research process. In the initial stage of the research, we employed the use of purposive sampling approaches to conduct qualitative interviews on intentional in-school collaboration on the interpretation and use of assessment data from the National Tests, and on teacher collaboration on curricular and pedagogical issues. In the second stage, we asked teachers to respond to two questionnaires; one that examined their in-school interactions and another that examined the Principal Leadership and professional Teacher Behaviours dimensions of school climate

### **Sample**

The sample comprised principals and teachers from seven of a cluster of nine primary schools in an urban school district in Trinidad and Tobago. The cluster was selected because the nine schools were representative of the schools in the educational district with regard to student socio-economic background, other student demographics, teacher qualification, and because one of the researchers had worked with some of the schools on a previous occasion.

Schools varied by sizes, ranging from  $n < 200$  – one school to  $n > 600$  – two schools. The sample comprised only teachers who taught or were currently teaching Stds. 2–4; the classes in which teachers most likely would have been making adjustments to their instructional methods

based on National Tests data. Four of the schools were designated PEP schools and three were non-PEP schools. Teachers responded to statements on the Social Network Questionnaire and two dimensions on the Organizational Climate Index (OCI) (Hoy, 2003), providing a response rate that ranged from 60% to 87.5%. The final sample comprised 56 teachers (female = 47, male = 9); mean age = 39.6 years; mean years in teaching = 13.73. With the exception of two teachers, all teachers had at least the Teachers Diploma, with 28 (52%) having at least a B.Ed. or BA. Schools C and D are single-sex girls' schools and schools B and G are single-sex boys' schools. There are no male teachers in the single-sex girls' schools and also in School A, which is the smallest school in the sample. Additionally, there were no responses from male teachers in School F. The ratio of female to male teachers reflects the ratio in the profession.

### **Qualitative Methods**

The qualitative methods used for collecting data comprised individual semi-structured interviews. The data reported here are from hour-long interviews with the seven principals to determine the organizational structures in place to facilitate effective use of the National Test report data. Similar questions were asked of 31 teachers in five focus groups, with regard to their classroom and pedagogical decisions. One of the authors conducted both the interviews and focus groups, which were audio-recorded and transcribed. The transcribed data were independently analysed for emerging themes and categories by two of the researchers with expertise in qualitative research. Draft copies of the focus group findings and the interview findings were emailed to respective participants for their comments. Comments received via this process were also incorporated as data in the final analysis.

Four broad questions were asked of the principals during their interviews. These questions were also posed to the 31 teachers in the focus groups. These questions were:

- *To what extent is there collaboration among teachers in addressing the findings of the National Tests Report?*
- *What structure do you have in place to facilitate teacher collaboration on curricular and teaching issues?*
- *Is there an educational plan at the department and/or school level to address the findings of the report? If yes, what does the plan entail?*

- *To what extent if any did teachers/the school use the findings in the National Tests Report in making curricular and instructional decisions?*

### **Quantitative Methods**

In the quantitative element of the research, teachers responded to two surveys. One survey was a networks questionnaire that comprised questions adapted from examples by Moolenaar (2012). Specifically, the Social Network Questionnaire (SNQ) consisted of 10 statements in response to the prompt: “name up to 4 colleagues, including the principal, in your school” with whom within the past year you have discussed the National Tests following the release of the report. The names of teachers for each school were placed across the top and down one side on a chart. A teacher selected by another teacher was connected by an arrow. Double-headed arrows indicate teachers who selected each other. Teachers were also asked to indicate on a scale of 1 (*once*) to 7 (*once a week*) how often they had met; and on a scale of 1 (*not important*) to 4 (*very important*) to rate the importance of the meetings (see Appendix A). We examined the frequency of the interactions as representing the stability of the structural patterns, as respondents are more accurate at identifying ongoing patterns than determining occasional interactions (Carley & Krackhardt, 1999 cited in Daly et al., 2010). Interactions twice a term or more were considered frequent.

The second questionnaire comprised the 14 items measuring the Principal Collegial Leadership (CL) and Professional Teacher Behaviour (PTB) dimensions on the Organizational Climate Index (OCI) (Hoy, 2003). The OCI is a 30-item descriptive measure for schools. The index has four dimensions—principal collegial leadership; teacher professionalism; achievement press for students to perform academically, that is, the emphasis placed on academic achievement by teachers, parents, and students; and vulnerability to the community. Collegial Leadership (CL) comprises seven items that measure principal behaviour with regard to the social needs of the faculty within the context of the school, for example, the principal treats teachers as professional colleagues; is open, egalitarian, and friendly, but at the same time sets clear teacher expectations and standards of performance (Hoy, Smith, & Sweetland, 2002). PTB addresses respect and trust in colleagues’ competence, mutual cooperation, and commitment to students (Hoy et al., 2002) (see Appendix B). Hoy et al. (2002) report reliability coefficients of .94 for CL and .88 for PTB. On this sample, we report Cronbach’s alphas of .83 for CL and .89 for PTB. School scores are

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calculated and converted to standard scores with a mean of 500 and standard deviation of 100 (see Hoy, 2003).

Teacher surveys were anonymous. While we could identify the school, teachers were not asked to indicate their class level. Also, to prevent possible school identification, an exact number of students enrolled in the schools is not reported. The school's performance on the National Tests and designation as PEP or non-PEP were retrieved from 2009–2011 school performance data received from the TTMOE. It is accepted that language and mathematics proficiency are the core elements for success in a knowledge-based and technologically driven society, therefore of interest was student performance on the mathematics and Language Arts assessment in Std. 3.

### **Data Collection and Procedures**

After receiving approval from the TTMOE, one of the researchers contacted the nine schools that comprised the cluster. Principals were given copies of the Permission Letter and the Confidentiality Statement, a short principal's questionnaire on school demographics, and copies of the survey instruments. The instruments for the teachers, including a letter requesting their participation, were distributed by one of the researchers to be collected in two weeks. After several attempts we retrieved sufficient useable data from seven of the nine schools. These schools provided the final sample for the study.

## **Results**

### **Use of Assessment Data, Networks, and Pedagogical Strategies**

The interview questions address research questions 1 and 2. In response to the interview questions, all the principals, in expressing concern for their school's performance on the National Tests, stated that they had taken intentional actions to address the identified areas of weakness identified in the National Test Report. They formed faculty teams, which they charged with the responsibility of studying the report and reporting back to the faculty. Based on the teams' report they put in place mechanisms to facilitate teacher collaboration on curricular and pedagogical strategies. In response to the question about whether there was an educational plan at the department and or school level to address the findings of the report, all the principals stated that they had such plans. Additionally, six of the seven principals could discuss the plans in detail, specifically relating them to the school's approach to addressing

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areas of weakness highlighted by the report. For example one principal stated that:

*the head of department or teacher in charge is responsible for developing and implementing a plan. She has assured me that she has met with the staff and they have come up with a working plan to address the areas of weakness highlighted in the report.*

It should be noted that the teams reflected the hierarchical organizational structure of the school, that is, the principal and heads of departments (HODs) or teacher in charge.

Teachers' responses to the four questions varied. While all teachers discussed the National Tests report, they varied on the extent and effectiveness of the collaboration on curricular and pedagogical strategies and the effectiveness. The following two examples reflect the marked differences across schools in approaches to treating with the assessment data in the National Tests report. For example, Ms. Thomas from School F, with voiced agreement from others, stated:

*We talk about the test results and we discuss especially the math and the comprehension. We recognize that these are problem areas that we have to work on, but that is as far as it goes. We share ideas giving reasons why we think the scores are what they are and agree that we have to do something about it. [However], each person goes back and tries to remediate the problem on their own. I try my best. I think we all try our best.*

However, School A adopted a more collaborative approach in addressing the findings in the report, as evidenced by the following statement from Ms. Lopez:

*We meet as a staff and discuss the report. Most times the principal leads the discussion but we all say our bit and together come up with strategies to address the problems identified in the report.*

### **Social Network, Climate, and Performance**

Analysis of the social networks data indicated that the frequency with which teachers met to discuss the report and made decisions based on the report differed among schools. However, the importance ascribed to the meetings did not differ significantly. The mean scores indicated that the meetings, if not deemed very important, were considered important (Table 1). Most of the respondents met at least once a term to discuss the data from the report and address related curricular issues, and more than twice a term to discuss their overall teaching approaches and strategies (Table 1).

In terms of school climate, five of the seven schools had principal collegial scores above the mean of 500; the exceptions were School E, which had a score of 444.91 placing it at the 30<sup>th</sup> percentile, and school G with a score of 461.03 placing it at the 35<sup>th</sup> percentile. With regard to teacher professional behaviour, only schools A, D, and F had standard scores above the mean (Table 1).

However, there is a strong correlation between principal collegial scores and teacher professional behaviours ( $r = .83, p = .02$ ); the schools with the highest principal collegial scores also had the highest teacher professional behaviour scores. With regard to teachers' selection of colleagues with whom they had specific work-related interactions, patterns varied across schools. From the responses, four patterns of the within-school interactions emerged. Figure 1 reflects the pattern for School A; Figure 2 for Schools B and C; Figure 3 for Schools E and F; and Figure 4 for Schools D and G.

**Table 1. Mean Response for Faculty on the Social Network Questionnaire and School Climate Scores**

Source	School						
	A n=7	B n=8	C n=9	D n=10	E n=7	F n=8	G n=7
School Classification	PEP	PEP	non-PEP	non-PEP	PEP	PEP	non-PEP
Met to discuss National Tests report	2.43	4.50	2.56	3.70	3.71	3.50	2.43
Importance of the meeting	3.43	3.50	3.22	3.60	3.14	2.63	3.14
Met to discuss teaching	5.0	5.13	4.67	5.10	5.00	4.75	5.0
Meeting importance	3.43	3.50	3.67	3.90	3.43	3.75	3.71
Met to make curricular decisions	3.14	4.0	2.56	4.44	4.0	3.88	4.14
Meeting importance	3.71	3.50	3.33	3.78	3.40	3.75	4.0

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Met to make pedagogical decisions	2.86	4.13	3.0	4.33	3.86	4.0	5.0
Meeting importance	3.14	3.38	3.67	3.89	3.43	4.0	4.0
Collegial leadership score	729.78	584.65	594.06	651.94	444.91	538.67	461.03
Professional teacher behaviour score	829.32	317.12	399.34	662.22	274.81	510.82	396.99

**School A**

School A is a small school (n < 200) with a tightly knit faculty. The teachers interact with each other; however, much of the interaction is centred around the principal—the triangle (see Figure 1). This is not surprising in this case. As stated by the principal, the school was at the bottom of the achievement ladder. She came to the position with a passion, a vision, and a plan. Her focus was on building teacher capacity and relationship with the community.

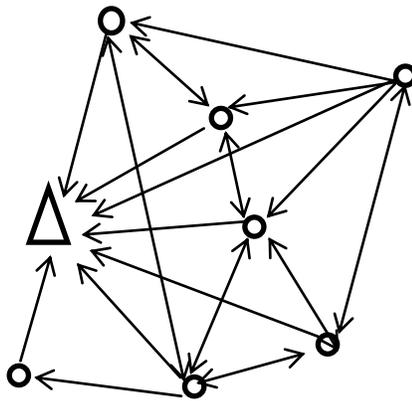


Figure 1. School A  -- principal  teacher.

As she explained:

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*I wanted to get certain things in place, get the school moving. I started professional development workshops because we never used to have that. We needed to build the teachers' capacity in order to build the children's capacity. ... Professional Development, I said it must become the culture in the school; that professional development must be done every term on a regular basis, not just targeting the children's needs but also the teachers' needs, personal as well as professional.*

Principal A further explained that:

*Everything to me is relationship, if you don't have good relationships with teachers or parents or children ... nothing happens. The relationships make them go the extra mile. [Do] things they normally would not do.*

With specific reference to the National Tests reports she also stated that:

*We meet in school, sometimes out of school and we discuss students' performance on the tests and we plan. We recognize and use each other knowledge and skills to help each other. We identify children who had struggled, did really badly on the tests and we discuss those students, share ideas.*

With regard to the National Tests report, the teachers in School A corroborated her statements. According to one teacher, with full agreement from the others, “*we study the report and adjust and adapt and make the relevant changes. We share ideas and books; [we] use the internet .... We really support each other.*”

Data obtained from the school climate questionnaire support the strength of Principal A's approach. Both the CL score of 729.78 and PTB score of 829.32 evidence the success of her approach to leadership. Additionally, a review of the school's performance on the mathematics assessment on the National Tests 2009 to 2011 indicates a steady, if small, increase in the number of students meeting the standard. In 2009, the percentage of students meeting performance standards (NCE scores < 50 > 71) in Std. 3 = 18%. In 2010, the percentage increased to 46%, and the results for 2011 remained steady at 46%, with two students exceeding the standard. In 2005, no student in Std. 3 met the standard.

The performance on the Language Arts assessments evidenced a similar trend. There was a consistent increase in the percentage of students performing at standard, from 16% in 2009 to 31% in 2010 and 36% in 2011. As explained by the principal, the improvement in the number of students meeting the standard, though small, is not by

accident. It is the result of hard work by all the teachers working together, “*putting their hands to the wheel.*”

### Schools B and C

The network pattern for School B—a medium size school ( $n \approx 300$ ) can also be applied to School C (see Figure 2). The teachers in School B all relate to the principal but, as can be seen, with the exception of a small group of teachers at the same grade level working collaboratively, the between-faculty interaction is not dense. Teachers’ professional interactions were more or less limited to the HODs and principal.

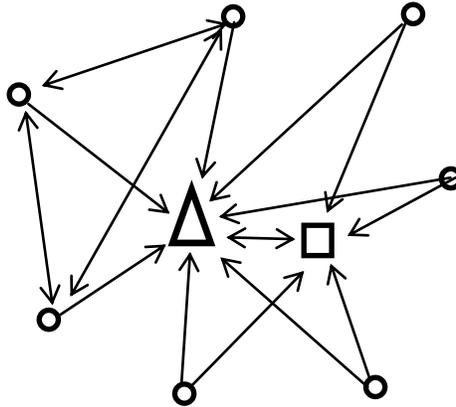


Figure 2. Schools B and C  -- principal  -- heads of department  -- teacher.

They met to discuss the assessment data and discussed next steps, but these meetings were all called by either the principal or HOD. They found the meetings important but there was no indication as to the extent to which they engaged in the process. The principal for School B explained:

*The school is now coming out of a very challenging period and as the new principal I am in the process of refocusing the school on student achievement, building school morale and building teacher capacity. The teachers still have to understand that we have to work together, that they have to be committed to the students and the school.*

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On the issue of student achievement he stated:

*We were classified as a PEP school and that did nothing for teacher morale. We are still waiting for the resources and facilitators that the Ministry promised. I have told the teachers that we are in this together. We have to share our expertise to improve our performance. I have put a team in place and encourage teachers teaching the same level to plan together and share with those in the higher classes into which the students would be going.*

With regard to teachers working together, he admitted that there was not a culture of collaboration in the school, which was not helped by the physical conditions under which the teachers worked.

Teachers in School B applauded the principal's efforts. They agreed that he is paying particular attention to student achievement and uses the feedback from the National Tests to inform the conversation as to where the school needs to go. As stated by Mr. Bell, a senior male teacher:

*The principal is dealing with many things at the same time and we have to step up and start to seriously work on the [national] tests reports. Some of us are ready, but not everyone. A few of us have come together and plan how we are going to teach certain topics. We also go on the internet and get ideas.*

This sentiment was echoed by another teacher who stated that the Std. 3 teachers work very well together. They shared ideas and as a matter of fact, she stated, "I am good at math and have been teaching certain math concepts to all the Std. 3 classes."

The CL score suggests that the principal is seen as relational and supportive of faculty. However, the PTB score of 317.12 indicates that there is still a lot of work to be done with regard to faculty trust and support for each other. The principal is trying to arrest a decline in student performance on the National Tests. A review of the National Tests mathematics scores from 2009 to 2011 shows that the Std. 3 performance has been inconsistent, increasing to 25% in 2010, but decreasing to 17% in 2011. The performance on the Language Arts assessment, while much better than in 2009 (15%), also has been inconsistent, increasing to 29% in 2010 but decreasing to 23% in 2011.

There are special circumstances affecting School C ( $n \approx 350$ ). The school has had to double the size of some of its classes because of sorely needed building repairs and teacher retirement. To alleviate some of the pressures on teachers, the principal sometimes teaches. Principal C is determined to get the school back on track. She explained that she

communicates regularly with staff and is focused on rebuilding a sense of family in the school. She noted:

*Our performance is unacceptable. It is not fair to the children and their parents. We as a staff have to do better. We have to work together more. We don't do that enough. We have to use the results to see what we have to teach better and which children need our special attention. ... We have the skills but we don't take advantage of what each can offer enough. That is what I am working on. We can't depend on the Ministry.*

Comments from the teachers indicated an awareness of the challenges they faced and the need to collaborate. The following statement encapsulates the sentiments expressed by the teachers:

*Listen! We know we have a problem and we are concerned. The children are not performing as they should. It is not that we do not work and cooperate with each other. We talk ... discuss strategies and so forth. But, the issue is more than just the [National] Test report. It is bigger than that. We appreciate what the principal is doing, but the working conditions can frustrate anybody. Honestly, by the end of the day you just want to get out of this building.*

The CL score of 594.06 suggests that the teachers hold the principal in high regard. Based on the PTB score it would appear that the trust level among teachers has declined. The school's 2011 performance data are a harsh reflection of what has transpired in the school. The percentage of students meeting or exceeding the standard is as follows: 2009 – mathematics = 18%, Language Arts = 41.2%; 2010 – Mathematics = 26.5%, Language Arts = 45%; 2011 – Mathematics = 10% and Language Arts = 21%. This school is rapidly changing its designation from non-PEP to PEP school.

### **Schools E and F**

School E is a fairly large single-sex boys' school ( $n \leq 400$ ) (see Figure 3). The school is in a tough neighbourhood and, as stated by the principal, is experiencing rapid turnover of staff.

The arrows indicate that most teachers interact with either the principal or the HODs. A few have formed their own clique. Principal E explained that her challenge is to bring teachers on-board. Her statements capture her frustration. As she lamented:

*When I came to this school I met a fractured staff. It was almost like there were two schools, the upstairs and the downstairs. While some teachers had their friendship groups, as a staff they did not*

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*come together. Individual teachers worked with their class and beyond that didn't really pay much attention to what was going on in the school.*

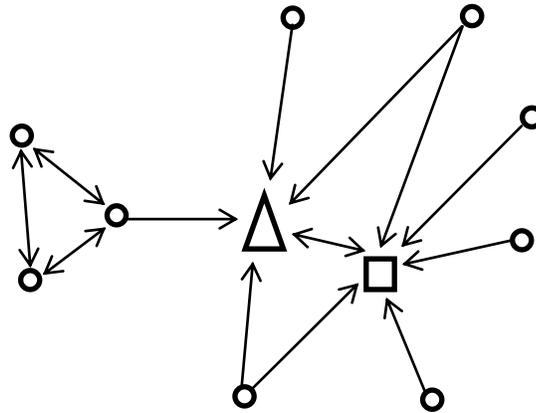


Figure 3. Schools E and F  -- principal  -- heads of department  -- teacher.

Recognizing that there was a long history behind the poor relationship among the teachers, she has implemented a new system and has created teacher teams for each class level headed by the HOD or senior teacher. She further explained:

*With the new system I have put in place, we have started to pay closer attention to the National Tests report. Every year when we get the results I call the teachers together to discuss the report and let the teams come up with strategies for their class level.*

While the responses of the teachers in School E did not contradict those of the principal, many of their comments focused on the quality of the students and reflected a lack of enthusiasm about the assessment. For example, Ms. Singh spoke about the parents' "lack of interest in their children's education." The teachers did confirm that at the behest of the principal they met by departments to discuss the report and identify areas where they needed to focus their attention. However, no one referred to any plans or strategies emerging from the meetings. The CL score is just below the mean but the PTB score is troubling. The school's performance on the national assessment reflects the less than ideal school climate. On the mathematics assessment in 2009, 43% of students met or exceeded the standard. This percentage decreased to 10% in 2010 and

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was at 27% in 2011. The trend is the same for Language Arts: 46% in 2009, 12% in 2010, and 26% in 2011.

School F is a small to medium-size school with a history of academic under-performance. The proportion of students meeting the standard in mathematics has been increasing, but only slightly (14% to 17%), and has been very inconsistent for Language Arts – 25% in 2009 to 1% in 2010 to 10% in 2011.

In discussing the school's performance on the National Tests and how they utilize the data, the principal explained that there are senior teachers who act as HODs for each class level. They are supposed to meet with the teachers and plan together to address the findings in the report. She is aware that they meet but could not give details of the discussions.

The teachers in School F did not give any detailed information about using the data to make curricular and pedagogical decisions. They spoke about meeting and talking about the results. The following statement captures this idea of talking to each other but not working together:

*Some of us meet and discuss the results; [we] look at the strands on which the students did not perform. We talk about having to do better but we don't have a comprehensive department wide strategy. But we share ideas etc. with each other. All the teachers work hard.*

The CL and PTB scores suggest that the school climate is positive. However, the network diagram indicates that while there is interaction with the principal and HOD, the teachers do not capitalize on each other's talents and skills. They may like each other but do not come together professionally to address student performance on the tests.

### **Schools D and G**

The network pattern for School D—a large school—also applies to School G (see Figure 4). School D has a highly structured teacher support system that predates the principal, who, incidentally, was a teacher at the school. Teachers interact with the principal and with their colleagues; however, as indicated by the lines of interaction and the larger size of the rectangle, the density of the relationship with regard to curriculum and pedagogical issues is with the HODs. The HODs meet regularly with their teachers and, as stated by the principal, the feedback from the National Tests is central to their discussions and planning. Each class level meets to plan the teaching curriculum. They know each other strengths and utilize this in-house expertise to arrive at strategies to address areas of weakness identified in the assessment report.

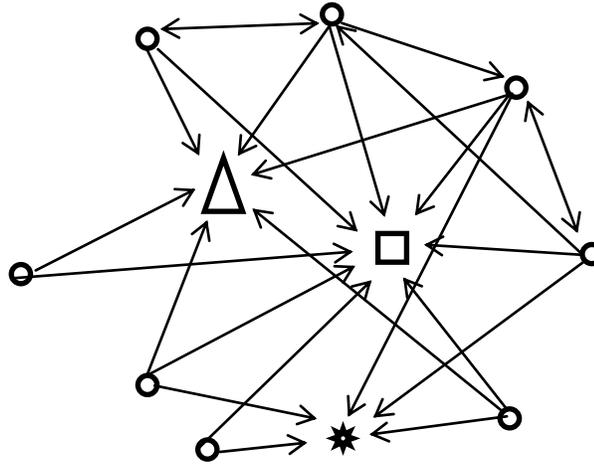


Figure 4. Schools D and G  $\triangle$ -- principal  $\square$ -- head of dep't  $\star$ -- Sp. Ed  $\circ$ -- teacher.

Teachers in School D also have special education support available to them; a resource that is not available to the other schools. Also, the principal was very clear in stating that she leaves “no stone unturned” in finding resources for her school and does not hesitate to bring in outside expertise when necessary. The teachers noted that they were accustomed to working in teams. In the words of Ms. Britto:

*We meet regularly to discuss how the students are doing. We have curriculum teams and we share teaching strategies, especially in math. We sometimes team-teach or Ms. K, who is really good in science, would teach a topic in my class or hold a lunchtime workshop. ...When I came here I met the system in place and I have learned a lot from the other teachers.*

Both the CL and PTB scores are more than one standard deviation above the mean for School D, suggesting that the principal respects and treats fairly with the teachers and the teachers trust each other’s professional judgment.

School G also is a large school, whose students have always performed well on the national exams. However, while the school is still performing much better than many of the other schools, in recent years

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there has been a steady decline in the percentage of Std. 3 students performing at standard; from 57% in 2009, to 52% in 2010, to 47% in 2011. Student performance on the Language Arts component has also declined from 67% in 2009, to 52% in 2010, to 59% in 2011. Principal G explained that the retirement of senior faculty has resulted in a rapid change in both the teaching faculty and administration. However, he assured that there is a system in place to address the National Tests:

*The HODs meet with their teachers and systematically go through the report. They meet immediately on the release of the report and then they schedule meetings during the academic year. The HODs keep me (the principal) informed about their progress and challenges.*

He further emphasized:

*This school takes pride in the academic achievement of its students and therefore we pay particular attention to student performance on the CAP.*

Similarly, the teachers in School G also expressed concern with the declining performance and have vowed to rectify the situation. As one male teacher observed:

*This (the decline) is new to us. We have lost some of our best teachers and obviously we are not filling the vacuum. Right now we are meeting by class (level) and looking at what ... how we are teaching certain concepts; what we need to do differently. Obviously we have to do a better job. We also have to acculturate the new teachers.*

The indicators on Table 1 suggest that the teachers in School G do meet regularly on issues related to student performance on the National Tests. The network graph indicates collegial interaction, which may be a reflection of the tradition as the school continues to build collaborative networks with new faculty. It is possible that the steady decline and the CL and PTB scores may be a reflection of the current transition.

### **Discussion and Conclusion**

In this study we attempt to determine whether: (1) there is an intentional formation of within-school social networks in primary schools around the interpretation and use of the data on the National Tests Report; (2) schools use these collaborative networks to inform curricular decisions and teacher pedagogy; (3) there is a relationship between the principal collegial leadership and teacher professional behaviour and the density of

the in-school professional social network; (4) there is a relationship between the within-school networks formed and the proportion of students meeting or exceeding the proficiency standard on the National Tests; and (5) schools/teachers ascribe any importance to the within-school professional relationships.

There is consensus in the literature that within the school, the most important element is the teacher, and one of the most effective strategies that a teacher can adopt is that of classroom formative assessment (Moss & Brookhart, 2009). But, as De Lisle (2010) has shown, in Trinidad and Tobago, even in schools where teachers have been trained to conduct formative assessment, there is wide variation in the effectiveness of the implementation. In his evaluation of the CAP, De Lisle makes a number of critical observations, among which is the existence of good instructional practices that were isolated and not collaborative and, consequently, may not be sustainable, especially in a school culture that is high-stakes and competitive. But, more importantly, he looked at contextual factors that influenced the implementation of the innovation by schools and the level of intensity and degree of fidelity. As he observed at one site:

The common factors were collegiality and collaboration, which had added importance in the context because there were no formal training programmes to support CAP at the building site. Collaboration in the form of sharing and modelling was a primary tool in the spread of the innovation at the site. ... Leadership proved a critical factor in ensuring such collaboration, both of which created a climate of support that allowed the innovation to scale-up. (p. 158)

Research questions 1, 2, and 3 asked whether there is an intentional formation of within-school social networks; whether schools use these collaborative networks to inform curricular decisions and teacher pedagogy, and whether there is a relationship between principal collegial leadership and teacher professional behaviour and the density of the in-school professional social network. While some were more effective than others, all principals spoke of intentionally forming networks to address the findings of the National Tests reports, and teachers either spoke directly to, or alluded to, some level of collaborative effort around curricular decisions and pedagogy. With the exception of School G, the schools with the highest CL and PTB scores also displayed the densest network formations.

Thus, the results of our study to some extent support De Lisle's claim with regard to collaboration and the role of leadership in fostering a

climate in which teachers feel free to share and model, and, in this case, turn the feedback from the National Tests into actionable knowledge (Halverson, 2010). Without doubt, and as seen especially with Schools A and D, the role of the principal is pivotal to the success of any innovation, for she or he is the “primary conduit through which the reform is initially diffused” (Daly et al., p. 372). The principal sets the tone and creates the climate that fosters teacher collaboration and willingness to share knowledge and expertise and learn from each other. This is the sentiment captured by the teacher from School D when she said she learned so much from her colleagues, and is also reflected in the assertion made by the teachers in school G of the need to “*acculturate the new teachers,*” which we understood to mean to make them a part of the community of practice.

Limited as this study may be to teachers who are currently teaching or have taught Stds. 2–4, the climate data suggest that the schools with the higher climate scores also demonstrated greater professional interaction between and among teachers. Also, in answer to research question 4, whether “there is a relationship between the within-school networks formed and the proportion of students meeting or exceeding the proficiency standard on the National Tests,” there appears to be a relationship between the more structured and deeper interaction, higher scores of principal collegiality, and teachers’ trust and commitment behaviours and improvement in student performance on both the mathematics and Language Arts components of the National Tests. This is made explicit in Schools A, D, and G. However, it is an area in need of further research.

These findings do not claim that the schools are making effective use of the National Tests report. De Lisle (2010) does an excellent job of addressing the issue of fidelity and the need for training and support. What this study suggests is that within-school professional social networks allow for the reciprocal sharing of ideas and expertise and, as a result, could have a positive impact on student learning. In all the schools the principals have created formal networks formed around the hierarchical structure and official positions of school faculty. Even though the teacher in School B taught math concepts to all the Std. 3 classes, with the exception of School A and School D, no principal organized the within-school network structure around teacher expertise and skill sets, even as they planned to address the National Tests reports. School A brought in outside experts to conduct workshops. School D ensured that all HODs accessed whatever professional development opportunities were available.

There are multiple actors that impact what transpires for education in the school. However, we also acknowledge that there is much hidden expertise among school faculty (as noted in Schools A, D, B, and G) that is lost to the school because opportunities and conditions for cross sharing are not factored into the organizational structure of the school (Achinstein, 2002; Daly et al., 2010). The fact is, and as De Lisle (2010) discovered, that despite the lack of within-school expertise in formative assessment, the schools that made most effective use of the assessment data did so through teacher collaboration; that is, they formed networks that allowed them to capitalize on their human capital. Our findings also suggest that the schools with the more densely and highly structured networks showed yearly progress or maintained acceptable performance standards on the National Tests. We suspect that the same would apply to school G after they settle from this period of transition. In a collective sense, these suggest the need for continuing exploration of the potential benefits of within-school expertise and networks especially in the context of working within a resource-strapped system. These have implications for how principals are prepared to lead their schools, plans for successful implementation of CAP, and for the overall enhancement of the academic performance of students.

There are limitations to this study. The sample is small and limited to one cluster of schools in an urban district. Additionally, the sample does not include all teachers in a particular school. Yet, the findings point to the relationship between teacher within-school networks that are focused on the use of assessment data in making curricular and instructional decisions and an increase in the percentage of students meeting or exceeding the standard on the National Tests. Additionally, the CL and PTB scores for Schools A, D, and G lend support to the literature that principal leadership style which is relational and teacher professional collegial behaviours facilitate teachers working together and the sharing of ideas and expertise.

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## Appendix A

### Social Network Questionnaire

**Directions:** We would like to know more about the professional relationships in your school. We are interested in communication on work-related matters (pupil behaviour, curriculum, instruction, planning/policy).

**Please indicate your status by placing 'X' in the appropriate box**

Sex:    male                          female   

**Please indicate an age category by placing 'X' in the appropriate box.**

< 20 years	20-24 years	25-29 years	30-34 years	35-39 years	40-44 years	45-49 years	50-54 years	55+ years

**Please indicate your status by placing 'X' in the space provided**

Qualification: T. Dip \_\_\_\_\_ B.ED/BA \_\_\_\_\_ M.ED/MA \_\_\_\_\_  
Other \_\_\_\_\_

Professional status: AT II \_\_\_\_\_ T1 \_\_\_\_\_ HOD \_\_\_\_\_ VP \_\_\_\_\_  
Ag. Prin \_\_\_\_\_ P1 \_\_\_\_\_

Years in teaching: \_\_\_\_\_                      Years teaching at the school:  
\_\_\_\_\_

**Name up to 4 colleagues, including the principal, in your school:**

1). With whom within the past year you have discussed the National Tests following the release of the report.

1-----                      2-----                      3-----  
4-----

How often have you met?

Once	Twice	Once a term	Twice a term	More than twice a term	Several times a term	Once a week

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On a scale of 1 (not important) to 4 (very important) rate the importance of the meetings.

1                      2                      3                      4

2). From whom you seek advice or information about teaching in general.

1-----                      2-----                      3-----  
4-----

How often do you meet?

Once	Twice	Once a term	Twice a term	More than twice a term	Several times a term	Once a week

On a scale of 1 (not important) to 4 (very important) rate the importance of the meetings.

1                      2                      3                      4

3). From whom you seek advice or information about math teaching strategies.

1-----                      2-----                      3-----  
4-----

How often do you meet?

Once	Twice	Once a term	Twice a term	More than twice a term	Several times a term	Once a week

On a scale of 1 (not important) to 4 (very important) rate the importance of the meetings.

1                      2                      3                      4

4). From whom you seek advice or information about literacy teaching strategies.

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1----- 2----- 3-----  
4-----

How often do you meet?

Once	Twice	Once a term	Twice a term	More than twice a term	Several times a term	Once a week

On a scale of 1 (not important) to 4 (very important) rate the importance of the meetings.

1                      2                      3                      4

5). From whom you seek advice or information about classroom discipline and strategies.

1----- 2----- 3-----  
4-----

How often do you meet?

Once	Twice	Once a term	Twice a term	More than twice a term	Several times a term	Once a week

On a scale of 1 (not important) to 4 (very important) rate the importance of the meetings.

1                      2                      3                      4

6). From whom you seek advice or information about course content and lesson planning.

1----- 2----- 3-----  
4-----

How often do you meet?

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<b>Once</b>	<b>Twice</b>	<b>Once a term</b>	<b>Twice a term</b>	<b>More than twice a term</b>	<b>Several times a term</b>	<b>Once a week</b>

On a scale of 1 (not important) to 4 (very important) rate the importance of the meetings.

1                      2                      3                      4

7). From whom you seek advice or information about strategies to assist low-performing students.

1-----                      2-----                      3-----  
4-----

How often do you meet?

<b>Once</b>	<b>Twice</b>	<b>Once a term</b>	<b>Twice a term</b>	<b>More than twice a term</b>	<b>Several times a term</b>	<b>Once a week</b>

On a scale of 1 (not important) to 4 (very important) rate the importance of the meetings.

1                      2                      3                      4

8). With whom within the past year you have used the assessment data from the National Tests to make curricular decisions

1-----                      2-----                      3-----  
4-----

How often have you met?

<b>Once</b>	<b>Twice</b>	<b>Once a term</b>	<b>Twice a term</b>	<b>More than twice a term</b>	<b>Several times a term</b>	<b>Once a week</b>

On a scale of 1 (not important) to 4 (very important) rate the importance of the meetings.

1                      2                      3                      4

9). With whom within the past year you have used the assessment data from the National Tests to make pedagogical decisions

1-----                      2-----                      3-----  
4-----

How often have you met?

Once	Twice	Once a term	Twice a term	More than twice a term	Several times a term	Once a week

On a scale of 1 (not important) to 4 (very important) rate the importance of the meetings.

1                      2                      3                      4

10). With whom within the past year you have used the assessment data from the National Tests to identify specific content and skill areas to address.

1-----                      2-----                      3-----  
4-----

How often have you met?

Once	Twice	Once a term	Twice a term	More than twice a term	Several times a term	Once a week

On a scale of 1 (not important) to 4 (very important) rate the importance of the meetings.

1                      2                      3                      4

*Professional In-School Networks*

For the colleagues you chose, in a few lines, please give **reasons** for your selection.

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**Appendix B: Adapted Climate Index**

<b>Directions:</b> The following are statements about your school. Please indicate the extent to which each statement characterizes your school from rarely occurs to very frequently occurs.		<b>Rarely Occurs</b>	<b>Sometimes occurs</b>	<b>Often occurs</b>	<b>Very Frequently Occurs</b>
1	The principal explores all side of the topics and admits that other opinions exist.	①	②	③	④
2	The principal treats all faculty members as his or her equal.	①	②	③	④
3	The principal puts suggestions made by faculty into operation.	①	②	③	④
4	The principal is friendly and approachable.	①	②	③	④
5	The principal is willing to make changes.	①	②	③	④
6	The principal lets faculty know what is expected of them.	①	②	③	④
7	The principal maintains definite standards of performance.	①	②	③	④
8	Teachers help and support each other.	①	②	③	④
9	The interactions between faculty members are cooperative.	①	②	③	④
10	Teachers provide strong social support for colleagues.	①	②	③	④
11	Teachers respect the professional competence of their colleagues.	①	②	③	④
12	Teachers ‘go the extra mile’ with their students.	①	②	③	④
13	Teachers in this school exercise professional judgments.	①	②	③	④
14	Teachers accomplish their jobs with enthusiasm.	①	②	③	④

**REVISITING “WRITING IN SPITE OF TEACHERS:  
ISSUES IN TEACHING WRITING  
(TRINIDAD AND TOBAGO)” 20 YEARS LATER**

*Krishna Seunarinesingh*

This article investigated the extent to which Watts’ (1993) claim that English teachers in Trinidad and Tobago used “simplistic, unintegrated and outdated strategies for teaching writing” (p. 68) was true. Four in-service English teacher trainees participated in the study, which used data from observation of lessons, post-lesson interviews, and tutor comments to the teacher trainees as its sources of data. The study found support for Watts’ claim, but only in teachers’ initial teaching practices; their more informed practice showed some alignment with best practices in writing instruction.

**Introduction**

Writing pervades contemporary life. Text appears in forms as diverse as advertising billboards, social media posts and feeds, emails, journalistic reportage, letters advancing propositions, reports and notices within organizations, as well as more academic prose intended for specialist audiences. As Graham and Perin (2007) observe, “the explosion of electronic and wireless communication in everyday life brings writing skills into play as never before” (p. 8). Since these diverse genres meet the needs of writers and their audiences, it is important that adolescents acquire proficiency in producing them whilst at school. Graham and Perin underscore this point:

Writing well is not just an option for young people – it is a necessity. Along with reading comprehension, writing skill is a predictor of academic success and a basic requirement for participation in civic life and in the global economy. (p. 3)

Consequently, writing is at the heart of the secondary school curriculum, more so the English language arts curriculum.

Secondary schools in the Anglophone Caribbean, such as those in Trinidad and Tobago, teach writing in English language arts to adolescents for whom English is a second language, and a vernacular of English is their first language or L1 (Craig, 2006). For this population, therefore, learning to write means learning to write in a second language,

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though that target language shares much of the lexicon of their L1. Teachers, especially English teachers, bear the responsibility for enabling these adolescents to produce (and comprehend) a variety of academic discourse types.

### **Teachers' Instructional Practices**

Student success in writing (achieving more than minimum standards) requires expert instruction because “writing is an enormously complex activity and...students need a lot of practice in order to master the many skills and subskills required to become competent writers” (Alliance for Excellent Education, 2007, p. 3). Research into what teachers actually do to develop students' writing skills has painted a relatively dim picture of writing instruction, though successive meta-analyses of the literature do indicate improvements in practice.

Early studies in the United States (US), such as Applebee's (1984) large, three-part study of writing instruction across the curriculum at two high schools—which involved 309 observations—as well as surveys of teachers at 196 schools and case studies of the students in those schools, produced disturbing data. Applebee found that little actual teaching of writing occurred; “instruction” was mostly testing of previous learning. Feedback from teachers comprised mostly error correction in writing mechanics, and “comments concerned with the ideas the student was expressing were the least frequently reported” (Applebee, 1984, pp. 90-91).

Eighteen years later, Hillocks' (2002) study of writing in five states in the US indicated that significant change had occurred in writing classrooms:

1. As a consequence of state assessments, teachers were teaching multi-paragraph compositions.
2. Teachers spent significant time preparing for writing, such as having students brainstorm for ideas, read and study models of writing, and analyse their characteristics in class.
3. Teachers reported paying attention to audience and having students address these in writing assignments.
4. Teachers reported using model pieces of writing, as well as using class time for peers to respond to each other's writing.

The major drawback of Hillocks' survey was that it used self-reported data, and there were no observations of actual classrooms to verify respondents' claims.

More recently, Scherff and Piazza (2005) surveyed 1801 high school

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students at four schools in Florida, US. The authors found that “many students were not guaranteed multiple opportunities to write, nor were they given adequate exposure to best practices in instruction as advocated in the empirical and pedagogic literatures” (p. 289). For example, 43% of students across school type and grade levels reported never having written expressively or poetically; research-based writing was “seldom if ever done” (p. 289), even at a top-ranked school; whilst students reported writing drafts, feedback, and revision were not a part of daily routine. Large numbers of students did report, though, that their teachers modelled writing instruction. Like the Hillocks (2002) study, Scherff and Piazza’s survey depends entirely on self-reported data, so their findings need to be treated with with some caution.

#### **Antecedent to the Present Study**

The foregoing description of teachers’ practices comes from research of US school contexts. In 1993, Margaret Watts presented an overview of what was then known about teaching writing, how students learn to write, what teachers need to know, and “current practice.” Drawing heavily on the work of Hillocks (1986) and Raimes (1991), Watts argued for secondary English teachers to place less emphasis on “form” and more on the writer, the content, and the reader. Such an approach, she argued, would de-emphasize correctness in favour of expression of ideas, although she did acknowledge that the peculiar linguistic situation in the Caribbean requires that teachers make explicit the differences between students’ home language and the Standard variety. It should be noted that whilst Watts titled this section of her paper “How students learn to write,” this topic is not explicitly addressed and is subsumed under “What we know about teaching writing.”

In terms of approaches to writing instruction that focus on the writer, Watts (1993) recognized that writing process was an important advance because it shifted teachers’ attention to during-writing interventions, as opposed to simply providing feedback at the end. However, she lamented that in the period 1981-1991 only three curriculum studies (action research reports produced by Diploma in Education (Dip.Ed.) students) focusing specifically on writing as a process had been written at the School of Education, The University of the West Indies (UWI), St. Augustine.

With respect to content approaches to teaching writing, Watts (1993) defined it as pedagogy that “attaches writing to various subjects across the curriculum” (p. 61). However, she noted that students on the Dip.Ed. (hereafter called teacher trainees) had had little success with such

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interventions in their classrooms because of “the constraints of the course requirements and the time allocated to the study” (p. 62). That is, she attributed the lack of success to factors operating outside of teachers’ control. Finally, Watts looked at approaches that focus on the reader, which she saw as reflected in the Caribbean Examinations Council’s Caribbean Secondary Education Certificate (CSEC) syllabus as a concern with register. This she considered a positive instructional focus or “antidote” (p. 62) to writers’ penchant for writing only for their teachers, peers, and themselves.

In the section of her paper titled “What the teacher needs to know and current practice,” Watts (1993) identified three major practices that characterize teachers’ writing pedagogy:

1. Correcting students’ language errors whilst ignoring what they are thinking and trying to communicate
2. Creating teacher-centred classrooms in which students continue in a “state of dependence on the teacher” because he/she has not provided them with criteria for judging the quality of their own work (p. 64)
3. Providing surface level feedback such as “noting errors, commenting on form or content (text specific), or emoting and praising” (p. 64)

To address these issues, Watts proposed that teachers must:

- know that they have to write and “analyse their own processes” (p. 63) in order to experience and respond to problems their own students face in learning to write;
- have linguistic pragmatic knowledge as well as pedagogical knowledge;
- know about classroom management, interpersonal relations, and “personal histories of the students” (p. 63);
- know that focusing on linguistic form in writing instruction communicates that the teacher values this more than content or appropriateness; and
- take responsibility for helping students “recognize that they are writers” (p. 64) by organizing their entry into a community of writers.

Finally, Watts (1993) observed that reading and writing “go hand in hand with listening and speaking” (p. 65). In the “heavily oral context of the Caribbean,” she argued that children can be motivated to read through writing, especially if they have not developed a habit of reading,

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or cannot read well; thus she said reading and writing should be taught together.

Watts (1993) made two main recommendations:

1. In-service workshops should be organized, so that teachers come to know useful ways of intervening in the writing process, explore their own writing processes, and learn strategies for teaching writing and organizing their classrooms.
2. Further research should “describe contextual features of classrooms and successful teaching and learning strategies” (p. 67).

She saw classroom teachers as best positioned to do such research. However, she claimed that teachers “continue to use rather simplistic, unintegrated and outdated strategies for teaching writing” (p. 68) (namely, ignoring the communicative function of writing, creating teacher-centred classrooms, and providing superficial corrective feedback).

This blunt assessment of in-service English teachers’ instructional practices in Trinidad and Tobago was made 20 years ago, but since then there has been no attempt to address these two intertwined “issues” (intertwined since any description of contexts in which successful teaching and learning strategies are used would, by implication, indicate that teaching was not simplistic, unintegrated, and based on outdated strategies). Consequently, there is no evidence to suggest whether in the intervening years the situation has remained the same or improved. If it is the former, then adolescents in schools are being left unprepared for working with texts; if it is the latter, then research is needed to describe and analyse what has proven successful.

#### **Purpose and Delimitation of the Present Study**

This study used a multiple case study design (Yin, 2014) to investigate to what extent Watts’ (1993) declaration that teachers “continue to use rather simplistic, unintegrated and outdated strategies for teaching writing” (p. 68) holds true two decades after it was made. It was expected that answering this question would, by extension, shed light on any progress English teachers have made in researching their own writing classrooms to find “successful teaching and learning strategies” (p. 67). The investigation was delimited to in-service English teachers enrolled in a Dip.Ed. programme, that is, the study confines itself to the same type of sample Watts referred to.

This article does not address two aspects of Watts’ study: 1) how students learn to write, and 2) the relationship of writing to the other

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linguaging modes. With respect to the former, Watts' original question, "What do we know about teaching writing and how students learn to write?" is a double-barrelled question, so it was split into two, and the second question on how students learn to write was removed because it would extend the paper to an unmanageable scope, given the increased body of knowledge available for answering the first part of the question (in the review of literature). With respect to the latter aspect (writing and other languaging modes), the decision was taken to omit this in favour of increasing the space required to explore the research question that directed the study.

### **Research Question**

*To what extent is it true that teachers (enrolled in the Dip.Ed.) "... use rather simplistic, unintegrated and outdated strategies for teaching writing" (p. 68)?*

### **Significance**

Effective writing instruction is key to students' academic success. Since secondary school students depend on their teachers for efficient instruction (National Writing Project, 2006), and teachers gain formal training in writing methods during teacher training, data about the latter's practices can serve two purposes: 1) it can indicate to what extent teachers are meeting students' instructional needs; and 2) it can inform teacher educators' understandings about what works in teacher training, and what issues need addressing.

## **Review of Literature**

### **What Is Effective Writing Instruction?**

For teachers and teacher educators in the English-speaking Caribbean, answers to the question, "What constitutes effective writing instruction?" must be guided by the fact that it is instruction for Creole-influenced vernacular (CIV) speakers (Craig, 2006). The review that follows examines the research database on L2 English writing as well as L1 English writing because (a) the latter is significantly more developed than the former, and (b) some practices used in L1 English writing pedagogy are applicable to CIV speakers.

### **Best Practices in L2 Writing Instruction**

It is a measure of the difference between research into writing instruction for native versus non-native speakers of English that a library database search for "best practices in writing instruction" returns significant scholarship on L1 English writing, and virtually nothing on best practices in L2 English writing instruction. Even a Google search for "best practices in second language writing instruction" provides no comparable returns, and most research into L2 writing seems focused on ESL students in higher education (especially in the US). Myles (2002) sums it up this way: "Much of the research on L2 writing has been closely dependent on L1 research" (Models of L1 and L2 writing, para. 2).

Second language research into effective practices that are relevant to the education of CIV speakers in Trinidad and Tobago falls into three broad categories: 1) recommendations for motivating L2 English writers to use English, 2) providing feedback, and 3) using computer technology. Additionally, there are some practices, such as process writing, that are applicable to both L1 and L2 English writers, and these will be treated in the section on L1 writing.

### **Motivation**

Both Craig (2006) and Youssef (2006) have pointed to the false sense of familiarity Creole speakers can acquire with English, thus prompting them to (a) believe they already speak English, and (b) "associate the Standard code with an alien culture..." (Youssef, 2006, p. 148). This sense of familiarity is hypothesized to influence Creole speakers of school age to resist learning English. Several writers (Craig, 2006; Nero, 2000; Siegel, 2008) have recommended motivating these speakers to acquire a Standard, such as Trinidad and Tobago Standard English. Presumably, this will be reflected in their ability to produce extended English prose; thus, motivation is seen as a prerequisite for embarking on any kind of instruction.

However, empirical research in Caribbean contexts that demonstrates efficacious means of motivating CIV speakers is scarce. A search of electronic databases at UWI and UWISpace (<http://uwispace.sta.uwi.edu/dspace/>) produced no relevant hits for this topic. Thus, the idea of motivating learners has the status of a recommendation rather than a finding in the literature on L2 writing.

### **Providing Feedback**

Providing corrective written feedback (CWF) to students has been a contentious area of L2 writing instruction. A minority of researchers

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(such as Truscott, 1996; Truscott & Hsu, 2008) believe that CWF does not belong in the composition classroom because it is the domain of grammar teaching; for them, it is both ineffective and harmful.

The majority of researchers oppose Truscott's (1996) position, and have offered some empirical evidence to support CWF; however, as Bitchener, Young, and Cameron (2005) point out, CWF is a "growing but far from conclusive body of research" (p. 194). Similarly, Ferris (2004) describes as "scarce," evidence that error feedback works. What she does argue is that students who receive feedback will be more likely to self-correct their errors than those who receive no feedback. This assumes, though, that CWF is not overwhelming to the point where the student becomes demotivated.

For those who advocate it, CWF constitutes core best practice in improving learners' production of accurate English grammar. Their evidence comes primarily from quasi-experimental research with ESL learners at high schools and universities. All experiments in which direct CWF was compared to indirect CWF and no feedback groups produced significant gains for the treatment groups (Ashwell, 2000; Chandler, 2003; Ferris & Roberts, 2001; Sheen, 2007).

Although there is generally inconclusive evidence of whether direct or indirect feedback produces larger, longer-lasting gains (Bitchener et al., 2008), it should be noted that some research suggests that indirect feedback is superior (Ferris & Helt, 2000 as cited in Bitchener, 2008). Ferris (2004) recommends using indirect feedback because it "engages students in cognitive problem solving as they attempt to self-edit based upon the feedback that they have received" (p. 60).

In contrast, Bitchener's (2008) own study, using three experimental and one control group, showed that low intermediate ESL students with at least eight years of English instruction made significant gains in accuracy on new pieces of writing when given direct feedback. Specifically, he found that direct CF plus written and oral metalinguistic explanation on two aspects of English grammar led to the most gains. It should be noted, though, that participants in this study were adults who were motivated to learn English, and who had gone to New Zealand for academic purposes.

Several researchers (Lee, 2008; Mok, 2011; Rollinson, 2005) recommend that ESL teachers resist the "error-focused approach to feedback" (Lee, 2008, p. 158) in which every "error" is circled or commented on. This can cause resistance, especially from low-performing students. Thus Lee endorsed Straub's (2000) position that, "it is important that teachers respond to errors according to student abilities and avoid overwhelming students with excessive error feedback" (as

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cited in Lee, 2008, p. 158). In practice, this means teachers should restrict their attention to a narrow range and small number of errors at a time (Bitchener, 2008), instead of trying to fix everything at once.

Furthermore, Lee (2008) recommends that (a) teachers select the feedback they give, and focus on “pervasive error patterns” (p. 159) as opposed to providing comprehensive feedback, which can result in illegible comments on student scripts; and (b) they explore other modes of offering feedback, such as audio feedback, computer-based feedback, and use of feedback forms.

For the purposes of the present study, what is problematic about most of the research into L2 writing is that (a) it scarcely treats with adolescent writers, and (b) the ESL participants and subjects who figure in the research are usually not Creole speakers. These two factors may constrain the extent to which L2 writing research is relevant to Caribbean educators.

### **L1 Writing Instruction**

In contrast to L2 writing research, investigations of what constitutes effective L1 English writing instruction at secondary school have a long history dating back at least as far as Lynch and Evans’ (1963) study of textbooks used for high school English at that time (as cited in Hillocks, 2008). Since then, researchers have attempted to find out what works to improve students’ writing by focusing on a range of variables. The review that follows examines meta-analyses of experimental research and technical reports summarizing the state of the field of writing research, as well as more recent research not reflected in these publications. The effect size cited in brackets in each case is Cohen’s *d*.

### **What Constitutes Effective L1 Writing Instruction?**

Graham and Perin’s (2007) meta-analysis of 123 experiments and quasi-experiments is the most recent of its kind. After calculating effect sizes for the studies they reviewed (which had to meet specific inclusion criteria; see Graham & Perin, pp. 447–448), the authors ranked 11 treatments based on their weighted effect sizes as follows: “strategy instruction (0.82), summarization (0.82), peer assistance (0.75), setting product goals (0.70), word processing (0.55), sentence combining (0.50), inquiry (0.32), prewriting activities (0.32), process writing approach (0.32), study of models (0.25), grammar instruction (–0.32)” (p. 445). The following paragraphs deal with the practices from this list ranked as most effective. However, “setting product goals” is not included since it is an aspect of strategy instruction. Finally, though cognitive

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apprenticeship is not a part of Graham and Perin's meta-analysis, it was reviewed here because of the interest shown in it by major scholars in writing instruction (Flower, 1993; Hayes & Flower, 1980 as cited in Duncan, 1996).

### **Strategy instruction**

Interventions that presented strategy instruction involved explicitly showing students how to plan, revise, and edit text independently. It should be noted that though the overall effect size Graham and Perin (2007) calculated was 0.82, self-regulated strategy development (SRSD) had an average weighted effect size of 1.14, which was the highest effect size of any intervention. SRSD has been tested at all levels of the school system and found to be extremely effective (e.g., Graham & Harris, 1996; Zumbrunn & Bruning, 2013). Harris, Graham, and Mason (2006) describe it as follows:

Although the primary focus of SRSD is on teaching students strategies for successfully completing an academic task, students are also taught knowledge and self-regulatory procedures (e.g., goal setting, self-monitoring, and self instruction) needed to carry out the target strategies and better understand the task. In addition, instructional procedures for fostering aspects of motivation, such as student effort, are embedded within the model. (p. 297)

What is key about SRSD is that it is a cognitive and metacognitive approach to writing that teaches strategies as well as ways of thinking about the composition process (strategic thinking about writing), and it builds self-regulation procedures in the form of goal setting and monitoring.

### **Summary instruction**

Summary instruction was as effective as strategy instruction. It included explicitly teaching how to summarize a text as well as "enhancing summarization by progressively fading models of a good summary" (p. 463). Graham and Perin (2007) surmised that the intervention taught students how to write more concise text. One consideration that teachers need to be aware of, though, is that if students bring significant prior knowledge of a topic to summarizing a text it can cause them to believe that they do not need to use summarization procedures they are learning (Hammann & Stevens, 2003). Hammann and Stevens discovered this when their research participants used their domain knowledge of a

familiar topic (deserts) to produce compare-contrast essays.

### **Peer assistance**

Peer assistance in writing refers to collaborative work between pairs or groups of students at any stage of the writing process (Hoogeveen & van Gelderen, 2013). In argument writing, for example, Andrews, Torgerson, Low, and McGuinn’s (2009) synthesis of research revealed that research by Englert et al. (1991) suggested that peer collaboration can help students to model a dialogue and this can “become internal and constitute ‘thought’” (p. 301). That is, with practice, the externalized dialogue can become internalized as a schema for directing the composing process.

More powerfully, though, peer review is a “reciprocal process” (MacArthur, 2013, p. 219), and if students are taught criteria for revising and editing, and afforded practice in giving and receiving feedback, it can develop their awareness of audience needs; increase their motivation to create meaningful texts by exposing them to the real reactions of those they interact with; increase their genre knowledge by familiarizing them with the forms and functions of different text types; and develop their metalanguage for talking about the language they are using in the composing process (Hoogeveen & van Gelderen, 2013).

### **Word processing**

Word processing using computer software has had a positive impact on students’ writing. Graham and Perin’s (2007) meta-analysis indicated an effect size of 0.55; later, Morphy and Graham (2012) did a meta-analysis of 27 studies, which specifically investigated the effect of word processing on weaker writers and readers. They found significant positive effects for writing quality (0.52); length (0.48); development/organization of the text (0.66); mechanical correctness (0.61); motivation to write (1.42); and preferring word processing to writing by hand (0.64). The three studies that used word processing programs, which provided “text quality feedback or prompted planning, drafting, or revising,” had a significant impact on writing ( $d = 1.46$ ). In interpreting these positive effects, it should be noted that some of the software installed on computers used in the studies were proprietary commercial software, not simply programs such as Microsoft Word. Additionally, some studies used voice recognition software, which allowed students to “dictate their papers to the machine” (Morphy & Graham, 2012, p. 649).

In L2 writing research, Stapleton and Radia (2010) demonstrated that word processing programs can increase student self-correction of written

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errors and free up teachers from dealing with spelling and grammar problems because such programs offer editorial signals (red or green lines under errors). Bradley, Lindstrom, and Rystedt's (2010) research showed the potential of wikis for fostering collaborative writing among pairs of student writers. They found that collaborating groups "produced more versions of revised text with a higher number of edits in their assignments" (p. 262). That is, there was increased operationalization of writing process principles.

Additionally, Pifarre and Fisher (2011), working with twenty-five 9- to 10-year-olds, confirmed that wikis contributed to students' understanding of composition and revision practices, leading them to engage with the composition process. They surmised, too, that the nature of the wiki increased the avenues available for peer feedback on writing and gave students "voice" because they could revise, edit, expand on other's ideas, and negotiate what they wanted to say in a collaborative space.

### **Cognitive apprenticeship**

Finally, a key element of best practice involves use of a cognitive apprenticeship model of instruction (Dean, 2010; Kellogg, 2008). Cognitive apprenticeship, proposed by Collins, Brown, and Newman (1989), is an approach to teaching and learning in which the teacher is positioned as an expert and the learner assumes the role of apprentice. It consists of five stages: modelling, coaching and scaffolding, reflection, articulation, and exploration.

According to Englert, Mariage, and Dunsmore (2006), these stages can be demonstrated by teachers who are skilled in apprenticing their students "in the discourse and practices of skilled writers" (pp. 209–210). It requires that teachers demonstrate what is required for accomplishing a writing task (by modelling), guide students through the initial steps of doing it, then gradually release responsibility to them by scaffolding their efforts with useful strategies.

A key concept presented by Englert et al. (2006), Hyland, (2007), and the National Writing Project and Nagin (2006), as well as Dean (2010), is that writing is a sociocultural activity in which individuals compose texts for different audiences, respond to their needs, collaborate to produce different genres, and consume others' ideas. Conceptualized in this way, it is necessary to see writing instruction as deploying best practices through sociocognitive apprenticeships, and embedded within communities of practice. That is, teaching children to write is not only about having strategies, such as SRSD, or using the latest technology; it

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is also about providing a context in which writing is a meaningful activity, and students learn their craft from more knowledgeable writers.

## **Method**

### **Design**

This study used a multiple case design (Yin, 2014) in which data were collected over the course of two years from four English teachers pursuing their initial teacher training.

Given the stratified nature of the education system in Trinidad and Tobago and the purpose of the present research (to find out if teachers were using simplistic, unintegrated, and outdated strategies for teaching writing), the study was designed for literal followed by theoretical replication of cases (Yin, 2003).

During the first year, there was literal replication of cases: the sample comprised one teacher each from two government-assisted schools, in the expectation that their practices would be similar because of contextual similarities: similar student academic profiles, teacher access to resources, and geographical location (both were urban schools). Theoretical replication occurred in year two: one teacher each from two new sector schools was added to the study in the expectation of contrasting results. Unlike government-assisted schools, which tend to be first-choice schools attracting students who score high marks at the Secondary Entrance Assessment (SEA) examination in mathematics, language arts, and a writing component, new sector schools generally serve students who score lower marks on the SEA. The expectation that guided sampling, therefore, was that teachers’ instructional practices would differ due to the lower writing ability of their students.

### **Participants**

All participants were female with an average teaching experience of seven years (minimum 2 years, maximum 9 years). Their average undergraduate GPA was 2.06, but two participants had a GPA of 3.10. Each participant was purposefully chosen to meet two sampling criteria: 1) they had taught writing for their action research project, which meant they had planned and delivered between eight and ten lessons on a writing topic; 2) they had taught at least two writing lessons during the academic year, not including the action research project (hereafter called the project). This latter requirement was included to afford a fuller analysis of teachers’ pedagogy over the year of training, and not just during the intensive writing project.

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A brief profile of participants follows. All names are pseudonyms.

### **Government-assisted schools**

**Judy** taught at an all-girls' Hindu school, which was built in 2001, and was approximately two miles from a major town. Student enrolment was approximately 500. In an early interview, she described her school as "results oriented," and students as deeply interested in cinema and popular music, and less so in reading.

**Mala** taught at an all-boys' Catholic school, which had been in existence since 1956, and had an enrolment of approximately 600 students. She described her school as "disorganised and noisy," and the boys as "active learners" who were motivated by competition and enjoyed using the latest technological gadgets.

### **New sector schools**

**Cindy's** school was a Secondary Education Modernization Programme (SEMP) school built in 2000 and located on the outskirts of a busy town. However, many students came from outlying communities. Infrastructure in this school was new and well-maintained.

**Grace** taught at a new sector school located close to a city. Her school had undergone recent renovations, so students and staff enjoyed several air-conditioned classrooms and well-equipped computer labs, including a special room for English teaching.

### **Training Context**

The participants in this study all took a methods course in teaching of English language arts, which presented to them research-based best practices in writing instruction. Instruction comprised lectures; class discussion of knotty issues such as effective approaches to teaching grammar for writing; modelling of instructional practices by the lecturer during lectures; and modelling of best practices by the lecturer during school field visits. The lecturer taught twice in each semester (160 minutes) for the teacher trainees featured in this study to observe. Demonstrations were followed by group discussion and opportunities for students to practise in their own schools. The methods course promoted strategic writing approaches, such as cognitive apprenticeship and SRSD. In terms of teaching grammar, the use of contrastive analysis (Craig, 2006) was recommended and demonstrated; the "policy" on corrective feedback was that it should focus on a maximum of two error types in a given instructional cycle, so as not to overwhelm learners. With respect to direct or indirect feedback, teacher trainees were introduced to the

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advantages and disadvantages, but left to experiment with which method they and their learners preferred.

#### **Data Sources**

Data for the study were collected from three sources: observation of lessons, post-lesson interviews, and lesson plans.

Observation data were collected from 21 lessons for a total of approximately 1,470 minutes of observed teaching. The researcher sat at the back of each class and made detailed typewritten notes on a laptop computer of what constituted writing instruction: what was said, what resources were used, and what tasks were set. This provided information on instructional context and teacher practices. The typewritten notes with my comments and suggestions were later edited and emailed to teacher trainees.

Lesson plans were of two “types”:

- Plans created as part of a unit of work students had to design and teach as their project
- Plans created as part of everyday teaching, which followed the teacher’s scheme of work

Though the latter were often integral parts of a sequence of lessons, yet that sequence was usually not extended enough to constitute a unit. I analysed plans to determine how the teacher had conceptualized the process of teaching whatever aspect of writing was to be explored in the lesson.

Post-lesson interviews were conducted with each participant. These focused on understanding the teacher’s intentions, rationale for the lesson, problems encountered, successes achieved, and instructional decisions made.

#### **Data Analysis**

All data were prepared so that they would be in typewritten text format. This meant transcribing interview data, and collating the notes and comments taken from classroom observations. Data were kept in separate files to facilitate later triangulation through data convergence (Yin, 2014).

Data collected during the literal replication phase of the study were subjected to five rounds of analysis:

1. Round one consisted of reading through the data several times to get a sense of the major issues.

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2. Round two involved assigning short phrases to significant chunks of text and writing memos that interpreted their meaning.
3. In round three, the texts and coded phrases were assembled into a new document and memos were synthesized and elaborated upon, with the texts serving as “evidence” to support the memos and coded phrases.
4. Round four involved diagramming the coded phrases and collapsing them, where possible, into superordinate code (e.g., “teacher modelling,” “technology telling,” and “giving a bus tour.”
5. Round five triangulated the data by looking for convergent evidence since the data came from multiple sources (Yin, 2014). This meant interpreting the findings of each data source and comparing findings across sources.

This entire process was repeated for data collected in the theoretical replication phase. Following this, I searched for commonalities (recurring coded phrases and memos) across the two phases of the research. It is these commonalities that are presented as findings in the next section. The research participants are called teacher trainees.

## **Findings**

### **Overview**

This study was undertaken to answer the following research question, “To what extent is it true that teachers (enrolled in the Dip.Ed.) ‘...use rather simplistic, unintegrated and outdated strategies for teaching writing’ (Watts, 1993, p. 68)?”

Both phases of the study (literal and theoretical replication) established strong support for Watts’ claim when observations were conducted during the initial stages of teacher trainees’ practice. However, the later stages, especially teaching during the project, revealed significant transformation in practice, which was marked by teacher trainees’ success in implementing some research-based best practices in writing instruction.

One participant, Judy, is presented as both a non-example of problems teacher trainees experienced initially as well as an example of informed use of cognitive apprenticeship, since she so clearly “disproves” Watts’ (1993) claim.

## Presentation of Data

### Initial practice

All teachers—regardless of school type—initially favoured two major practices in teaching writing: 1) telling; and 2) providing sweeping overviews, which could be characterized as “simplistic, unintegrated and outdated.”

**Telling.** Telling refers to two inter-related practices: 1) lecturing to students in a way that presented declarative knowledge and little or no procedural knowledge, and 2) telling with technology. In each case, the teacher lectured to students on a topic (much as the teachers may have experienced university lectures) and students’ role was to make notes or answer questions, following which they attempted to work on a task requiring procedural knowledge that had not been taught to them.

**Telling declarative knowledge.** Declarative knowledge is “knowledge of,” such as knowing what is a summary, what are the elements of a story, and what is descriptive writing as a genre. Procedural knowledge is “knowledge of how to” write a summary, how to combine the elements of a story to create an interesting narrative, and how to produce a vivid description. Initially, teachers seemed to assume that telling students about a generic element (e.g., plot in narrative, or thesis statement in exposition) would automatically translate into students’ ability to execute a skill, such as write a story or a letter.

For example, Mala presented a lesson on friendly letters to a Form 1 class (11- to 12-year-olds). In it, she engaged students in a discussion of why a particular rhetorical situation would require a letter of invitation; following this, she distributed an example of a model letter she had written, drew a three-column table on the board with the headings “format,” “tone,” “content,” and explored features of the pre-written letter that fell into these categories. She ended instruction by summarizing for students what was the content of the letter. Following this, Mala directed the class to write a letter inviting the Member of Parliament for the area in which the school was situated to attend a school function. However, many students could not complete the task within the 30 minutes allocated.

In the post-lesson interview, Mala explained:

*Every year students come to us and we think they should know letter writing, you know? Because it’s on the primary school syllabus. But, sometimes they swear they never did it before, and*

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*some of them who do remember how to start a letter can't remember what goes into it, so...I have to teach them everything.*

My written feedback on the lesson was as follows:

Here is a problem: students usually have composition problems when writing social letters. What you presented was the example of a letter and you went through its features. How, though, did the writer generate this content? The analysis was important and well done but needs to be supported with brainstorming and demonstration on the board. This should have been step 8 because you must show how to write the letter. Your lesson presented declarative knowledge (features of the letter) but the task you required the class to work on asked them to demonstrate procedural knowledge (creating a letter) without demonstrating the procedure for doing so.

In effect, as Watts (1993) had complained, Mala did not engage students with the deep purpose of the genre and move beyond noticing surface features, yet she expected them to produce proficient examples of it.

***Telling with technology.*** Telling with technology meant that teachers used slide shows (Microsoft PowerPoint presentations) as aids to telling and transmitting information, so that the slide content merely substituted for teacher talk or notes written on a white board.

When teachers told with technology, a typical instructional sequence was as follows: the teacher activated students' background knowledge, explained the purpose of the lesson, engaged in several Initiate Respond Feedback turns with students, then presented a slide show using slides replete with notes, definitions, and procedures for getting something done. The teacher provided an explanation of the content on the slides, asked questions, and allowed students to take notes. Usually, this was followed by pair or group work based on the content of the presentation, and the lesson ended with student presentations. An example of a lesson on summary writing by Grace illustrates this pattern. The transcript starts approximately four minutes into the lesson, and the events captured are in sequential order:

**Teacher:** *I want you to be able to read and understand, develop critical thinking skills, think outside the box, say what something means. We already know how to extract ideas. Pull out ideas. Extract is to pull out, yes?*

Teacher shows slide titled, "How to write a summary." The slides instruct how to do a summary:

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- Read the material and get main idea
- Try to understand...
- Underline....

**Teacher:** *One of the things you ask yourself is, ‘What goes into the summary?’ We have four Ws. Mike, tell us what they are.*

Student recalls the four W’s: Who, what, why, where?

Teacher presents a supporting slide: ‘Ask who, what, where, why’?

**Teacher:** *These as key words. But how do you know what key points are? Ask these questions. (points to the slide.)*

**Teacher:** *Ask yourself the following, ‘What is the main reason for the passage? Out of everything the writer said, what seems really important? Look for [gives list of text features].’*

Shows slide titled, “How to write a summary,” which contains the following information: “delete minor and redundant details, combine similar details into categories and provide a label, select main idea sentences when the author provides one, or invent main idea sentences when the author is not explicit.”

In this example, there is no engagement of students, and the slides simply transmit a welter of information about the topic. The principal benefit Grace reaps using this approach is saving time that would normally be spent writing the information on the board.

Another point to note is that Grace attempts to teach summary writing through a sweeping overview. That is, she presents all the information about the topic in one block or instructional sequence, which is a characteristic of transmissive teaching (Brann, Edwards, & Myers, 2005).

**Providing sweeping overviews.** The purpose of an overview is to provide declarative knowledge, which can also function as an advance organizer, but some teachers did not differentiate between an overview of a narrow element or feature, such as characterization in story writing, and doing an overview of the entire topic. They then seemed to expect that this bird’s eye view of the whole topic was adequate preparation for students to actually write competently in a genre. For example, approximately five weeks after her lesson on letter writing described previously, Mala said in a post-lesson interview: “*I wanted to teach*

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*students how to write an effective essay (story) because they always writing really short th... um...like summaries,”* but she had presented an entire lesson on elements of story writing, with graphics showing types of conflict and plot of a story (with a story mountain graphic), then immediately asked students to work in small groups to write the exposition for a story.

Similarly, Cindy explained, *“It’s important for students to know how to, you know, describe people and places, descriptive writing, ok? This is the big topic for three’s [14-year-olds] this term, so in this lesson I showed them how to write a description.”* The lesson comprised almost 30 minutes of an overview lecture—via a slideshow—on descriptive, narrative, and expository writing (without engaging students in explicit comparison and contrast of the genres), with examples of each and discussion of their salient features. In the remaining 10 minutes, students were given a prompt, *“Think about a person you admire a lot, and write a one paragraph description of him/her.”* Since there was insufficient time to complete the task, students were told to work on it at home. It is important to note here that Cindy said she *“showed”* students *“how to write a description”* when in actuality she delivered a lecture that provided declarative knowledge. This approach is quite likely what Watts (1993) characterized as *“simplistic, unintegrated and outdated”* teaching.

**A non-example.** Unlike the other teacher trainees, Judy’s first observed writing lesson was actually the second supervised lesson she taught. Her first lesson focused on teaching students to analyse character in *Wuthering Heights*, and she had received verbal and written feedback on it. Thus, when she taught the lesson on writing her practice had already been *“primed,”* as it were, by the experiences of the first clinical practice. The pedagogical problem in her lesson on writing, she related afterwards, was that students created predictable, boring stories that had little reader interest:

*They come from primary school after writing the SEA and I feel they just learn off these plots and phrases, so everybody’s writing about the same thing. There’s no creativity, and it gets really boring to mark after a while.*

Her solution was to lead students through a brainstorming process in response to a visual stimulus (a picture of a sleeping dog curled up on a rug) then prompt them to use descriptive details to create a memorable character.

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At the end of the brainstorming exercise, in which students’ ideas were written on the board and they discussed in some detail what they wanted to happen in the story, Judy read the professionally written story from which the picture had been taken. Afterwards, she engaged students in comparing and contrasting what that author had done to achieve reader interest versus what they (students) had produced. The strength of her lesson was in its intention to produce “noticing” (Schmidt, 1990) and explicit awareness in students of what is engaging writing. More pointedly, her students were actively engaged in comparing, contrasting, describing, and reflecting where Mala’s, Cindy’s, and Grace’s students had been passive listeners.

The examples presented so far, except for the case of Judy, showed teacher trainees teaching writing in the “simplistic, unintegrated and outdated” manner Watts (1993) had described. The section that follows presents evidence to show that a majority of them acquired more sophisticated and effective pedagogical approaches for teaching writing because they aimed for student engagement and student self-regulation in the composing process.

#### **Informed practice**

The measure of teachers’ pedagogical improvement during the year of their training was their adoption of research-based best practices. Although, as was to be expected, no one demonstrated adoption of all best practices in such a short time, the following were observed in the majority of the sample: 1) Use of cognitive apprenticeship, 2) Use of technology for more than lecturing, and 3) Experimentation with process writing.

**Cognitive apprenticeship.** Cognitive apprenticeship (Collins, Brown, & Newman, 1989) requires teachers to model, scaffold, and guide learners through the process of composing in a genre before gradually releasing them to independent practice. The version of the model teacher trainees used was gradual release of responsibility (Duke & Pearson, 2002). Most teachers experimented and gained proficiency with it, especially after they used the project as a vehicle for extended practice with the approach. Though they worked in very different contexts, Grace and Judy experienced success using cognitive apprenticeship.

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### Grace

For her project, Grace combined SRSD and cognitive apprenticeship to address the problems her students were experiencing with narrative writing, which she described as follows:

*Students are able to informally narrate a story orally among themselves and give details on a character but when challenged to do the same in the written form, find difficulty in doing so. Although they are taught the fundamentals of character development, they seem to focus more on one event in a story and include a character without much thought or skill.*

Grace operationalized cognitive apprenticeship in her project through a five-stage process:

- In stage one, she developed students' background knowledge and assessed pre skills.
- In stage two, she discussed the use of the WWW, W=2, H=2 graphic organizer and students memorized it.
- In stage three, she modelled and used the think aloud teaching strategy.
- In stage four she scaffolded student efforts in small groups to use the mnemonic.
- In stage five, she offered opportunities for independent performance, where students practised self-questioning and used checklists to guide their writing.

Grace tried assigning individual writing for homework in an effort to save classroom instructional time; however, only three students consistently did this. The remainder made excuses, so she was forced to schedule independent writing during class time when she could supervise it and urge students on.

The following is an extended excerpt from my field notes describing how Grace showed students to use the strategy through think aloud and modelling:

*I picked my idea: I said 'students should not go for recess'. I organised it on my paper with my points [in the exam you can write these on the exam paper]. We will examine now how we will explain it.*

*That's the 1<sup>st</sup> part of the strategy. While we are POWing we will use the strategy TREE and it looks something like this: places diagram of a tree on the board. TREE stands for three things: T for*

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*topic sentence, R for reason, E for explain, another E for ending or wrap up. This is what you will be using all the time. When they say “Convince and persuade anybody,” use this. It’s a reminder; a trick to help you remember. ...I will show you how I will put ‘my students will not go for recess’ into the TREE. Give me a topic sentence. I can say something like, “Students should not be allowed to go for recess.” That is my topic sentence. What am I doing next? I’m going to my reasons. We have a few reasons. Lists them. These are our reasons here why we think...you with me? Right.*

The rest of the class was spent working out how to convert the idea (not permitting students to have recess) into a paragraph. Grace demonstrated, then enlisted student assistance in the composition task. She modelled topic sentence generation and chaining of sentences within a paragraph whilst thinking out loud for students to understand her thought process. Following this, students volunteered sentences that logically built up the argument of the paragraph. The role Grace adopted was that of proficient writer apprenticing novices and showing them how to write by actually demonstrating how to do it on the board. This was significantly different from her previous practice of simply telling with technology because it gave her students cognitive tools for eventually working independently.

**Judy**

Judy’s project addressed her students’ needs for instruction in writing essays for Literatures in English (LiE) at the Caribbean Advanced Proficiency Examination (CAPE) because, she said, *“it has been my experience that students’ essays for CAPE LiE become a replication of a response to an English B question at the CSEC.”* She pointed specifically to skills required in interpretation, illustration, and evaluation, which she felt had contributed to under-performance in LiE because the English B syllabus and examination did not emphasize these skills.

Instead of merely telling students about effective essay writing, Judy devised her project so that she apprenticed her sixth form students into literary scholarship. She modelled how to create a socio-historical background in an essay, and how to use concept maps to assess the impact of authorial/historical background. Her stimulus texts were *Wuthering Heights* (Bronte, 1847; 1996) and *Brown Girls Brown Stones* (Marshall, 1959; 2009).

Scaffolding/providing guided practice comprised the following: pairing students, and enlisting their help to identify what information was relevant for creating socio-historical background; inserting

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authorial/historical information through either parallel or integrated construction; deconstructing propositions; creating and using cluster maps for defining main ideas, and drafting essays.

The collaborative learning phase overlapped with the guided practice phase, perhaps because students learned very quickly and were able to complete their maps and devote more time to addressing a significant problem that they faced: How to translate the ideas from the map into actual paragraphs. Since the class was small, Judy responded by helping the pairs to construct opening paragraphs based on their maps. Finally, she implemented the independent practice phase by having students write responses to examination type questions at home since she did not face the same problem Grace did.

**Technology use.** Informed use of technology meant using a computer for two major purposes: 1) displaying PowerPoint presentations to provide vicarious experience and supplement students' prior knowledge of a topic; and 2) using YouTube videos, film clips, and cartoons as text. With respect to the former, for example, Cindy wanted students to write about the injustices Blacks had endured in the United States, which are captured in the poems *Dreamin' Black Boy* (Berry, 1988) and *Epitaph* (Scott, 1973), so she created a slide show with images showing the KKK, segregated classrooms and public spaces, chained Africans being taken into slavery, and other visual artifacts. This she used for generating a discussion about racism and its impact on an entire race. Following that, Cindy led students in writing a letter to the editor of a newspaper presenting the plight of the narrator in Berry's (1998) poem. In justifying this approach to writing instruction she said:

*The comments that were made for the English B syllabus um..um..questions that they did, I think it was last year, Epitaph and lynching were compared, right? And the examiners were saying a lot of the students did not have even background information as to the history of this particular poem. If a student was to read this poem by himself he would not understand it. So I chose to build the historical background so they would understand why 'epitaph'. Why choose the word 'epitaph'. Even while I was doing this poem, I was trying to put myself in their position and build knowledge for myself because you can't write about the poem if you don't really know the background.*

In effect, what Cindy did was to disrupt the normal writing instruction practices in her class, which had depended on lecturing with PowerPoint presentations, giving notes, and expecting that the broad overview would

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somehow trickle down into concrete skills for writing. What was also interesting was that Cindy recognized that she could integrate letter writing as a means for channelling her students’ negative sentiments about the events in the poem.

With respect to use of video clips from movies and cartoons, Mala experimented with these to encourage her students to infuse their stories with mood and tone, especially as it related to character development and interpersonal conflict. For example, in one lesson she set out to teach intra-personal conflict using primarily visual tools:

1. She used slides of persons exhibiting sadness and generated vocabulary such as *glum*, *crestfallen*, and *crushed*.
2. She showed an excerpt from the TV sitcom, *Seinfeld*, in which the character, George, describes his failures in life and decides to reverse all his usual responses to things. This instructional step produced the words *morose*, *regretful*, *frustrated*, *confused*, and *upset*.
3. Mala generated discussion about the characters’ emotions and led the class in writing a description of what they had viewed in the slides as well as the video clip, using the vocabulary they generated.

Commenting on her success in using these technological tools, she analysed it as follows:

*The students’ increase in description of feelings may be attributed to the analysis of characters’ feelings during the development of the conflicts in stories and clips. I observed that during these classes students would show a lot of zeal because they were viewing clips that they were able to relate to what was being shown. Therefore they were always aware of characters’ moods and feelings.*

This was a significant shift in practice for her from “telling” and providing “sweeping overviews,” and it relied on engaging students by having them use low-frequency words already in their mental lexicon (but which they did not usually employ), and modelling for them how to write the description.

Some teachers at new sector schools had more difficulty using technological tools because AV equipment was frequently broken or unavailable, even when they brought content created on their home computers. Though teachers at government-assisted schools tended to have working facilities, access was frequently an issue.

### **Process writing**

Another way all teachers avoided instructional practices that were “simplistic, unintegrated and outdated” was by teaching process writing for their projects. However, the major implementation issue related to instructional time required for the middle steps of writing and revising. Although teachers’ strategies across schools were similar (incorporating gradual release of responsibility and process writing), teachers at new sector schools spent significantly more time assisting students with the revision stage. On average, they devoted three sessions (210 minutes) of instructional time to this, compared to their counterparts in the assisted schools who spent 35–40 minutes (one class).

Where teachers’ practice needed more polishing, too, was in providing corrective feedback. They said they favoured the multiple draft approach to writing. However, classroom observation, as well as analysis of student work appended to the projects, indicated that “multiple” really meant two drafts: there was an initial draft which the teacher responded to in detail (focusing on punctuation, grammar, and spelling, especially in new sector schools), following which students handed in a final corrected version. Teachers favoured direct feedback and none of them used the conventions of indirect feedback.

### **Discussion**

This study investigated Watts’ (1993) claim that English teachers “continue to use rather simplistic, unintegrated and outdated strategies for teaching writing” (p. 68). Using a purposive sample of Dip.Ed. teacher trainees, the present study confirmed Watts’ claim, but only for some teachers’ initial practices.

Given the fact that teachers had been teaching writing for some time (at least for two years in the case of the least experienced teacher), and were probably presenting their best practice as their first lesson, it may be fair to assume that those lessons represented their conception of how to teach writing. In effect, what happened after verbal and written feedback from the tutor was that teachers attempted to change their practice to align it with what the training programme presented as best practices. That is, once they received feedback and understood the need for apprenticing their adolescent writers they attempted to practise it. If this is so, then it means that their changed practice represented a change in conception of what it meant to teach writing. One might then speculate that the “simplistic, unintegrated and outdated” approaches they used initially reflected the state of their knowledge at that time. That is, they

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initially conceptualized writing instruction as lecturing or telling until they saw other ways demonstrated to them.

It is also possible, though, that teachers adopted the new strategies merely for the tutor’s benefit because they would eventually be graded on their adoption of best practices, and did not really change their conceptions. However, it was not possible to test this possibility.

In analysing the evidence from this study and comparing it to Watts’ (1993) study, a key element of timing arises. Though Watts made her claim about teachers’ unsophisticated pedagogy, she did not specify the point in the training period her assessment of them referred to. This is an important consideration when evaluating teachers because of the nature of the training programme: it is a postgraduate diploma offering initial teacher training for persons who are already teachers. This means that even though trainees have classroom experience it is quite likely that their pedagogical skills and approaches have been strongly influenced by apprenticeship of observation (Lortie, 1975). That is, they teach in the way they were taught. Consequently, if Watts’ comments applied to teacher trainees before they had had adequate opportunities to assimilate and experiment with what, at that time, were considered best practices, then her categorization of their teaching would have been an accurate one. However, the categorization would have also been an incomplete one.

If it is that Watts’ sample exited the training programme exhibiting the lack of skills she described, then several possibilities present themselves:

1. Teacher trainees chose not to practise what was taught in the training programme, which makes it an effectiveness of training issue.
2. Writing pedagogy was not taught or explored during the period, in which case Watts’ claim was unfair since she expected teachers to demonstrate what had not been taught.
3. Writing pedagogy was taught, but it failed to change teacher trainees’ conceptions of what it means to teach writing.
4. Writing pedagogy was taught, but teacher trainees failed to acquire mastery of the principles.

Any of these possibilities may be true; however, Watts’ (1983) article is silent on the details.

The design of the present study assumed that differences in school contexts would be reflected in differences in pedagogical practice, given the significant differences in learner profile at the schools sampled. Surprisingly, however, there were no significant differences in teachers’ initial practices, but those who practised at new sector schools tended to

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have fewer technological tools. There was also low variability in teachers' informed practices. If one explains the initial practices in terms of apprenticeship of observation (Lortie, 1975), a possible reason for the lack of differences in informed practice may be the extended modelling provided by the tutor. Theoretically, this could have provided the cognitive blueprint teachers needed for enacting what the training programme was recommending because they had live demonstrations of what was presented in the methods course (Collins, Brown, & Newman, 1989). What such an explanation cannot explore in this paper, though, is what effect or impact instruction had upon adolescent students in the different contexts.

Finally, and significant for its omission, was the issue of teaching of grammar. One would have expected contrastive analysis lessons to be taught in new sector schools because the students there have less control of Standard English; however, none of the lessons at any school dealt with this aspect of writing instruction.

### **Implication for Teacher Training**

Teacher trainees benefit from training. If one measures their growth unidimensionally in terms of the degree to which they adopt research-based best practices, then the evidence suggests that they can grow during the year of training. As indicated earlier, it would probably be impossible for teacher trainees to adopt all best practices in writing instruction, so teacher educators need to prioritize which best practices are key to improving student writing in schools, and model these for teacher trainees to emulate.

The findings showed that, initially, teacher trainees tended to tell rather than show how to write, and they relied on broad overviews of topics despite plenary discussion of the issues and lecturer modelling. This suggests that teacher educators must anticipate teacher trainees' initial moves and provide teaching tasks for them to work through that "phase" in their development.

In this respect, a major challenge facing teacher trainers is the need to target teacher trainees' conceptions of what constitutes best practices, and lead them to understand the need for teaching their students strategic thinking about composition.

### **Limitations**

Although the evidence presented here suggests that English teacher trainees' writing pedagogy was better than what Watts (1993) had described, one must bear in mind that teachers sampled in this study

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were “on show” and the main audience was a tutor whose judgement could have decided their success on the training programme. Thus, there is no guarantee that, once they graduated, they did not revert to teaching writing as they did prior to training. Finally, this study focused only on investigating Watts’ claims; therefore, it made no attempt to assess the effect of teachers’ practices on students’ writing. That is, it looked at what they did and how it was done, not on its impact.

### Conclusion

This study set out to explore the extent to which Watts’ (1993) claim that teacher trainees’ writing instruction practices “continue to be simplistic, unintegrated and outdated” is relevant today. The data presented here provide evidence that that criticism may be too harsh. Once teacher trainees conceptualized writing instruction as teaching of strategic thinking, and realized that their “apprentices” needed to see a more proficient writer engaged in composition, they consistently explored selected best practices in writing instruction. That is, they consciously moved away from the kinds of superficial, teacher-centred practices Watts had criticized. This suggests that at least some adolescents are receiving the kind of instruction required for “participation in civic life and in the global economy” (Graham & Perin, 2007, p. 3). This may be indicative of the transformative effect of teacher education.

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**THE INFLUENCE OF A MUSIC INTERVENTION  
PROGRAMME ON SELF-ESTEEM AND ENHANCING  
STUDENTS' EXPERIENCES IN AN URBAN SCHOOL  
WITHIN AN UNDER-RESOURCED COMMUNITY  
(A Pilot Study)<sup>1</sup>**

*Loraine D. Cook and O'Neal Mundle*

This study sought to investigate the impact of engagement in music activities on students' self-esteem. The 42 students who participated attended a remedial school for adolescents, located in an inner-city community. They were exposed to a music intervention programme for one semester. The study utilized a multi-method approach, in that students were observed and interviewed during the intervention programme; and, in addition, pre- and post-tests were carried out using Rosenberg's self-esteem instruments. The findings so far suggest that students and teachers felt that the music experience enhanced their academic experience.

**Introduction**

This study sought to examine the effect of a music intervention programme on the self-esteem of a selected group of students from an inner-city community in Jamaica, and to describe their experiences during the intervention. Self-esteem is an individual's evaluation of his or her self (Woolfolk, 2010). It is one's attitude towards self. Individuals can be classified as having a positive (high) self-esteem or a negative (low) self-esteem. A positive self-esteem generally has beneficial consequences for an individual, and includes high self-efficacy, healthy self-concept, high academic performance, and greater physical activities (exercise-driven) (Lane, Lane, & Kyprianou, 2004; Tremblay, Inman, & Willms, 2000). Tremblay et al. found that students with high levels of self-esteem were engaged more intently in physical activity, and the authors noted that "for some children, physical activity (physical education) may be indirectly related to enhanced academic performance by improving health and self-esteem" (p. 312). Low self-esteem is sometimes associated with various mental health problems. Individuals'

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evaluation of self is usual lowered the more depressed and anxious they become, and these dispositions are reinforced as such individuals have a tendency to avoid activities that could help to address their anxieties and build their self-esteem (Crocker & Wolfe, 2001; Kort-Butler & Hageman, 2011; Tighe, 2011; Trzesniewski, Donnellan, & Robins, 2003). Negative self-esteem among students can create anxiety, stress, and depression, and seriously impair academic performance (Szabo & Marian, 2012; Tighe, 2011).

### **Self-Esteem and Poverty**

Poverty can have an isolating and profoundly damaging impact on a person's life. Society's low expectations for the health, employment, and family stability of people living in poverty generally seeps into the mentality of low-income individuals and cause them to have negative perceptions of themselves, thus making it difficult to build their self-esteem and psychological well-being (Batty & Flint, 2010). Poverty is sometimes conceptualized as arising from personal inadequacies rather than the inadequacies of societies to provide for their inhabitants (Batty & Flint, 2010). Such perceptions are held not only by members of society at large, but also by individuals living within lower-income communities. Mooney (2009) noted that people experiencing poverty in disadvantaged places are informed by ideas of "individual inadequacy, dependency and disorder" (p. 437). Studies by Orton (2009) and Blokland (2008) revealed that deprived individuals were highly critical of self and viewed themselves as "not trying hard enough" (Blokland, 2008, p. 43).

Poverty among Jamaican youth is a major cause for concern both in and out of schools. For example, while the *2012 Report Card on Education in Jamaica* (Partnership for Educational Revitalization in the Americas & Caribbean Policy Research Institute [PREAL & CAPRI], 2012) noted that Jamaicans produce low test scores at all levels of the education system, this seemed especially true for poor children who "are particularly ill-served" (p. 6). The report noted that children from middle- and upper-income families who attend privately run schools at the primary level usually outperformed children in the public schools (lower income) in all five Grade Six Achievement Test (GSAT) subjects by as much as 30 percentage points. The report further revealed that "approximately 90% of the poorest persons have no secondary or post-secondary certification" (PREAL & CAPRI, 2012, p. 6). In addition, many of the crimes in Jamaica seem to be carried out by young persons from the inner city. In Jamaica, the perpetrators and victims involved and affected by violent crime are usually the lower-income males, who are

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the unskilled, unemployed, and undereducated, and aged 15–29 years (Jamaica. Ministry of National Security, 2010).

There has been an increase in both the number of male children on the streets and the incidence of teenage pregnancy in urban Jamaica (Smith & Green, 2007). The rise in crime and unemployment has resulted in an increase in the number of fatherless children, and a chronic absence of fathers in households within lower-income families (Smith & Green, 2007). The authors also assert that Jamaican urban youth have little hope for the future and suffer from acute feelings of unworthiness.

#### **Self-Esteem and Music Interventions**

In 2004, Costa-Giomi conducted a study in which 117 fourth grade children participated. Sixty-three children in the experimental group received piano instruction weekly, while those in the control group (54 children) did not. Self-esteem was measured using the Coopersmith Self-Esteem Inventories (long form) test. Self-esteem scores in the experimental group increased significantly over the three years, while there was no increase in that of the control group. In essence, piano instruction had a positive effect on the self-esteem of the students, although it did not affect their academic achievement in mathematics and language.

Tyson (2002) used a pre- and post-test design to assess the influence of hip-hop therapy on at-risk youth in the USA. The intervention involved the discussion of rap lyrics emphasizing positive themes. Their quantitative results were inconclusive, but the qualitative interviews revealed that participants thought highly of the intervention. Choi, Lee, and Lee (2010) also investigated the effect of a music intervention programme on children's self-esteem and aggressive behaviours. Their research revealed that children who participated in the music intervention experienced improvements in self-esteem and a reduction in aggressiveness after 15 weeks. The researchers therefore concluded that music intervention improved self-esteem and reduced aggression. Daykin, de Viggiani, Pilkington, and Moriarty (2012), in their review of 50 studies concerning music intervention, suggested that "future studies should involve larger samples and extended follow-up in order to support conclusions about longer-term outcomes of music intervention" (p. 10). Daykin et al. identified the following themes as emerging from the qualitative studies: identity; empowerment; role of rap music and hip-hop; cultural relevance; expression; and sustainability and resources. The authors define these themes as follows:

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- *Identity*: Music intervention helped participants to shape positive identities by diverting attention away from negative influences.
- *Empowerment*: Identity was connected with empowerment. Music intervention must address participants' felt needs while maintaining a focus on individual change and social reform.
- *Role of rap music and hip-hop culture*: Daykin et al. (2012) noted that several authors had suggested that the use of hip-hop acknowledges the adolescents' background and shows respect for their music. This approach provided avenues for educating participants about their culture and history.
- *Cultural relevance*: Daykin et al. (2012) cited Baker and Homan (2007), who reported that their participants rejected activities that did not fit with their perceptions of cultural and gender relevance.
- *Expression*: Music provided young people with valuable opportunities for emotional release, as well as resources for coping with difficult feelings.
- *Sustainability and resources*: Daykin et al. (2012) noted "some authors drawing attention to the short term nature of projects and the frustration and disappointment that some young people may feel at the end of projects" (p. 10).

Self-esteem is not developed in isolation from our environment, but the development of self-esteem is embedded in our social relationships and experiences. Being liked by others influences positive self-esteem (Srivastava & Beer, 2005). It has been argued that working together in a group influences positive social self-esteem. Group work provides the environment, through collaboration and cooperation, to develop trust and a sense of belonging. Despite this, the individual can get lost in the process of rehearsal and performance (Reynolds, n.d.). Reynolds therefore advised that music teachers should guard against building social esteem at the expense of individual self-esteem.

### **Literacy and Music Intervention**

Research has established relationships between music programmes and literacy. Music and language have been seen to share a close relationship, especially at the cognitive level, and music is seen to improve and shape language processing (Moreno, 2009). Colwell (1994) explored the effects of a music programme on the development of global word recognition abilities in kindergarten classes in the United States. In this study, it was found that participants exposed to a music programme

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in which stories were sung, or sung and read, had a better understanding of the text, and omitted and substituted fewer words than those who were exposed to stories that were only read. In a later study, Gromko (2005) investigated the effects of music education on the development of phonemic awareness. Her study included 103 kindergartners in the United States over a four-month period, participating in a weekly 30-minute music programme, with a control group receiving equivalent teaching time in an emergent literacy programme. Throughout the study there was a more significant improvement in phonemic awareness abilities in the experimental group compared to the control group. Bolduc (2009) also examined the effects of an experimental music programme on the development of phonological awareness and word recognition in 104 kindergarten children in Quebec. It involved weekly 60-minute sessions, over 15 weeks. Results showed that children in the experimental music programme were more effective in the emergence of writing abilities such as the manipulation of certain phonological units. Furthermore, these children saw improvement in complex syllable recognition.

The purpose of this study was to explore the influence of a music intervention programme on students' self esteem in an under-resourced remedial school within an urban community, and to describe the experiences of the students in the programme from their perspective and that of their teachers. Based on previous studies by Costa-Giomi (2004) and Choi, Lee, and Lee (2010), it was hypothesized that the music intervention programme had a positive influence on student's self-esteem. To this end, the following questions were asked:

- 1. Did the music intervention programme influence students' self-esteem?*
- 2. What were the experiences of students during the intervention programme?*
- 3. What are researchers' and teachers' views of the impact of the music intervention on the students?*

## **Method**

### **Research Context**

The participating school is a remedial school located in an under-resourced urban community in Jamaica. The school originated in 1994 out of an after-school programme, and over the years has morphed into a full-time remedial education school. The motivation for developing this

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remedial school came from the observation that a high percentage of children attending traditional schools were unable to read and write. Presently, the school targets “out-of school” youngsters aged between 12 and 17 years who are unable to spell their names or even say the alphabet. The student population of the school is generally about 48 students, with 73% being boys. At the time of the implementation of the music intervention programme, the population of the school was 42. Prior to the intervention, the school had acquired musical instruments as donations from various individuals and agencies. These instruments had been locked away as there was no music teacher to implement a music programme in the curriculum. As university lecturers, we approached the principal and discussed with her how we could enrich the curriculum by offering music classes to the school. One of the lecturers, who is an expert musician, implemented the music intervention along with two other colleagues—one also an expert musician from another university, and the other an experienced music performer.

### **Participants**

The participants consisted of 42 students, aged between 12 and 16 years, who attended the school in the inner city of Kingston, Jamaica. The school was designed for children in need of remedial work and the 35 boys and 7 girls at this institution all operated below grade level. They all lived within the inner city and within walking distance from the school. Due to the small size of the school population, all students participated in the intervention. However, at different points of the core section of the intervention, one or two students missed school sporadically due to illness. Also, for the musical excursion outside of the community, only a limited number of students (18) were able to perform due to the transportation cost for 42 students. Students who went on this excursion were volunteers who were prepared to attend an intense period of after-school music practice for the performance.

### **Measurement of Self-Esteem**

Self-esteem was measured through the use of the Rosenberg Self-Esteem Scale (RSES). There are 10 items in this instrument, all addressing a person’s general belief about his or herself. The items elicit responses on a four-point scale ranging from: *strongly agree* to *strongly disagree*. The instrument includes five items that are reversed scored. A higher score suggests higher self-esteem. At the onset of the intervention, a pre-test was administered using the RSES instrument, and a post-test was administered after the 12-week period, using the same instrument. The

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instrument was administered by the classroom teachers and 72% of the returned questionnaires had completed responses. The Cronbach Alpha for the instrument revealed an acceptable level of internal consistency (0.717). Studies using Rosenberg have also recorded .71 to .73 (Schmitt & Allik, 2005; Shin, 1992 cited by Nho, 1999).

At the end of the first phase of the intervention, interviews were carried out mostly by the university lecturer who was not directly involved in the programme. The sample of students for this stage included all seven girls in attendance at the school, and five of the boys randomly chosen. The interviews enquired into their previous musical experiences, disposition, and reaction to the music programme, and perceptions regarding possible impact on their other subjects and general school work.

#### **Intervention Programme**

The music intervention programme was delivered in two phases: the first phase involved formal and structured music classes for a 12-week period, while the second phase involved coordinating performance opportunities for the students for the remainder of the academic year. During the initial 12 weeks, sessions were held, on average, twice per week. The sessions were delivered by two expert/trained music educators and one female musician with music performance experience. On the first day of the programme, boys were taken separately from girls, and the session consisted of activity geared toward determining music abilities and skills. This process included children singing songs that they already knew (in the presence of their peers), individually or as duets or trios. For the next few weeks, the classes involved all children meeting in the same room under instruction from the three programme facilitators, with support from regular classroom teachers in terms of maintaining discipline. These large-group sessions were geared towards ensemble singing, and focused on compositional activities along the mode of extemporization around current topics affecting the lives of the students, for example, a period of heavy rains. Within the context of specific musical parameters, they took turns 'DJ-ing' and rapping about the subject in question.

For the ensuing weeks, children were placed in three groups: boys with the expert music educators, while the girls were placed with the female musician. The more disruptive students were placed in one group and were engaged by one music educator, while the other group of boys was assigned to the other music educator. The programme of singing, accompanying movement, and other musical engagement such as drum accompaniment remained generally uniform across groups, and the

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second half of each session was characterized by a regrouping of all for a recap and combining of voices and skills.

In the second phase, the music programme was continued largely through one of the facilitators meeting regularly with the students at the school. Though not a trained music teacher, she possessed music abilities, being particularly experienced in singing; and had other skills such as drama, dance, and the artistic use of sign language. In addition, the educators from the university coordinated opportunities for the students to do live performances in their school and immediate community. The children were also exposed to environments outside their community, and a high point for them was getting the opportunity to perform for a group of university lecturers on retreat at a hotel. Eighteen students volunteered to participate in this segment of the intervention. These students were committed to practice outside of regular school time. Only seven of these self-selected students had been to a hotel before this event. The remaining 11 students indicated that before this event they had never been to a hotel.

### **Analytical Procedure**

The quantitative outcome was compared using the Paired sample t-tests; this facilitated the comparison of the pre- and post-test of students' self-esteem. The interview transcripts were read and analysed by the two researchers. Phrases and sentences were assigned themes reflecting the meanings that were garnered from the responses.

## **Findings**

### **Impact of Intervention on Students' Self-Esteem**

The intervention did not impact the students' self-esteem scores as there was no statistical significant difference between the pre-test and the post-test of students' self-esteem scores using the modified Rosenberg scale ( $t=.668, p>.05$ ; see Tables 1 and 2).

### **Students' Views on Their Experiences**

An analysis of responses to the students' interviews resulted in the emergence of five themes: an increased awareness of their environment; improved reading skills; developing creativity; validation of the individual; and gaps in the programme. Students felt that the music intervention made them more aware of their environment, improved their reading skills, challenged their creativity, and improved their self-confidence. There was concern about the music teachers' attitude

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towards homework, in that they felt the teachers rarely checked on their homework.

**Table 2. Intervention Results: Descriptive Statistics**

		Mean	N	Std. Deviation	Std. Error Mean
Pair 1	Pre-test Results	26.57	30	5.328	.973
	Post-test Results	25.40	30	6.951	1.269

**Table 2. Intervention Results: T-Tests**

		Paired Differences		Std. Error Mean	95% Confidence Interval of the Difference		T	df	Sig. (2-tailed)
		Mean	Std. Deviation		Lower	Upper			
Pair 1	Pre-test Results - Post-test Results	1.167	9.570	1.747	-2.407	4.740	.668	29	.510

**Increased awareness of their environment.** The students felt that the music intervention increased their awareness of their social and geographical environment. Through the folk songs, they were able to understand the seasons. Also, the lyrics of some songs allowed them to understand their social structure and empowered them to want to bring about change when they become adults. For example, Sandra and Neil reflected these consequences from the intervention when they voiced the following:

*I like the songs that wi [we] sing. Some talk about Jamaicans, some talk about the seasons; and some talk about people. Dem [the songs] talk about your country and help yu [you] to understand it. (Sandra, 14 years)*

*Mek yu [make you] understand things... For example, people poor, ghetto people song. Song for di [the] poor –mek [make] yu [you] want to help poor people when you grow big. (Neil, 14 years)*

**Perceived improvement in reading skills.** All the students were struggling readers. They were between ages 12 and 16 years and struggled to read beyond the Grade 1 level. During the intervention,

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copies of the lyrics of songs were given to the students. The music teachers guided the students in reading the lyrics; this effort was usually reinforced by the classroom teachers. Kim's response is representative of several of the participants:

*The music programme help mi [me] to read more when the teacher print the words and give to mi [me]. Wi [We] have to read the words. (Kim, 14 years)*

**Developing creativity.** The students said that they enjoyed the musical extemporization sessions. It was during these sessions that the music teachers would set melodic and rhythmic parameters and stimuli while allowing students to create their own lyrics based on their everyday experiences. There were several stories to be heard. For example, one student sang about a rainy day when he took shelter under a mango tree and a mango fell and hit him in his head. Another student sang a story about a friend who stole from him and how he confronted the friend. They enjoyed composing and listening to each other's stories. Michael's statement reflects the students' enjoyment of the sessions, which they viewed as a cultural experience.

*Love to mek [make] a vibes [good feelings]...create a song. A culture time. (Michael, 14 years)*

**Validation of the individual (how they are viewed by others).** Students said that they felt validated by the audience response to their performance. The performances influenced the development of their self-confidence and several went from being shy to being confident performers. Michael and Sandra voiced their experiences in the music intervention:

*Mek [make] mi [me] feel good. Mi [I] like the performance and the applause ...mek [make] people rail for me [Love the exciting atmosphere & cheers from the crowd]. (Michael, 14 years)*

*Mi [I] was shy but mi nuh shy again [I am not shy again]. Mi [I] was shy because too much crowd, mi no longer shy; I feel good. I like the songs that wi [we] sing. (Sandra, 14 years)*

**Gaps in the programme from a student's perspective.** There was frustration among some students when the music teachers did not follow through in holding the students accountable for the homework. The teachers did not check on the homework to ensure that it was done. This

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was frustrating for the students since they put time and effort into doing the homework and apparently wanted to please the music teachers. This could have been the students' way of expressing appreciation for the music intervention, and disappointment was expressed when the teachers did not follow up. Kaye Bart (a student) voiced the following:

*They (music teachers) don't practice the same songs. So dem [them] let wi [we] prepare the songs and don't come back with the same songs. They keep coming with different songs. I feel bad. The students prepare the songs and they [the students] feel bad that after preparation dem [them] nuh [don't] sing the songs. Dem [the music teachers] would a feel bad too [would also feel badly].*

#### **Researchers' Reflection: Going from Shy to Confident**

The progress between the first meeting and the end of the first phase of the intervention was noticeable, with improvement in the students' confidence and willingness to perform, especially in the case of the girls. Initially the students, more so the girls, were noticeably shy and withdrawn. When they entered the room for the first music class, some of the girls had little eye contact with the adults, they were soft-spoken and refused to participate in the singing activities because they said they were scared that the others would ridicule them. By the end of the 12 weeks, lecturers observed considerable improvements in their confidence and willingness to participate in musical performance. The students appeared self-assured in their delivery and general attitude to the intervention process. This view was reinforced by the resident staff, who expressed their delight and amazement when they saw how well the students performed at a community event with an audience of approximately 150 persons; and at the University Staff Retreat before approximately 35 persons.

#### **Reflection From the Acting Principal: Nurturing and Blossoming**

It is important to note that Ms. D's first encounter with the school was when she was invited to be one of the music teachers in the intervention. During this time she mentored the girls, listened to their pain and insecurities; and used music to inspire and connect with them. Ms. D., during and immediately following each music session, taught the students life lessons and used music to instil in them hope for the future. This specific music teacher had such an impact that when the principal for the school needed to go on sick leave, Ms. D. was invited to be acting

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principal. The following represents her thoughts on the music intervention:

*I must say that it was a culture shock for me when I entered the gates of the school. Coming to the inner-city I would expect to see a more assertive set of children, instead they were withdrawn (girls). The boys were more approachable. The music intervention implemented by the university has been very instrumental. I have seen growth, especially with the girls, so much that I was proud of them when they performed at the hotel in front of professors and lecturers. I was even more impressed when the children asked if we would do it again. I personally hope the program continues.*

#### **Reflection From Classroom Teacher Dell**

This classroom teacher is a leader among the teachers and her views are representative of the other classroom teachers. She noted the following:

*The music programme has done a lot for the students, particularly those in the 9th grade. You can see great improvement with Kaye Bart. She isn't so difficult and unresponsive as before. Their [students] self-esteem and confidence has risen and I know they are going to take it to their new schools in September. My student Ronnie Muir—everything has changed about him since his performance at the hotel, he is coming to school on time. His appearance is impeccable, home work is done and his behaviour has been changed. On a score from 1-10, I would give the programme an 8.*

#### **Discussion of Findings**

In the present study, there was no statistically significant increase in the self-esteem scores at the end of the 12-week music intervention. This result differs from a relatively recent study by Choi, Lee, and Lee (2010), in which improvement in self-esteem was evident after 15 weeks. It is arguable that 12 weeks is too short a period for such an intervention to be most meaningful. Another possible explanation for failure of scores to improve relates to the frequency of occurrence of the intervention per week. The sessions were for the most part once per week, lasting approximately 75 minutes, although there were about two weeks of a greater intensity in the number of sessions as the Christmas performance occasion approached. The intervention contact time, however, did not amount to more than a total of 20 hours. The contact time in the

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intervention used in this present study is clearly below other music intervention programmes, which were more intense in nature, such as Costa-Giomi's 2004 study where children received individualized 30-minute and 45-minute piano lessons once per week for three years.

Notwithstanding the lack of improvement in the actual self-esteem scores, there were some important findings of a qualitative nature derived through interviews with the students, classroom teachers, and administrators at the school. The students were generally forthright in communicating their feelings regarding the programme. One highlight was an increased awareness of their community environment, largely derived through some of the songs that spoke to the inner-city realities. In fact, the creative engagement during extemporization sessions allowed the students to expand on existing musical stimuli and incorporate their own community experiences within such a context. For example, shortly after a recent flood experience, the students creatively weaved their experiences into given musical patterns and phrases. In interviews, students reflected on these experiences and appeared to find them extremely rewarding.

In this present study, students expressed appreciation about the intervention's focus on reading the words of the songs when preparing to perform. It is not surprising that such an activity being part of the programme was considered useful, since the school in this research is designed to accommodate children who are behind academically, particularly in the area of reading. The experiences of the children are supported by a body of research that establishes a relationship between literacy and music, and even suggest that music programmes enhance reading skills (Bolduc, 2009; Colwell, 1994; Gromko, 2005; Moreno, 2009).

The interviews revealed that students appreciated being validated as individuals. An important plank of the intervention related to the opportunity to perform the pieces, especially where such performances involved being before an audience. One student reported feeling good and liking when the crowd would "rail" up for him while he was on stage. It is important that members of a group are able to value their individual contribution to the success of the group work. By seeing the response of the audience as not only to the group presentation but also to the individual's contribution to the performance, individual self-esteem will increase and thus stimulate individual growth (Reynolds, n.d.).

Despite the positive reflections about the intervention, there were, however, some criticisms made by participants regarding the structure of the programme. The practice of presenting varying songs and song-styles was viewed as a lack of continuity and was not always appreciated by the

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students, who preferred that the music teachers returned to the songs of the previous week. Some students reported preparing for returning to particular songs only to be disappointed when expectations were not met.

### **Limitation of the Study**

We note that the small sample size influences the power of detection of strength of influence of the music intervention programme on the students' self-esteem. The non-significant results between the pre- and post-tests should be viewed with caution, since a sample size of 30 (71% response rate) may be too small to detect the influence of the music intervention at a 0.05 level of significance.

Because the quantitative results by themselves are inadequate, the qualitative data facilitated a more comprehensible assessment of the influence of the music intervention by allowing for data collection from multiple perspectives.

The one group pre-test–post-test design helped to compute a contrast between the means. However, using this approach can be a threat to internal validity; Kirk (n.d.) pointed out that:

a pre-test, for example, may sensitize participants to a topic, and, as a result of focusing attention on the topic, enhance the effectiveness of a treatment. The opposite effect also can occur. A pretest may diminish participants' sensitivity to a topic and thereby reduce the effectiveness of a treatment. (p. 26)

The experiment design of control and treatment group would not be appropriate for this school. The children who participated in this study are a vulnerable group, and many have been rejected by the regular school system. Consequently, dividing the students into control and treatment groups could have further affected the individual student's self-esteem.

The separation of the students into three groups for some of the sessions, with three different instructors, could have introduced some constraints on the study. It is, however, important to emphasize that students always regrouped into the bigger group for the second half of each music class time.

Future directions in this research would entail a longer period of intervention, with the intervention being standardized, and, where possible, greater intensity in the programme. An enquiry into the children's self-efficacy in music is another direction possible in this intervention. Future research will explore relationships between this music programme and the literacy levels of the children.

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## **TEACHING INTEGRATED SCIENCE THROUGH THE USE OF INTERACTIVE WORKSHEETS**

*Rawatee Maharaj-Sharma*

In this work, interactive worksheets were used to teach a unit of integrated science to a group of 32 lower secondary school science students in Trinidad and Tobago. Observational checklists, students' journals, and perception opinionnaires were used to: (1) explore what effect interactive worksheets had on students' levels of participation during classroom learning, and (2) solicit students' views about the effectiveness of interactive worksheets to teach science. The findings revealed high levels of student participation and an overall expression of enjoyment among students when science was presented to them via this method. Students indicated that the experience was a meaningful one to them and suggested that interactive worksheets were effective in facilitating their understandings of the science content that was taught in the unit.

### **Introduction and Background**

Research in methods of delivery in science instruction suggests that rote delivery “turns-off” students and contributes to the development of resentment for the science discipline (Anderson, George, & Herbert, 2009; Kinchin, 2004). Given that science is by nature a hands-on discipline it is not easily understood why teachers opt to choose traditional passive methods of delivery over more practical, interactive strategies. Hake (1997) suggests that interactive instructional techniques not only stimulate student learning in the classroom but that they impact on overall student performance in the long term. A number of interactive methods have been used to promote active participation and interactivity in the science classroom, including peer instruction tutorials (Mazur, 1996); ranking tasks (O’kuma, Maloney, & Heiggelke, 2004); and in-class worksheets (Heuvelen, 1997). What all these have in common is a use and design format that allows for students to hold a certain degree of autonomy for their learning in their hands.

In general, these methods are quite attractive and offer science teachers a non-traditional approach to achieve learning in their classrooms. They have found a great deal of acceptance among teachers in all of the science disciplines—biology, chemistry, physics, earth science, and agricultural science—because they can be used effectively

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in classes of all sizes and do not require teachers to make drastic changes to their course content (Johnson & Dasgupta, 2005).

### **The Trinidad and Tobago Context**

In Trinidad and Tobago, students enter the secondary school system at an average age of 12 years, and as part of the prescribed curriculum they are all required to pursue Integrated Science (a combination of biology, chemistry, and physics) for the first three years of secondary schooling—called lower secondary—in all instances. Their placement in secondary school is determined by the results of their performance on a national placement examination called the Secondary Entrance Assessment (SEA) examination, which is administered to them at the end of primary schooling. In this SEA, only skills in Language Arts, Mathematics, and Creative Writing are assessed. There is no science component even though science is taught at all levels in the primary system. Given the nature of the assessment in this placement examination, teachers in the primary schools do not place as much emphasis on the teaching of science—in both quantity and quality—as they do on the teaching of Language Arts, Mathematics, and Creative Writing. Wiggins (1993) has suggested that when there is a reduced emphasis on science teaching and learning at the primary school level it usually results in a situation in which students entering the secondary school system are either deficient in science content or disinterested in science, or both, because of their limited exposure to the discipline at the primary level.

Against this background, it is not surprising to find many lower secondary students in Trinidad and Tobago displaying varying degrees of disinterest when re-introduced to science at secondary school. As Watters and Ginns (2000) have said, limited prior exposure to science at primary school often manifests itself in low levels of participation and involvement in secondary school science classes. This, in fact, is an observation many lower secondary school science teachers in Trinidad and Tobago have made, and they have indicated that they feel challenged when attempting to deliver science instruction to non-responsive participants. They recognize that it is important for them to devise strategies and to adopt methods that will stimulate students' participation and promote meaningful learning in their science classrooms. As a result, some teachers have employed practical hands-on approaches and structured small group activities in an attempt to encourage student participation and promote interest in science. They feel, however, that they are unable to facilitate these approaches for all science topics when

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class sizes are large, and when their classes are comprised of mixed ability students.

Teacher educators in science education programmes in Trinidad and Tobago have listened to and given consideration to the challenges faced by secondary school science teachers, and have introduced trainee science teachers to the concept of interactive worksheets as another more recent strategy that they can use to promote interactivity and participation in their science classrooms. Leslie-Pelecky (2000) has explained that well-designed interactive worksheets are highly versatile and flexible, and therefore have the potential to treat with the challenges faced by lower secondary science teachers. Teacher educators in many of the existing science teacher preparation programmes in Trinidad and Tobago have been making deliberate attempts to encourage science teachers to consider interactive worksheets as one possible strategy to assist them in delivering science instruction.

In this study, the use of interactive worksheets to teach a unit of integrated science to a group of Form 2 lower secondary students is investigated. The study is set in Central Trinidad, and participants include students and teachers from a government-controlled secondary school with a school population of 604 students. The overarching goal of this work is to reveal the effect of in-class interactive worksheet on the levels of student participation, and to gauge the students' views on the effectiveness of this strategy as a teaching/learning tool for integrated science. In this regard, therefore, the following two research questions shaped the approach adopted:

- 1. What effect does the use of interactive worksheets in a form 2 integrated science class have on the levels of student participation in the science classroom?*
- 2. What are students' views about the effectiveness of interactive worksheets to teach integrated science?*

#### **Interactive Worksheets**

As mentioned, worksheets are very versatile and can be designed to meet any instructional objective in any topic, in any discipline. It is important to note that worksheets of any type—interactive or otherwise—will consist of questions, and that writing “good” questions—those that stimulate thought, encourage critical and creative thinking, and promote problem-solving skills—is not always an easy task. Furthermore, worksheet questions should also seek to identify students' misconceptions and allow for clarification of these as far as possible (Leslie-Pelecky, 2000). No matter what the type, worksheets for a given

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topic must be very specific (to the topic), that is, devoid of ambiguity, in order to allow teachers to target the intended objectives of the lesson being presented to students.

Interactive worksheets can be of two types:

- Problem-solving worksheets are those that are designed to lead students through the specific steps for arriving at an algebraic or numerical solution. Questions on this type of worksheet can be worked on as sample problems during the lesson or can be used as stimulus material for structured classroom activities. Problem-solving worksheets can also be used as a formative assessment tool. Usually, questions on problem-solving worksheets require students to apply some learned theory, law, equation, or relationship to new situations in which the variables might be different from, but related to, those encountered in the learning experience (Gormally, Brickman, Hallar, & Armstrong, 2011).
- Conceptual worksheets are more focused on developing conceptual understanding and confronting students' perceptions and/or misconceptions, which are necessary for understanding subsequent material (Heuvelen, 1997).

The focus in this particular work is on exploring students' levels of participation through collaborative engagement in problem-solving exercises and activities. Their general perceptions of the effectiveness of problem-solving interactive worksheets in the teaching of integrated science will be sought, and to that end only problem-solving worksheets will be used in this work as these will adequately accomplish the aims of the research.

## **Literature Review**

### **Underlying Theory**

The Piagetian view of learning, which led to the shift from learning as "knowledge-acquisition" to learning as "knowledge-construction," has at its core the belief that students construct knowledge and understandings by negotiating past experiences with new experiences in socially interactive settings. It saw learning occurring through a learner-centred approach, in which the teacher becomes a cognitive guide of learner's learning and not a knowledge transmitter. This view of learning suggested that learning within a social context is facilitated through concepts such as modelling, observational learning, and imitation, and that children learned from observing and interacting with others by

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engaging in structured, well-paced activities. In the late 20th century, the constructivist view of learning was reshaped by the rise of the perspective of “situated cognition and learning,” which emphasized the significant role of context, particularly social interaction, in the learning process. In the new view, cognition and learning are understood as interactions between the individual and a situation; knowledge is considered as situated, and is a product of the activity, the context, and the culture in which it is formed and utilized. In this revised view, learning occurs through active participation and social negotiation (Lave; 1988; Rogoff, 2003; Vygotsky, 1997).

#### **Science Learning, Interaction, and Interactive Worksheets**

Science is often perceived as a difficult subject by many; some describe it as confusing and others suggest that it is boring (Maharaj-Sharma, 2011). Physics, in particular, seems to be deliberately avoided by a number of students pursuing higher-level science education, to the extent that, in Trinidad and Tobago, enrolment in physics at the secondary and tertiary levels is the lowest among the other science disciplines such as chemistry, biochemistry, botany, and zoology (Trinidad and Tobago, Central Statistical Office, 2008). Investigation into students’ perceptions of science suggests that their dislike/avoidance of the subject is only remotely linked to what is taught in the science class, and instead is more directly related to how science teaching occurs in the classroom. Goldenberg (2011) suggests that students really do enjoy learning science, and that they are quite fascinated by the enquiry process and by discovery learning, but they feel stifled into having to conform to the regimented, passive methods of delivery. Watters & Ginns (2000) found that when the learning process is made enjoyable, by allowing students to express themselves through questioning, collaboration, and interactive discourse, science students not only perform at higher levels when assessed, but are motivated to pursue science at higher levels. The opportunity to actively participate in their learning seems to yield its own reward (Kinchin, 2004).

With particular reference to physics, Heuvelen (1997) designed, for the first time, and used in-class interactive worksheets in physics classes, and found that the worksheets were able to achieve much more than was originally expected. Not only did it tease out information about **when** students did not understand the physics, but it also revealed **why** they did not understand. Furthermore, the immediate student feedback that the in-class worksheets provided allowed for confrontation of both the **when** and **why** of students’ lack of understanding. The worksheets also allowed

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for better daily evaluation of students' learning and significantly improved students' participation in class. In addition to Heuvelen (1997), Hake (1997) used a number of interactive activities in the classroom, and found that the creation of interactive settings within the classroom prompted learners of all types to participate in class activities and created the optimum environment for science students to learn from each other. Later, Goldenberg (2011) revealed that students of the science disciplines were asking for more interactive approaches to be used in their science classes, and that even slow learners were identifying ways in which interactive methods of learning were impacting positively on their cognitive development.

Leslie-Pelecky (2000) suggested that while interactive worksheets in science classes are very effective at confronting students' lack of understanding/misunderstanding, and while they promote increased levels of student participation and a higher degree of student-teacher interaction in the classroom, they are not suitable for all topics in science. In addition, worksheets take a long time to prepare, and for some topics they cover less content material than would be covered in the same time using more traditional methods of delivery. These are issues that teachers who wish to use interactive worksheets must carefully consider before opting to use them.

Educators in the local context agree that there is an urgent need for teachers to make science learning a more rewarding experience for students and, in this regard, over the last two decades, more and more efforts have been made to shift to contemporary practices through the use of a number of creative, innovative, and hands-on strategies and approaches in science classrooms (Maharaj-Sharma, 2008). In keeping with this effort, in this work interactive worksheets will be used for the first time to deliver science instruction to science students in the local context—Trinidad and Tobago.

## **Methodology**

### **Target Group**

A group of 32 Form 2 lower secondary school science students participated in this work. Their ages ranged from 12-15 years and the class consisted of 15 boys and 17 girls. The group was a mixed one, in terms of ethnicity, geographical origin, and previous academic performance. The class was taught Integrated Science by one teacher, who saw the class three times per week for sessions lasting 50 minutes each. The teacher has been teaching Integrated Science for the past 6

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years, and for the purposes of collecting data for this work she was assisted by a cooperating teacher. Because the intervention (interactive worksheets) is a new one in this context, convincing teachers and, by extension, their students to participate was not very easy. This particular teacher felt very encouraged by the potential benefits interactive worksheets could have for her students, and she encouraged her students to participate in the research.

#### **Treatment — Pre-Implementation**

The case study approach was adopted for this work. Structured interactive worksheets of the type(s) discussed herein are a somewhat new strategy that teacher educators are introducing to trainee teachers and encouraging them to adopt in their classrooms. In this specific case, the science teacher, being very enthusiastic about the strategy, volunteered herself and her Level 2 Integrated Science class to participate in the project. Parental permission was sought and obtained for all 32 participating students. In the study, the teacher delivered an integrated science unit entitled “Forces and Motion” to the students. The unit consisted of six 50-minute lessons in which interactive worksheets were used as the main teaching/learning strategy.

The unit of work was planned well in advance of the classroom delivery, and corresponding worksheets were designed for each lesson in the unit. The worksheets were reviewed, in conjunction with the lesson, by a teacher educator in the area of science education to verify consistency between the lessons’ content and the worksheets’ coverage, and to ensure that the worksheets were coherent and unambiguous. All stimulus materials, models, laboratory equipment, and readings needed for the lessons were prepared before teaching of the unit began.

#### **Treatment — Implementation**

The unit was taught over a period of two weeks; 3 lessons per week on Mondays, Wednesdays, and Fridays. The interactive worksheets were used primarily in the body of the lessons, except for the first lesson in which it was used at the end of the session. The worksheets were not graded, but were used formatively to allow the teacher to determine the extent to which students were able to apply learned material to solve problems or to explain observations and occurrences. The teaching session for each lesson consisted of three phases. In the first phase, students were taught some foundational content about the topic of the lesson and were presented with examples of applications of the content. In the second phase, they were presented with the worksheets and

instructed to work through them by engaging in group collaboration. For each question on the worksheet, the students were instructed to share what they each thought was a suitable answer and to explain to the group why they thought so. When members of a group had differing answers they had to decide on which answer to present on the worksheet. In making this decision, they were to collectively consult their class notes, handouts, and blackboard work, to arrive at consensus on what they would present as a suitable answer for the question. The worksheet exercises were designed to progressively move students from the cognitive levels of knowledge and comprehension up to analysis and synthesis, by prompting them to solve problems as they completed the sheet. In the final phase of the teaching session, each group presented by telling the class what problems they were presented with and the solutions they arrived at. In any one teaching session, each group worked on a different problem.

During the lessons, students' levels of participation were gauged by the use of a detailed teacher checklist. The observational checklist used was adopted, and suitably adapted, from work done by Wiggins (1993), in which students' levels of participation in science learning were explored. The cooperating teacher observed the lessons and completed the checklist while the class teacher taught. The checklist consisted of 15 descriptive items, which each sought to encapsulate the behaviours of students as they worked through the worksheets. Each item rated a particular behaviour as *high*, *moderate*, or *low* depending on the extent and the frequency (as described by Wiggins, 1993) with which the particular behaviour was observed among the students. The checklist focused on behaviours in the following areas:

- Students' willingness to freely volunteer answers to questions posed to them in the class
- Students' participation (oral and written) in group work/activities
- Students' engagement in peer assistance when working through the interactive worksheets

At the end of **each lesson**, students' perceptions about the effectiveness of the worksheets were captured by way of a short journal entry. They were asked to indicate in what ways the worksheets were helpful or useful to them in the lessons, and to say whether or not they thought the worksheets were effective in facilitating their learning. At the end of **the unit**, each student was asked to complete a short Likert-type opinionnaire, which sought to capture additional details about their levels

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of participation as well as their overall perceptions of the effectiveness of the worksheets in facilitating learning in integrated science.

*[The opinionnaire was designed initially by the researcher and went through three phases of piloting. The first phase sought to ensure that the statements were grammatically unambiguous and, as a result, was sent to the language department for review and critique. In the second piloting phase, the aim was to ensure that the statements targeted the key parameters for which information was being sought—levels of participation and perceptions of effectiveness. A measurement and evaluation specialist reviewed the opinionnaire, and feedback furnished was used to improve the validity and reliability of the instrument. In the final phase of the piloting process, the instrument was administered to 100 Form 2 students (none involved in this study). These students were from the same school at which the study took place but belonged to other Form 2 groupings. Their responses suggested that the instrument was clear and focused.]*

## **Data and Data Analysis**

### **Observational Checklists**

The observational checklists focused on the activities students were engaged in during the learning process, and sought to capture students' levels of participation during each teaching session. The checklist allowed the cooperating teacher to record, from among the list of demonstrative behaviours on the checklist, which behaviours each student displayed during each lesson, and also to classify the behaviour as *strong*, *moderate*, or *weak*. The cooperating teacher observed the students as they worked through the activities using their interactive worksheets, and she completed the observational checklist to reflect the extent to which the students were participating in the lessons. Upon completion of the unit of work, these lists were collated, reviewed, and analysed quantitatively to determine the extent to which each of the behaviours observed was displayed by the students. Observed behaviours were further analysed to reveal the extent and nature of students' participation in terms of their willingness to provide and/or volunteer responses, their participation in group work through information sharing, and their willingness to provide peer assistance to others in the class.

### **Journals**

Students were asked to make a short journal entry at the end of each lesson, in which they were encouraged to write about their views of the effectiveness of the interactive worksheets in facilitating their learning for that lesson. The entries were made under the cover of anonymity so that students could honestly and freely express their views in a non-intimidating setting. These journal entries were collected, reviewed, coded, and subsequently analysed qualitatively to give an indication of what students' views were in respect of the effectiveness of the interactive worksheets to teach science.

### **Perceptions Opinionnaire**

Items on the perceptions opinionnaire were used to capture additional data about students' levels of participation when interactive worksheets were used in the classes, and students' perceptions of the effectiveness of interactive worksheets to teach science. Its use was to complement the data obtained from both the checklists and the journal entries. It consisted of 10 opinion statements presented via a Likert model, to which students responded that they *agreed*, *disagreed*, or were *uncertain*. Some of the items were linked to levels of participation and some sought to reveal students' perceptions of the effectiveness of the worksheets. These opinionnaires were analysed in conjunction with the data obtained from the checklists and the journal entries to present a more thorough picture of the effect that the use of interactive worksheets had on teaching and learning in the science classroom.

## **Findings**

### **Students' Levels of Participation**

Analysis of the data obtained from the observational checklists revealed that, in general, students were very involved when interactive worksheets were used during the teaching of the science lessons. Students were discussing ideas and solutions to problems on the interactive worksheets, and were explaining concepts to their peers, genuinely assisting them to work through the worksheets. When class questions were posed by the teacher there was an overwhelming willingness by the students to answer or to provide additional explanations. The science class was abuzz with interactivity—sharing and collaboration—as students attended to the tasks on the worksheets. Quantitative analysis of the observational checklist data revealed the following:

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1. Students' levels of participation, as described by Bean and Peterson (1998), in terms of willingness to volunteer responses to oral questions, willingness to offer explanations, and readiness to make input in discussion was greater than 83% in each of the lessons of the unit.
2. In collaborative group work, while completing the interactive worksheets, more than 80% of the students were engaged in information sharing and discussions for each of the lessons.
3. Peer assistance by way of explanations of ideas and concepts to each other was observed in all the lessons and, based on analysis of the checklists data, 3 out of every 4 students indicated that they explained an idea to one or more of their peers, and 9 out of every 10 students indicated that an unclear or difficult idea was made understandable to them by one of their peers.

### **Students' Journals**

When students' journals were analysed, it was revealed that their perceptions of the effectiveness of the interactive worksheets were overwhelmingly positive. Most students found the worksheets to be helpful in allowing them to work through a problem in a "stepwise" and "logical" manner. There was a strong indication that the interactive worksheets facilitated "flow" and "building" of ideas as the unit progressed from lesson to lesson. Students indicated, too, that the process was an enjoyable one as they were allowed to learn through collaboration and sharing of information with their peers. Many students said that working with their peers on completing the worksheets was an "enjoyable" experience, and that they "liked explaining what they knew" to their friends. Even though the shift from the traditional paradigm seemed to have found great acceptance among many of the students in this work, a few of the high performers in the class expressed, through their journals, less positive views about the use of interactive worksheets. But even while they cited the much slower pace with which the class progressed as their main area of dissatisfaction, they agreed that interactive worksheets were effective in facilitating science learning. Responses of this kind, however, were in a very small minority; less than 7% of the responses.

The following excerpts of journal responses captured, in a general sense, students' perceptions of the effectiveness of the interactive worksheets:

*Rawatee Maharaj-Sharma*

*Student 1: ...I did not get it at first....but when Amy explained it to me  
....I was able to do the worksheet...*

*Student 2: the equations in straight line motion were difficult....but when  
I went through the steps in the worksheet with my friend it  
was easy to follow*

*Student 3: ...it was fun explaining how a force works to the others in my  
group...*

*Student 4: The worksheets made the problem seem easy....and I was able  
to explain it...*

*Student 5: we really shared our learning....*

*Student 6: ...the worksheets really helped me to understand effects of  
forces*

*Student 7: Comparing my answers with my friend ... helped me to see my  
mistake....*

*Student 8: ...the sharing and discussing was nice... it was different...*

*Student 9: the worksheets were very useful to me...*

### **The Likert Perceptions Opinionnaire**

*[The 10-item Likert perceptions opinionnaire was administered to the class at the end of the unit, after the teaching of the six science lessons. The students were asked to indicate if they **agreed**, **disagreed**, or were **uncertain** for each item.]*

**Views on participation.** Students' responses to items on the Likert perceptions opinionnaire that sought to elicit from them their views on the effect the interactive worksheets had on their levels of classroom participation indicated that, in general, students felt that the worksheets facilitated greater levels of peer-peer interactions and allowed for a high degree of student participation in the lessons. Students suggested that, in general, they were interacting with their peers more than they normally did in previous science classes. Their responses indicated that in using the approach, a great deal of information sharing occurred among the students, which allowed for a lot of learning from each other. Their overall response to the participation specific items is summarized below:

- The interactive worksheets encouraged me to share my knowledge with my friends.

Agree – 83%; Disagree – 8%; Uncertain – 9%

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- I was able to help my friends understand something using my worksheet.  
Agree – 89%; Disagree – 2%; Uncertain – 9%
- When using the worksheets, I interacted more with my peers than I did in lessons before.  
Agree – 85%; Disagree – 4%; Uncertain – 11%

**Views on effectiveness.** The other 7 items on the perceptions opinionnaire sought to reveal what were students' views on the effectiveness of the worksheets on their science learning. Students agreed overwhelmingly that the worksheets aided their understanding of content covered in the unit, and that it was a useful teaching/learning tool. Most of the students (90%) indicated that the worksheets were helpful to them as they helped them to link related ideas. All the students agreed that the worksheet design facilitated developmental understanding because the sheets started with simple ideas and gradually moved along to more challenging concepts and scenarios. All but two students agreed that the worksheet made learning the topic easy for them. These two students were high academic achievers in the class. They assisted their classmates on occasion, but seemed bored over the time it took for their peers to arrive at answers for questions on the worksheets. The majority of the class (92%) indicated that by using the interactive worksheets they were encouraged to think carefully as they worked through the problems to arrive at the final answers. In terms of the frequency with which they felt interactive worksheets should be used and its overall effectiveness in aiding learning in science, all but two of the students agreed that it should be used more often and that it was effective in helping them learn concepts in the topic.

### **Discussion**

For the students, the use of interactive worksheets to teach integrated science in this work revealed that prior experience, learning context, social interaction, and suitably selected interactive approaches all contribute to meaningful and effective learning in the classroom. As was reported by Bean and Peterson (1998), the interactive worksheets used in this particular case encouraged students to learn science through collaboration by engaging in small group discussions, by sharing information and experiences, and by sequentially building knowledge and understandings. Learners of all types commended the strategy highly and expressed satisfaction with the experience. No comments of

intimidation or strong unease emerged from the data, which seems to suggest that, in general, learners of all types participated without inhibition.

Insights about when students did not understand a concept and, to a lesser extent, why they did not understand it were revealed through the interactive worksheets. Close examination of the completed worksheets submitted by the students indicated very clearly at what point the students encountered difficulties as they worked through the sequence of tasks on the interactive worksheets. For example, a common problem experienced by the teacher when teaching in the past had been students' difficulty in grasping the idea of distance moved in the direction in which a force acts when describing work done on an object. If the distance in the direction in which the force acts was given to students they were able to figure out what work was done very easily, but once they were required to examine either the wording of a problem or the diagram of a system to determine what was the distance moved in the direction in which the force acts, they ran into difficulties and were unable to solve the problem.

With the interactive worksheets, this problem was broken down into smaller problems/parts, which allowed, in this particular example, for students to identify, firstly, **where** the force was acting and what was the **magnitude** of the force. The next step in the worksheet asked students to **track/trace/explain the motion** of the object as a result of the force acting on it and to assign a **direction of motion**. In the third step they were asked to return to Step 1 and to indicate the **direction** in which the **force** was acting on the object. In Step 4 of the worksheet they had to look at the **direction in which the force was acting and the direction in which the object was moving**, and to determine whether they were the same or different and if they were different to explain how the directions were different. This stepwise approach allowed for students to see clearly the relationship between the direction in which the force acted and the direction in which the object moved and to determine the work done on the object. In this regard, therefore, the interactive worksheets allowed the teacher to see some of those areas where students were experiencing difficulties.

An unanticipated benefit of using the interactive worksheets, as articulated by the class teacher in informal discussions after the project was completed, was that the psychological distance between student and teacher, which is often present in large classes, seemed to have been practically eliminated. Students' names were visible on every worksheet; they were talking about the topic freely, helping each other, and sharing what they understood. They were speaking more frequently, openly, and

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with greater levels of confidence to the teacher. The teacher indicated that the experience allowed for her to get to know “*more about many more of her students.*”

#### **Lessons Learned**

Interactive worksheets are very effective in that they allow teachers to recognize students’ preconceptions, misconceptions, and problem-solving challenges. They are very effective at facilitating class participation and at increasing both student-student and student-teacher interactions. The particular design of the worksheets can help teachers determine if the difficulty for the students is linked to problem solving or if it is conceptual. While opportunity for open responses in the worksheets can provide valuable information about what student learning has or has not occurred, if the responses are too vague it will make assessing the extent of learning a difficult task for teachers. It is important, therefore, to provide lots of writing space for students on the worksheets, as on many occasions they write/scribble before/during the thinking process. Not only students, but teachers too, can benefit from the responses students provide on their worksheets. These responses can point out weaknesses in a teacher’s presentation of the topic and can indicate to teachers those areas/topics in which he or she needs to be more explicit in subsequent teaching.

Leslie-Peckley (2000) indicated, and it was verified by the teacher involved in this work, that preparing worksheets for classroom use can be a time-consuming exercise and it is a process that requires significant teacher foresight. Students’ collective responses to the strategy emerging from this work, however, suggest that this challenge may be more than offset by the realization that students work much harder in the class, are more motivated and engaged in the learning process, and are developing essential cooperative and collaborative skills. In spite of the small number of participants in this work, the implications of outcomes such as those discussed in this paper cannot be disregarded. From the teacher’s perspective, it is a useful tool to promote students’ participation and to facilitate meaningful learning. From the student’s viewpoint, it is effective in aiding understanding and promoting learning through collaboration. The teacher and the students involved in this work agreed almost unanimously that the interactive worksheet is a unique and useful teaching/learning tool, which can be tailored to focus on those particular skills or concepts the teacher deems to be most important.

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## Appendix A – Sample Interactive Worksheet

**>FORCE & MOVEMENT<**      Name .....

A **FORCE** is a **PUSH** or **PULL**. Force is measured in **NEWTONS (N)**. Forces can speed up or slow down objects. The diagrams below show how different forces can affect the movement of a car.

1. Force from the engine makes the car begin to move.



unbalanced force

2. As the car speeds up the force of air resistance gets bigger.



unbalanced force

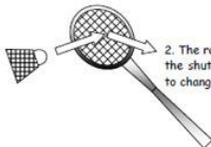
3. The car reaches a steady speed when the two forces are equal.



balanced force

When the force pushing against the car is the same size as the force from the engine the car stops accelerating and travels at a steady speed.

Forces can also make objects change direction. The diagram below shows this.



1. Shuttlecock moving in one direction hits the racket with a force.

2. The racket gives a force to the shuttlecock and causes it to change direction.

The important rules from this are :

1. Unbalanced forces change the speed and/or direction of moving objects.
2. Balanced forces produce no change in the movement of an object.

**Exercise** - Complete the sentences underneath each of the diagrams below.

Force from engine is 500N.      Force of air resistance is 300N.



1) The car will \_\_\_\_\_

Force from engine is 500N.      Force of air resistance is 500N.



2) The car will \_\_\_\_\_

Force from engine is 500N.      Force of air resistance is 700N.



3) The car will \_\_\_\_\_

A book is pulled down with a force of 5N.

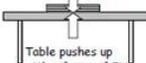


Table pushes up with a force of 5N.

4) The book will not \_\_\_\_\_

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**Appendix B – 10-Item Likert Perceptions Opinionnaire**

Please read the statements carefully and tick the box which best reflects your opinion about the statement (SA=Strongly Agree; A=Agree; U=Undecided; D=Disagree; SD=Strongly Disagree).

<b>Statement</b>	<b>A</b>	<b>U</b>	<b>D</b>
1. The interactive worksheets encouraged me to share my knowledge with my friends			
2. I was able to help my friends understand something using my worksheet			
3. When using the worksheets, I interact more with my peers than I did in lessons before			
4. The worksheets helped me to understand the topic that was taught in class			
5. The worksheets helped me to see how ideas are related so I could link things			
6. The questions on the interactive worksheet moved from simple to difficult and this made it easy for me to follow			
7. The worksheets made learning the topic easy for me			
8. The worksheet questions prompted me to think carefully about the answer I was giving			
9. Interactive worksheets should be used more often to teach science			
10. Overall, I would say that the interactive worksheets were effective in helping me to learn about the topic.			



**WHEN TEACHERS LEAD:  
An Analysis of Teacher Leadership in One Primary School**

*Rinnelle Lee-Piggott*

While teacher leadership is a concept that lacks consensus in the literature and may be underexplored in schools, it is a practice that is worth pursuing for its many cited benefits to school improvement. However, the extent to which teacher leadership thrives in any school is dependent on school conditions such as principal support and school culture. This is evident in an analysis of teacher leadership episodes from one primary school in Trinidad, which the author undertook in order to identify the supportive structures as well as barriers to teacher leadership. Evidence on teacher leadership from developed countries such as the USA and the UK, where the concept is more widely known, was used to form the analysis, which revealed an emergent form of teacher leadership existing at the school.

**Introduction**

Having had the opportunity to observe the work of teachers in very different school contexts over a number of years, it appears that there are some teachers who, in the interest of improving the learning opportunities for their students and raising the standard of professional practice, extend themselves by taking on extra responsibilities. The actions of these teachers have come to be recognized in the literature as *teacher leadership*.

In this paper, research-based conceptualizations of teacher leadership are used to gauge the extent to which this phenomenon existed in one primary school in Trinidad. Consequently, reflections on teaching episodes at this school have been presented and analysed to identify the conditions that facilitated teacher leadership, as well as the barriers that hindered not only its emergence and maintenance but also the school's use of teacher leadership for school effectiveness and improvement. Successful teacher leadership and its benefits are examined and, finally, possible areas for research are identified. The objectives of this conceptual paper are: (1) to provide an overview of teacher leadership; (2) to raise awareness of its existence and potential for school improvement in Trinidad and Tobago schools; and (3) to highlight the

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need for empirical studies into the phenomenon of teacher leadership in the nation's schools. A review of the literature on teacher leadership follows.

### **Conceptions of Teacher Leadership**

The literature provides different conceptions of teacher leadership, which Harris and Muijs (2005) assert “clearly delineate” from traditional ideas and approaches of leadership. To appreciate what they mean, an extended definition of traditional leadership is proffered, followed by various conceptions of teacher leadership as provided by several authors.

Coleman (2005) affirms that traditional leadership tended to be associated with one person, such as a principal of a school, giving rise to the “great man” theory of leadership (Murphy, 2000) or the idea of the “heroic school leader” (Hallinger & Heck, 1999, p. 185, cited in Ribbins, 2001). Related to this conception is the notion that leaders possess special traits with which they are born. This idea negates the need for leadership training and development. Such leaders have followers and may be effective in one context but not another (Coleman, 2005).

More recent conceptions cast leadership as “fluid and emergent” as opposed to “fixed” (Gronn, 2000, p. 333), and is most effective when shared (Gronn, 2003; Harris, 2008; Spillane, 2006), culminating in “total leadership” (Leithwood, Day, Sammons, Harris, & Hopkins, 2006). Such leadership is about learning and “constructing meaning and knowledge collectively and collaboratively” (Lambert, 1998, p. 5), which leads to positive change. It is within this schema that teacher leadership is situated.

Interestingly, *teacher leadership* is not a term used by teachers in schools (Muijs & Harris, 2006). However, research suggests that such a concept exists, though definitions of the concept vary slightly within the literature (Muijs & Harris, 2006). In the USA, Canada, and Australia, the concept of teacher leadership, according to Hopkins (2001), is particularly well developed and evidenced by empirical data. While in the UK, the concept has recently emerged, but is gaining momentum (Day & Harris, 2002; Frost & Durrant, 2003b; Harris, 2003b; Muijs & Harris, 2003).

Little (2003) charts the development in the USA over a 14-year period, and finds that teacher leadership has undergone marked changes. Using case study data, Little notes that in the 1980s teacher leadership was limited to leadership of subject departments, but by the mid-1980s it became profoundly associated with imposed school reform, as was later seen in Canada in the 1990s (Anderson, 2004) and in the late 1980s in the

UK (Reid, Brain, & Boyes, 2004). This period of reform in the USA, in particular, was characterized, according to Little (2003), by conflict over the meaning of teacher leadership. In more contemporary times, teacher leadership has come to be equated to intensification of labour (Ballet & Kelchtermans, 2002; Bottery, 2002; Hargreaves, 1994, all cited in Little, 2003) or to an “expanded” role for teachers (Hoyle, 1980; Lieberman & Miller, 1990, both cited in Little 2003). Bascia (1997) contends that “these expanded notions of teacher’s work are sometimes characterized as teacher leadership” (p. 69).

Anderson (2004) believes that “teacher leadership means to set directions and influence others to move in those directions. It is a fluid, interactive process with mutual influence between leader and follower” (p. 100). Apart from the outright reference to a leader-follower connotation, which is unpopular in such a discourse (Gronn, 2000; Harris, 2003b), and the ambiguity implied by “mutual influence,” the leadership of teachers in this definition appears to be autocratic. In 2003, a project, which was commissioned by the General Teaching Council for England and the National Union of Teachers (NUT; the largest teacher union in England) “to investigate the extent to which teacher leadership had cogency in the UK,” defined the concept as “the capacity for teachers to exercise leadership for teaching and learning within and beyond the classroom” (Muijs & Harris, 2006, p. 963). Frost and Durrant (2003b), choosing to be concerned only with the work of informal teacher leaders, assert that teacher leadership involves “managing change through collaboration,” “experimenting with practice,” [which is action research] and “gathering and using evidence” [data richness] (p. 171). Muijs and Harris (2006) agree that collaboration is necessary for teacher leadership. They maintain that “teacher leadership is conceptualized as a set of behaviours and practices that are undertaken collectively,” and “is centrally concerned with the relationships and connections among individuals within a school” (p. 962). They extend the discourse on teacher leadership by showing its close connection with distributive leadership, purporting that it is:

conceptually narrower, being concerned exclusively with the leadership roles of teaching staff, while simultaneously being broader than many practical operationalisations of distributed leadership that have often concentrated on formal positional roles, in particular those relating to middle management and subject leadership. (p. 962)

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But what is distributive leadership? Distributive leadership first appeared in the leadership literature in the late 1950s (Harris & Muijs, 2005). According to Harris (2008), it is a form of lateral leadership, where the practice of leadership is shared amongst organizational members and is, therefore, seen as “the product of conjoint agency” (p. 175) that comes about by “decentr[ing] the leader” (Harris, 2003b, p. 317). It is not misguided delegation; rather, according to Spillane, Halverson, and Diamond (2001), the task of leadership is accomplished through the interaction of multiple leaders, over whom the leadership function is “stretched.” Empirical evidence indicates a strong correlation between patterns of distributed leadership and organizational performance (Leithwood, Day, Sammons, Harris, & Hopkins, 2007). However, Hargreaves and Fink (2006) say that distributive leadership “is sometimes bad leadership” (p. 106), explaining that fewer leaders rather than more is better. Melnick (1982) agrees, believing that such sharing of leadership leading to ambiguity is one of six obstacles to effective team performance. But Sergiovanni (2001) advocates high “leadership density,” in which more people [teachers] are involved in the success of the school.

Teacher leadership, like distributive leadership, is believed to emerge within the organization in order to solve problems or take action (Harris, 2003a). Despite whichever conception of teacher leadership is held to, its “emphasis upon collective action, empowerment and shared agency is reflected in distributed leadership theory” (Harris, 2003b, p. 317). Also, whether teacher leadership is perceived as a process, capacity, or a set of actions, or is exercised within a formal role or not, what is important is that teachers work collegially while leading the improvement of professional practice and student learning, in ways that are duly aligned to the school’s vision.

### **Teacher Leaders: Who Are They? What Qualities Do They Possess?**

Barth (2001b) holds fast to the belief that “all teachers can lead.” Whether this is so or not, certainly not all teachers aspire to leadership. Two questions beg to be asked: Who, then, is a teacher leader? What qualities and skills does he/she possess? Patterson and Patterson (2004) answer the first question by defining a teacher leader as “someone who works with colleagues for the purpose of improving teaching and learning, whether in a formal or an informal capacity” (p. 74). It is widely agreed that formal teacher leaders have recognized titled positions or legal authority (Bascia, 1997; Birky, Shelton, & Headley,

2006; Wasley, 1991) for which they would have applied, been selected, and, ideally, received training (Danielson, 2007), as well as compensated with additional or higher salaries and/or a lighter classroom teaching load (Birky et al., 2006). Narratives from teacher leaders dishearteningly suggest that the latter is only a fantasy (see Little, 2003; Reid et al., 2004). Examples of formal teacher leaders include heads of departments, senior teachers, union representatives, and curriculum leaders. A less formal teacher leader is identified by one respondent in the Reid et al. (2004) study as the teacher who accepts delegated responsibility, usually from the principal.

Conversely, informal teacher leaders are those who assume the role regardless of position or delegation (Bascia, 1997). Bascia refers to this type of leadership as “invisible”—a reference that may be inappropriate when the work of even these informal teacher leaders extends beyond the classroom. Frost and Durrant (2003a) assert that *informal* should not simply be taken to mean the absence of a formal position, but, more significantly, be used to define that teacher who has chosen to contribute to school improvement. Danielson (2007) sees informal teacher leaders as “emerg[ing] spontaneously and organically from the teacher ranks” (p. 16) to take on a number of responsibilities on their own volition. Wasley (1991) gives some idea of these responsibilities. He states that informal teacher leaders:

are recognized by their peers and administrators as those staff members who are always volunteering to head new projects, mentoring and supporting other teachers, accepting responsibility for their own professional growth, introducing new ideas, and promoting the mission of the school. (p. 112)

From Wasley’s definition, some of the qualities that teacher leaders—not just informal teacher leaders—possess can be gleaned. Firstly, they are risk takers who display optimism about teaching and learning (Lieberman, Saxl, & Miles, 2000), and so are “always volunteering” and “accept responsibility for their own professional growth.” Also, “mentoring and supporting other teachers” suggests that teacher leaders are respected for their own teaching capabilities by fellow teachers and administrators alike, as found by Danielson (2007), and that they are versed in subject content as identified by Nieto (2007) and Lieberman et al. (2000).

Other attributes include open-mindedness, ability to collaborate effectively, respect for the views of others, and flexibility (Danielson, 2007; Lieberman et al., 2000); all of which are necessary when working with colleagues, who pose a very different set of challenges for teacher

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leaders than those posed when working with students (Danielson, 2007). Frost and Durrant (2002) recognize the nature of such work, and highlight the following qualities and skills that are observable in teacher leaders: “Considerable sensitivity in working with colleagues; the need for determination, patience and conviction; and gentleness, coupled with persistence” (p. 151). These attributes suggest that the exercise of teacher leadership is not always fluid, as will be discussed when the issues and barriers to teacher leadership are examined later in this paper. Teacher leaders’ roles and responsibilities are now addressed.

### **Roles and Responsibilities**

A third question warrants consideration: What do teacher leaders do? Whether formal or informal, teacher leaders, as mentioned previously, take on a number of roles and responsibilities. Katzenmeyer and Moller (2001, p. 17) identify three facets of teacher leadership:

- (1) “leadership of students and other teachers” as mentor, coach, facilitator or curriculum specialist
- (2) “leadership of operational tasks,” including keeping the school organized and on course to its vision
- (3) “leadership through decision making,” or partnership with fellow teachers in committees or with businesses within the school’s immediate community.

Barth (1999, cited in Harris & Muijs, 2005) views teacher leadership as fulfilling some of the functions that would normally be undertaken by school administrators, such as “choosing textbooks and instructional materials; shaping the curriculum; setting standards for pupil behaviour; deciding on tracking; designing staff development programmes; setting promotions and retention policies; deciding school budgets; evaluating teacher performance; selecting new teachers; and [even] selecting new administrators” (pp. 24-25). Other researchers, such as Danielson (2007), Gehrke (1991), Harrison and Killion (2007), and Lieberman and Miller (2004), identify quite similar functions, though they may condense them into dimensions or separate them into very distinct roles.

While many of the roles and responsibilities of teacher leaders may be similar across different school contexts, some functions will be context specific, as evidenced in Nieto’s (2007) study. She observed quite a different set of functions of the teacher leaders when teaching multicultural students in the USA. These teacher leaders believed in, and advocated for, public education. They “challenged conventional

wisdom” through their genuine respect and high expectations for students, and through their belief in the intellectual ability of teachers. Nieto (2007) adds that they question taken-for-granted assumptions about knowledge and improvise where necessary. These teacher leaders also modelled social justice, as well as used their influence inside and outside the classroom.

The consideration that now comes to the fore is that of school conditions. It would seem that in order for teacher leaders to carry out such roles and responsibilities, and function as they do, as reported by Barth (1999, cited in Harris & Muijs, 2005), Danielson (2007), Nieto (2007), and other researchers mentioned, school conditions that allow teacher leadership to thrive are likely to be present. A look at teacher leadership in successful schools, headed by successful principals, should provide a useful frame of reference.

### **Teacher Leadership in Successful Schools: Supporting Conditions**

Successful principals of successful schools “draw on the same repertoire of basic leadership practices” (Leithwood, et al., 2006, p. 6). Although the practices of successful principals should not be taken as prescription, since the influence of school context coupled with human agency (Ribbins, 2001) in the exercise of leadership are critical factors in determining school success, the literature provides evidence to support that what they do has a significant, albeit mostly indirect, effect on student achievement (Hallinger & Heck, 1998; Leithwood et al., 2006; Leithwood & Riehl, 2003). One important practice related to this discourse is that of successful school leaders establishing systems and incentives—supporting conditions—to ensure the sharing of leadership (Harris & Day, 2003). Ideally, the school as a professional learning community provides the right conditions for this sharing of leadership, which develops and supports teacher leaders (Muijs & Harris, 2006; Stoll, Bolam, McMahon, Wallace, & Thomas, 2006). Seashore, Anderson, and Riedel (2003) describe a professional learning community as one in which there is “the establishment of a school-wide culture that makes collaboration expected, inclusive, genuine, ongoing and focused on critically examining practice to improve student outcomes” (p. 3). A school’s culture is critically important to the functioning of schools, and involves an intricate mix of beliefs, values, meanings, and assumptions, which are manifested in an array of symbolic representations, such as ceremonies, artefacts, and relationships; and is a strong determinant of individual and group attitudes, behaviours, and actions (Barth, 2001a;

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Nias, Southworth, & Yeomans, 1989; Peterson & Deal, 1998). Undoubtedly, every school has a culture, which, using dichotomous descriptions, may be hospitable or toxic (Barth, 2001a); positive or toxic (Peterson & Deal, 1998); and healthy or unhealthy (Saphier & King, 1985). Positive, hospitable, and healthy school cultures are those associated with professional learning communities that have the supporting conditions for teacher leadership to thrive.

Muijs and Harris (2006) identify 10 factors in healthy school cultures that contribute to the emergence and maintenance of teacher leadership:

- (1) supportive culture characterized by collaboration, trust, and collegiality among staff
- (2) supportive structures, such as opportunities for continuing professional development, time to meet, and internal promotions, with clearly defined roles for lead teachers
- (3) strong guidance and support from the head teacher
- (4) commitment to action enquiry and data richness
- (5) innovative forms of professional development
- (6) coordinated improvement events, which ensure that development works are aligned to the school's vision
- (7) high levels of teacher participation and involvement
- (8) collective creativity
- (9) shared professional practice, which enhances professional learning
- (10) recognition and reward, particularly to sustain teacher leadership and teacher motivation

The findings of other researchers, such as Birky et al. (2006); Frost and Durrant (2003b); Little (2003); Mangin (2007); and Nieto (2007), support Muijs and Harris' (2006) findings. It is conditions such as these that successful principals and head teachers work to ensure exist in their schools.

In fact, Whitaker (1995) made two important discoveries from his study, which distinguish between more and less effective school principals with regards to teacher leadership. Whitaker notes that not only were more effective principals able to recognize their informal teacher leaders, but they also had the ability to use teacher leaders more effectively in the change process than principals in the less effective schools, thereby creating an enabling school condition for teacher leaders. Some effective principals, according to Birky et al. (2006), choose to directly influence the development of leadership skills and attitudes in teachers by mentoring those who are learning to lead, while

others make themselves available when needed or lead by example. This shows the varying degrees of support for teacher leadership by principals.

Mangin (2007) recognizes a link between principals' level of support and their combined knowledge of the teacher leadership role and interaction. She notes that principals with high levels of knowledge and interaction actively support teacher leaders by communicating with teachers about teacher leadership. These principals identify teacher leaders as a resource for improvement and communicate expectations for teachers' instructional improvement. They influence teachers' receptivity to teacher leaders by their words and actions, which lend credibility to the role and, so, they expect teachers to interact with the teacher leaders. In this way, many of the barriers erected by teachers themselves are torn down and the benefits of teacher leadership realized. The potential benefits of teacher leadership are now discussed.

### **Benefits and Impact of Teacher Leadership**

Though teacher leadership is widely advocated in the literature, there is, according to Harris (2005), little evidence of its impact on school improvement. However, it is supposed that by using the transitive relationship—teacher leadership encourages collaboration, which results in professional learning as knowledge is shared, which translates into improvement in professional practice, which in turn reflects in students improved achievement—the impact becomes evident (Frost & Durrant, 2003b; Smylie, Conley, & Marks, 2002). Frost and Durrant (2002), using a handy framework, identified the following impacts:

- on classroom practice—changes included such things as using “more adventurous teaching styles” and new materials and technology
- on colleagues' practice—teachers reported thinking differently about their teaching—an important step to school improvement—and were sharing “best practices”
- on personal practice—the impact was evident in teachers' increase in knowledge about classroom practice and school-wide processes, which enhanced teachers' professional identity

Collegiality, social capital, and trust are increased as staff work together, while the school's culture changes to being “learning enriched” (Rosenholtz, 1989) as its capacity for more and better development work increases. It is this aspect of teacher leadership that has the most potential to effect school improvement (Muijs & Harris, 2006). Teacher

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leaders also reflected on the impact of their leadership beyond the school, reporting that networking became a reality and parental involvement in student learning increased. Students are also impacted as their dispositions towards learning improve.

Teacher leaders in studies conducted by Harris and Muijs (2005); Muijs and Harris (2006); and Birky et al. (2006) reported being empowered and motivated. Their performance and level of job satisfaction had improved. Teachers were more committed, evidenced by lower levels of absenteeism and higher levels of teacher retention. Positive impacts on teachers' morale, self-efficacy, and agency were also evident (Frost & Durrant, 2003).

Senior management also benefited, as a larger bank of knowledge and ideas is created when teachers are involved in school development (Muijs & Harris, 2006). A spin-off effect is that teachers buy into change more easily as they feel a sense of ownership, having participated. There is also support for the principal who needs assistance to accomplish his/her increasing responsibilities (Camburn, Rowan, & Taylor, 2003, cited in Muijs & Harris, 2006). As schools function as learning communities where teacher leadership thrives, Frost and Durrant (2003b) notice other benefits—everyone has a voice and the freedom to reach their potential, and students become prepared for a democratic way of life.

Common knowledge suggests that not all schools benefit from teacher leadership in the ways identified here. Arguably, where the supporting conditions for teacher leadership are absent, toxic, or unhealthy, school cultures prevail. Such cultures likely entertain the erection of barriers to teacher leadership; however, this is not to suggest that healthy cultures are free from barriers or that toxic ones have no supporting conditions. More realistically, one can conceptualize schools existing along a continuum where the two opposite school cultures—healthy and unhealthy—are polarized, with barriers to teacher leadership existing to varying degrees. It is to these barriers that attention is now turned.

### **Barriers to Teacher Leadership**

Barriers to teacher leadership can be intrinsic to the teacher leader or context-specific. One internal obstacle is the tension created from taking on expanded responsibilities, resulting in concerns over work-life balance (Little, 2003; Reid et al., 2004). With respect to school conditions, the barriers may be many more. Aguirre (2002, cited in Little, 2003) identified the tension teachers may experience between professional autonomy and collective obligation, which may determine

the extent of collaboration and support that might be offered to teacher leaders or development work. Moreover, where teachers are apathetic, unwilling, or lack the confidence and experience to take on leadership responsibilities or support that of others, an unsupportive culture is created, which hinders the development of teacher leadership (Muijs & Harris, 2006). Also constituting a barrier to the development and maintenance of teacher leadership is a devaluing of the work and efforts of teacher leaders (Birky et al., 2006), as well as a lack of principal support, particularly where the head either refuses to relinquish control or demonstrates a passive form of support by not communicating adequately with teacher leaders or waiting for teachers to assert developmental work (Muijs & Harris, 2006). Other barriers to teacher leadership noted by Muijs and Harris (2006) include external accountability pressures, which may make the sharing of leadership more difficult and risky, especially in underperforming schools, and lack of internal coherency, which results in staff moving in different directions because the school's vision is not shared. Frost and Durrant (2002, 2003b) and Little (2003) also identify the latter.

Danielson (2007) recognizes yet another barrier to the emergence, development, and maintenance of teacher leadership in what she describes as the "tall poppy syndrome," an Australian expression meaning "those who stick their heads up risk being cut down to size" (p. 19). The tall poppy is the teacher leader who may be humiliated by other teachers. Fullan (1991) and Lieberman et al. (2000) also note this alienation of the teacher leader whose recognition, whether real or perceived, may aggravate some teachers. According to Anderson (2004), aggrieved teachers may see the teacher leader as the principal's pet and teacher leadership as having the potential to create hierarchies amongst teachers in terms of closeness to the principal, which can result in some teachers having no influence in decisions made in relation to the school. Fullan (1991) calls this a disruption in the egalitarian culture among teachers, which is punishable by alienation (Johnson & Donaldson, 2007; Katzenmeyer & Moller, 2001; Pugh & Zhao, 2003). A similar type of segregation among teachers was noted by Leithwood and Jantzi (1997, cited in Anderson, 2004), who argued that in some schools, formal leadership roles were actually used to exclude potential sources of teacher leadership, forming another barrier to the emergence and development of teacher leadership. Where such barriers exist, especially in proliferation, the benefits of teacher leadership may not be realized or sustained.

This overview of the conception of teacher leadership has looked at definitions of teacher leadership and has addressed questions as to who

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teacher leaders might be, looking at their qualities, roles, and responsibilities. The conditions, benefits, and barriers to the emergence, development, and maintenance of teacher leadership have also been discussed in this overview. An explanation of the approach used to analyse teacher leadership at one primary school in Trinidad and Tobago, using the overview of teacher leadership, follows.

### **Approach**

As this analysis is not done on data from a formal research study, the *approach*, rather than *methodology*, used to draw attention to the possible existence of teacher leadership in the Trinidad and Tobago (T&T) school context is gleaned from the author's reflection on being a teacher at Savannah Primary. Some would argue that it is a rather unconventional approach. Notwithstanding, this approach, which gauges those reflections of teacher leadership using existing conceptions of the phenomenon, produces valuable knowledge on the practice, potential benefits, support, and barriers of teacher leadership in that school, which may provide the impetus for future research into the phenomenon within the T&T context.

In order to assess the practice of teacher leadership at Savannah Primary, four teacher-leadership episodes, featuring teacher leaders for whom pseudonyms have been used, are presented and discussed. In selecting the word *episode*, I wish to show that not only are the accounts related, but that they together form part of a larger narrative that is the life of the school. The literature on teacher leadership, largely drawn from the UK and US where the concept is more widely known, was used to analyse the school's response to this type of leadership sharing. The supports and barriers to teacher leadership at the school are then presented as driving and restraining forces in a force field chart, which provides a graphic summary of the analysis. A brief description of Savannah Primary is now presented.

### **Savannah Primary: A Brief Description**

Savannah Primary, a pseudonym for a co-educational, government primary school in Trinidad, serves a socially and economically disadvantaged community. It has a history of high staff turnover, but within the last few years has managed to retain a stable staff. Savannah Primary has had three principals and two acting principals over its 15 years of existence. Apart from the vice-principal, there are 22 teachers on

staff, including two heads of departments. The student population, which has been dropping steadily, is 438 students presently.

Savannah Primary is renowned for its outstanding performances at cultural and sporting events. However, though it has seen some academic improvement, it remains under “academic watch,” as approximately 75% of students writing the national tests either nearly meet the standards or fall well below them.

At Savannah Primary, lead teachers take on a variety of roles and responsibilities, which include:

- meeting with colleagues to examine the reasons for pupil underperformance
- analysing test data
- designing and running an after-school programme for parents to help them assist their children with reading
- mentoring teacher trainees
- representing the school in a visionary exercise to improve schooling in the district
- creating the school’s development plan
- participating in decision making
- assisting in performance evaluation of teachers

Some of these bear resemblance to the work of teacher leaders in the USA, UK, and elsewhere. As mentioned earlier, four episodes of the work of teacher leaders at Savannah Primary have been analysed to appreciate what teacher leadership looks like in this school, and to identify the conditions that support and/or hinder its emergence, development, and maintenance. The presentation and discussion of these episodes follow.

### **Teacher Leadership at Savannah Primary: Conditions That Facilitate and/or Hinder Its Emergence and Maintenance**

For analysis, four episodes from the school are presented and discussed.

**Episode 1: The Reading Programme**

The Reading programme was developed by a group of three teachers, each having between 10 and 15 years of teaching experience, including experience in reading remediation. They had volunteered to address the literacy problem at the school. After long hours spent, sometimes at lunch time and after school, researching for and designing the programme, the teachers had a final product that they shared with the staff. As the Reading programme was well received, the teachers soon got working on creating a Reading room. Many books, furniture, audio/visual equipment, and reading remediation software were sourced through donations, fundraising ventures, and the use of some school funds. The room was beautiful!

However, when it came to implementing the programme, problems arose—timetabling clashes, unwillingness on the part of senior teachers to allow their students to participate in the programme, and the two teachers who were asked to expand their classes to take the students of the “new reading remediation teacher” refused. Eventually, the implementation of the programme was discontinued and the room was left unused. The developers of the programme vowed never to get so involved again.

From the scenario in Episode 1, it appears that there was some principal support (Muijs & Harris, 2006), to the extent that teachers were allowed to innovate and resources were made available to them for this purpose. Some aspects of a supportive culture (Muijs & Harris, 2006) existed, such as the “intellectual sharing, collaborative planning and collegial work” (Johnson, 1990, p. 148) amongst the programme designers, which undoubtedly provided them with a sense of satisfaction (Johnson, 1990). Unfortunately, it was short-lived as colleagues did not appear to be supportive. The culture of teaching at the school (Johnson & Donaldson, 2007) seemed to undermine the teachers’ efforts, resulting in enthusiasm giving way to disappointment as teachers relinquished their leadership responsibilities. Little (2003) reports on teacher leaders even leaving their posts, schools, or teaching altogether after such disappointments.

There is also a “tension between professional autonomy and collective obligation,” as described by Aguirre (2002, cited in Little, 2003). Teachers, particularly senior teachers, prefer to “protect their autonomy” and “reinforce their seniority” (Johnson & Donaldson, 2007, pp. 10–11) rather than go along with everyone in accepting advice about

teaching from teacher leaders, whom they consider too young or inexperienced to function in such a capacity (Johnson & Donaldson, 2007).

There is also evidence in this episode of, according to Muijs and Harris (2006), a lack of structural support for the full institutionalization of this development work in the form of timetable clashes and, it seems, unclear communication about how the work was to affect other teachers. This, and the principal not doing more to have the programme running, may suggest her adoption of a “passive approach to teacher leadership” (Muijs & Harris, 2006, p. 971), where the principal in this episode didn’t communicate adequately with teachers or encourage the full implementation of the programme, thereby forming a barrier to teacher leadership. The barriers here also point to a lack of internal coherency, where the school’s vision seems not to be shared, and school members appear to value or prioritize school goals, such as improved literacy among students, in different ways.

Strong guidance and support from the principal was evident in Episode 2. Having recognized a need, the principal, acting as instructional leader, sought to improve the situation and did so by encouraging the professional development of the infant teachers. According to Muijs and Harris (2006), it is usually the head who initiates teacher leadership by actively encouraging teachers to take on leadership roles as seen in Episode 2. Frost and Durrant (2002, 2003b) make the same observation, adding that principals have the power and influence to provide both internal and external support in order to create the right conditions for the emergence and sustenance of teacher leadership, as is also seen in Episode 2. Birky et al. (2006) and Little (2003) corroborate this.

Episode 2 mentions the recognition of the work of one teacher by the principal. Birky et al. (2006); Frost and Durrant (2002a); Mangin (2007); and Muijs and Harris (2006) all attest to the strong motivating force that such recognition has in sustaining teacher leadership. However, some teacher leaders, upon receiving recognition or reward for their work, are faced with alienation from other teachers (Fullan, 1991; Lieberman et al., 2000) as punishment for upsetting the egalitarian culture among teachers (Johnson & Donaldson, 2007; Katzenmeyer & Moller, 2001; Pugh & Zhao, 2003) as observed in Episode 2. While this may dishearten some teachers, others, as reported in Frost and Durrant’s (2002) study, have found that without affirmation of their work, impact of the development work on the school is limited.

**Episode 2: A Master Teacher Shares Her Knowledge**

Mrs. Green, a teacher for more than 30 years, was recognized for her expertise in the teaching of reading and comprehension skills. She was particularly creative at producing resources that both pupils and teachers could use in these subject areas. As the acting principal, she was very much interested in what went on in classrooms and offered her assistance where needed. One day, she made the observation that the infant department seemed too regimented. She lamented that she heard no rhymes and singing coming from those rooms, which she noticed were not arranged or decorated in ways that were inviting to young children.

Concerned, she decided to informally and non-obtrusively (or so she thought) give ideas to improve the learning experience of both Year 1 and 2 infants. The result was that four out of the five infant teachers took her advice and had begun to see real improvements in their teaching and in student outcomes. In fact, one practising teacher for 7 years, Ms. Romany, was now doing so well that she was being innovative herself, and Mrs. Green decided to show her room as a “model infant classroom” to staff. This teacher became quite unpopular with other teachers in the department.

Unfortunately, Episode 2 also notes the unpopular position in which the teacher leader was placed, reflecting the possible existence of the “tall poppy syndrome” (Danielson, 2007, p. 19), as teachers felt the need to “cut down the tall poppy.” Anderson (2004) reasons that such a situation has the potential to create hierarchies amongst teachers based on closeness to the principal. One district in the 1980s, as reported by Little (2003), sought to rid itself of such a problem by eliminating the formal post of Head of Department. How effective the move was is not discussed.

One identifiable, supporting condition for teacher leadership from Episode 3 is a “commitment to data richness” (Muijs & Harris, 2006, p. 967), which is used to inform teaching and learning. However, Muijs and Harris (2006) only make mention of collecting data. Surely, data richness also involves processing, analysing, and reporting on or representing that data in a more useful manner. However, as observed in Episode 1 about the Reading programme, the school—teachers and pupils—did not benefit from the development work of the teacher leaders. It is quite possible that this development work, which saw the involvement of school stakeholders in the creation of a shared vision, acknowledgement

and identification of its strengths and weaknesses, and the devising of an action plan towards improvement, would have begun to reap the benefits of teacher leadership for the school. Evidence of the development of a healthy culture was evident in the collaboration and the attempts at promoting internal coherence through the development plan; however, the creation of this plan seemed to be an end in itself rather than a means to school improvement.

**Episode 3: School Development Planning**

As part of its accountability to the Ministry of Education, Savannah Primary had to submit a comprehensive school development plan. The head of the Data Committee at the school, Ms. David, a teacher for 12 years, was at the time, with her team, analysing three years' national test data and two years Secondary Entrance Assessment (SEA) examination results, when she was asked if she would lead the creation of the development plan. She willingly accepted, though the deadline clashed with other important school events.

The plan had to include a school profile, SWOT analysis, strategies for improvement, and an action plan. Ms. David got busy, creating questionnaires for teachers, parents, students, and ancillary staff. These were administered and her team analysed the findings and gave regular reports to staff. Meetings were held with teachers and parents to create a vision for the school and possible strategies for dealing with the challenges that were identified.

The project lasted four months during which Ms. David worked long hours, sacrificing parts of her personal life. However, at the end of it all, a nicely bound development plan was sent to the Ministry of Education and a copy was placed in the principal's office as evidence of a completed project.

One issue implicit in this episode is the teacher leader's struggle to satisfy the measures and deadline set by the Ministry of Education while juggling the demands of the school and her personal life. Teacher leaders in the studies of Little (2003) and Reid et al. (2004) had similar concerns, and also complained of being overworked and unable to find a work-life balance.

Episode 3 also tries to highlight what a great support Ms. David is to the principal. Johnson and Donaldson (2007) recognize that while this may be beneficial to the principal, and because teacher leaders' roles are

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seldom well defined, many teacher leaders end up spending much of their time as assistants in administration, rather than, they say, using their expertise to improve teaching and learning. Little (2003) defines this simply as a division of managerial labour. While this is quite possible, the relationship between the principal and teacher leader has been looked at from a different perspective—not one of administrator and personal assistant, but one in which there is “leadership reciprocity,” as proffered by Anderson (2004). Yet, this idea too has its limitations. Leadership reciprocity projects a mental picture of leadership influence being passed back and forth, like a ball, between principal and teacher leader. It is worthwhile to consider that when one has the ball, the other does not; also the one with the ball is free to do with it as he/she likes. What will the other be doing then? Again, consider what can happen if one of the two should drop the ball? Is leadership reciprocity a true conception of the relationship between principal and teacher leader? Investigations into the nature of this relationship may provide better understanding, and may even assist in identifying ways to improve those that are lacking.

Episode 4 draws attention to professional development at Savannah Primary. The provision of continuing professional development as a necessary condition for the empowerment of teachers and improvement of professional practice cannot be emphasized sufficiently. Muijs and Harris (2006) recognize that innovative forms of professional development are necessary for the emergence and maintenance of teacher leadership. In their study, teacher leaders worked together to find ways to upgrade their professional development activities. According to Episode 4, teachers tried two ways to do just that. The first, using the strengths of teachers at the school to develop other teachers in a form of internal professional development, though well intentioned, was prematurely aborted. Teachers appeared unwilling to conduct or participate in sessions, citing a number of reasons, which though not invalid in themselves, remain only excuses so as not to dive into the labour-intensive, intellectually-challenging work of improving teaching and learning.

The second strategy of inviting external help appeared to work. The school was benefiting. However, two or three sessions in one academic year can hardly make a significant impact, especially since deciding on the topic for professional development day is done in a similar fashion as the proverbial pulling numbers from a hat. This again points to the crucial issue surrounding teacher leadership development at the school—the lack of internal coherence of development work (Frost & Durrant, 2003b; Muijs & Harris, 2006). The school’s academic performance is so low that teachers are not sure where to begin and so they try this and try

that in search of solutions, with little attempt to align the work to the school's vision or prioritize. Teddlie and Reynolds (2000) maintain that coordinated improvement efforts are important for school effectiveness. It is also possible that teachers at Savannah Primary may lack confidence in taking on the teacher leadership responsibility of running professional development sessions, preferring that external personnel to the school be charged with this responsibility.

**Episode 4: In-House Professional Development**

As part of the move to improve student achievement, teachers agreed that there was need for continuing professional development. Ms. David, who was the head of the Data Committee, had voluntarily designed a needs analysis sheet and passed it around to all the teachers to identify their areas of strengths and those needing development as related to classroom teaching. Every teacher filled in the form. Ms. David liaised with the principal and teachers to categorize and match the areas of development with the teachers who identified them as strengths. It was decided that teachers would have a working lunch one day in each week, where some aspect of teaching would be addressed.

Only one session happened before the idea crashed. The reasons included the demands of teaching; preparation for tests; no support structures put in place, e.g., supervision of students at lunch time; and some teachers felt that they should have a choice in which sessions they attended.

However, the mandatory staff development day sessions, which occur once a term, were successful—teachers spoke of which strategies they were using in their classrooms from the sessions. The first was on team building and was conducted by a facilitator from a private agency. The second was on Creative Writing teaching and was conducted by teachers from another school.

An overview of the analysis of teacher leadership at Savannah Primary, which brings together the main issues, follows.

**Analysis of Teacher Leadership at Savannah Primary:  
Overview**

Determining the cogency of teacher leadership at Savannah Primary is not a simple exercise. The author recognizes, too, that this analysis has

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its limitations, as it is based on reflection rather than on an investigative study of the school; and so is subject to gaps in memory, some situational misinterpretations, and ignorance of certain facts. However, this analysis can serve as motivation for such a study in the future.

Though there are a number of supporting conditions, the emergence and sustenance of teacher leadership at the school are restrained by unrelenting barriers. There is need, then, to consider the strength of the effects of both supporting and debilitating conditions on teacher leadership at the school. Such a consideration is undertaken in Figure 1 using a technique proposed by Kurt Lewin in 1947 known as a force field analysis. Note that the supporting conditions are the driving forces, while barriers or issues surrounding teacher leadership are the restraining forces.

### **Supporting Conditions and Barriers to Teacher Leadership**

From the episodes discussed, a number of supporting conditions for teacher leadership at Savannah Primary can be identified, although they exist at varying strengths (see Figure 1). Its strongest driving forces are principal support, collective creativity, and teacher involvement. However, while these are important to teacher leadership development, other conditions appear to have a rather debilitating effect on the potential outcomes of teacher leadership at the school. These include the weak supportive culture and structures at the school, and a very weak commitment to innovative professional development. It is likely that the prevailing effect of teacher autonomy and the alienation that comes with the tall poppy syndrome serve as counterforces to a more supportive culture of teacher leadership. It seems also that principals, while being supportive of teacher leaders, are not very effective at influencing teachers' receptivity of teacher leaders, which is needed for teacher leadership to thrive, according to Mangin (2007). It appears from Figure 1 that the overall effect of the supporting conditions may be slightly stronger than that of the restraining forces. This may mean that an 'emergent' form of teacher leadership, according to Harris and Muijs (2005), exists at Savannah Primary. There is the presence of key conditions for teacher leadership to thrive, which may account for the improvement in the retention rate at the school within the last few years; but the principal and teachers are still learning to share leadership.

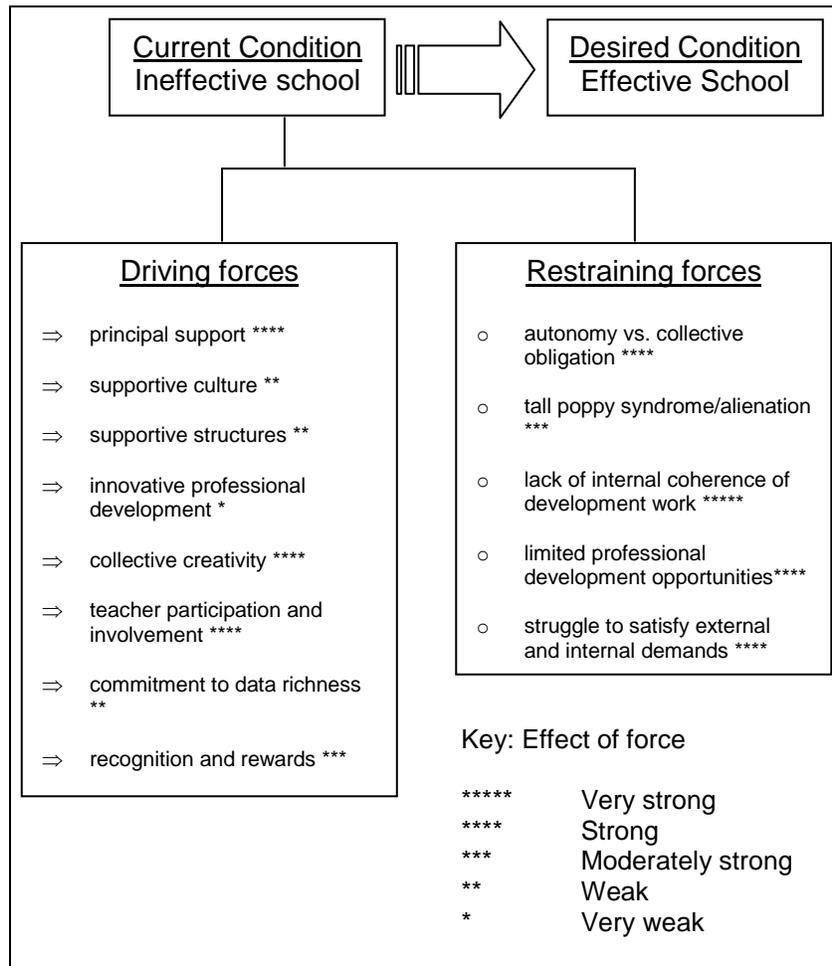


Figure 1. Force field analysis of teacher leadership at Savannah Primary.

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### **Teacher Leaders at Savannah Primary**

Another aspect of this analysis focuses on the teacher leaders themselves. The developers of the reading programme each had 10-15 years of teaching experience and expertise in reading remediation. Ms. David had been a teacher for 12 years and was versed in data processing and analysis, being the delegated head of the school's Data Committee; while Ms. Romany, the infant classroom designer, had been a teacher for 7 years. All these teacher leaders operated in informal capacities towards developing some aspect of the school by volunteering, taking on delegated tasks, or "emerging spontaneously" like Ms. Romany (Danielson, 2007, p. 16). In terms of their qualities, evident from their acceptance of responsibility for the development of the school, they all appeared to be optimistic about teaching and learning and school improvement; they were all talented and proficient in their subject content and were likely respected for their knowledge, at least by their principals and those that worked closely with them.

Interestingly, these teacher leaders at Savannah Primary are mainly teachers in the second stage of their teaching careers—4-10 years (Johnson & Donaldson, 2007), which coincides with professional life phases 4-7 years and 8-15 years conceived by Day & Gu (2007). Johnson and Donaldson (2007) have recognized that these teachers often find opportunities to lead attractive, as many of them want to share the expertise they have acquired. Day and Gu (2007, pp. 435–436) see a similar trend in teachers developing their professional identity, but they also capture that group of teachers, like Ms. David, who are trying to define their work-life balance. It is this committed, passionate action of teachers, which, as Frost and Durrant (2003b) remind us, leads to real, sustainable school improvement. However, at Savannah Primary, there seems to be little or no assessment or appreciation of the time, effort, and work of teacher leaders that is wasted. This disregard can possibly lower teacher leaders' commitment and morale, as was evident in Episode 1, the Reading programme.

### **Impact of Teacher Leadership**

Until the present time, the school has seen only small signs of improvement, which often are not sustained. The main reason may be because, according to Muijs and Harris (2006), teachers are moving in different directions, introducing strategies and initiatives that lack internal coherence—one of its significant barriers. Sammons, Hillman, and Mortimore (1995) refer to this as not having a high level of consistency in practice or coherence in values. Frost and Durrant (2003b,

p. 175), in agreement, explain that the “deeper shared understanding” that comes from “critical discourse among colleagues” is lacking, thereby creating few opportunities for the “examination and clarification of the values” to which the school should adhere. In other words, the school’s culture seems to tolerate contrived collaboration (Fullan & Hargreaves, 1996) rather than encourage true collaboration about teaching and learning, based on trust. The school needs to be ‘recultured’ (Fullan & Hargreaves, 1996). It is, consequently, the principal’s responsibility to ensure coherence among the various development works, as well as their alignment to the school’s vision and set priorities (Frost & Durrant, 2002, 2003b). Naturally, this is no easy feat, especially since principals’ support at Savannah Primary varies with each new principal; but it is still a worthwhile pursuit that will enhance the school’s effectiveness.

At Savannah Primary, there also seems to be a lack of continuity of beneficial development work because of teachers’ tendency to capitulate to “business as usual.” Should Savannah Primary gather and use evidence of the impact of its development work to transform the planning of future development work, according to Frost and Durrant (2003b), then realization would come that a colossal amount of time and energy is being wasted, and work that has the potential to improve pedagogy and student achievement is being neglected.

Unfortunately, in Trinidad and Tobago, there is little the school can do about unwilling, unsupportive teachers, besides helping them to see the benefits of teacher leadership, and even less can be done about external accountability measures. There are, consequently, two significant barriers to teacher leadership at Savannah Primary to “overcome”: limited professional development opportunities and the internal incoherence of development work. Savannah Primary will also need to strengthen the supporting conditions that exist at the school, in order to reach its goal of becoming an effective or successful school.

## **Conclusion**

In this paper, a teacher leader is considered as one who, whether formally or informally, works collegially while leading the improvement of professional practice and student learning in ways that are duly aligned to the school’s vision. The paper has presented an overview of teacher leaders and their leadership, and has analysed its presence (or lack thereof) at one underperforming primary school in Trinidad and Tobago. The lack of consensus about what exactly is teacher leadership has made its legitimacy within the leadership field difficult to pursue (Harris,

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2003b) and any meta-analyses hard to make (Harris, 2005). Though a number of benefits, such as increased teacher motivation, have been cited, the practice of teacher leadership is likely underexplored, even in countries where the concept is well known. However, where teacher leadership does exist, the extent to which it thrives, as seen in the analysis in this paper, is dependent on school conditions such as its culture, principal support, commitment to continuing professional development, and internal coherence of development work through vision creation and alignment. Also noted is the responsibility of the principal in ensuring these conditions at the school. This analysis showed Savannah Primary to have an emergent form of teacher leadership, where some supporting conditions, such as principal support, were present alongside counterforces or barriers that did not allow for its benefits to be fully realized. An interesting and important area for research would be an investigation of what intervention or mediation strategies are used by principals, and even teacher leaders, towards demolishing barriers to teacher leadership. An equally informative area of research would investigate the exercise of teacher leadership in successful schools, particularly in Trinidad and Tobago, so that best practices would be gleaned.

In addition, based on this analysis, there may be need to re-examine and reconceptualize teachers' professional preparation and development to include not only the development of leadership skills, as suggested by Reid et al. (2004), but also "opportunities for systematic [and collaborative] reflection on their teaching practices, beliefs, values and contexts" (Day, 1998, p. 268). Surprisingly, the literature is somewhat deficient on research of teacher leaders' development. In the absence of such programmes, the responsibility to develop teacher leaders belongs to principals—a responsibility dutifully fulfilled by successful school leaders. Rather than leaving this to chance, according to Mangin (2007), principal preparation programmes that provide information about the purpose of teacher leadership and on the principals' relationship to the role would likely improve the situation at schools. Nonetheless, the reality is that potential teacher leaders are in schools everywhere; although they may be invisible or under-appreciated. It is the remit of principals and other school leaders to become aware of the untapped leadership potential that lies within teachers, and to develop and use these for the benefit of their schools and students.

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## **TEACHER LEARNING IN AN ONLINE SOCIAL NETWORKING WEBSITE<sup>1</sup>**

*Vimala Kamalodeen*

This study was designed to explore teacher learning using an online intervention with in-service secondary teachers in Trinidad and Tobago. It has been argued that traditional teachers' professional development practices do not adequately meet the needs of today's practitioners and that new models of teacher learning need to be explored for in-service teachers. In addition, non-traditional learning spaces such as social networking sites are being currently debated for their use in education. In this paper, an online social networking site is considered as an alternative learning space, which is mediated through Web 2.0 tools and the Internet. Social constructivism provides a framework to understand teachers' participation on the site as they interact with colleagues and add content to the site. Data were collected directly from the site and analysed using a mixture of methods. Data consisted of digital text and mixed media such as pictures, videos, and hyperlinks. Findings indicated that teachers participated in activities across space and time, and preferred certain activities over others. They shared knowledge and opinions of their classrooms and schools, reflected on their practice, and connected with new people. Learning is concluded to have taken place through participation on the site. This study provides an avenue for further research on how teachers can experience a shift from traditional professional development.

### **Introduction**

Teachers have been expressing dissatisfaction with the way professional development has been made available to them. Professional development is viewed as a means of assisting teachers in acquiring skills and expertise in content, pedagogy, and technology. In Trinidad and Tobago, many of these programmes are government-initiated and are meant to fill gaps in teacher expertise, but are often unpopular with teachers as they are felt to be "not of high quality" (Borko, 2004, p. 3), "episodic, myopic

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... and disconnected from the realities of classrooms” (Darling-Hammond, Wei, Andree, Richardson, & Orphanos, 2009, p. 2). Teachers are faced with a number of demands from politicians, administrators, students, and the community at large. Changing curricula and high-stakes assessments, more diverse school populations, and the introduction of new technologies and tools have impacted teachers’ practice. Teachers often become frustrated with professional development because it is ineffectual or requires large investments of time they do not have (Dede, Ketelhut, Whitehouse, Breit, & McCloskey, 2009).

Teachers often face challenges within their schools while attempting to implement new methods and techniques that they may have acquired at workshops/seminars. Secondary schools in Trinidad and Tobago are not designed for collaboration as classrooms can be far apart and teachers’ staff rooms are inadequately resourced. The literature reveals a persistent problem of teachers’ classrooms being off-limits to their colleagues, which disadvantages them from learning from one another (Darling-Hammond, et al., 2009; Lieberman & Mace, 2010). This denies them the opportunity to work collaboratively either through observation or research, or team-teaching. Additionally, teachers may suffer from a lack of administrative support in implementing new techniques. This often leads to teacher isolation and a further reluctance to learn new pedagogies and approaches. This points to a need to explore alternatives to the ways teachers experience learning in practice and to minimize their isolation from each other.

### **Teacher Learning**

The idea that teaching is a learning profession (Darling-Hammond et al., 2009) engages a substantial body of literature, and researchers distinguish between the concepts of professional development and professional learning. Recently, newer, more complex and broad-based ways of looking at teachers’ learning have emerged over observations of “discrete” activities like workshops and seminars (Desimone, 2009). Bruce, Esmonde, Ross, Dookie, and Beatty (2010) propose that in professional learning, “professionals learn from experience and that learning is ongoing through active engagement in practice” (p. 1599). Desimone asserts that the most difficult part of teacher professional development to measure is teacher learning; however, she argues for more appropriate ways of measuring teacher knowledge change, and proposes that recent research in the field has allowed a conceptual framework for teacher learning to emerge and should be used without bias. Research on teacher learning includes that of teacher education and

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professional development, and also what is learnt from informal interactions with colleagues and daily classroom practice (Feiman-Nemser, 2008; Vermunt & Endedijk, 2011). Moving from formal settings for professional development to teachers' informal interactions that take place in a workplace context, such as corridors and lunch rooms, as teachers engage in their daily practice, has motivated researchers to examine how learning can take place in informal settings (Borko, 2004; Opfer & Pedder, 2011).

Research into teacher learning is not as well developed as that of student learning (Vermunt & Endedijk, 2011), and a number of researchers suggest the need to study it within multiple contexts, such as in the workplace (Eraut, 2004), and through different lenses (Borko, 2004; Desimone, 2009; Lawless & Pelligrino, 2007; Opfer & Pedder, 2011; Vermunt & Endedijk, 2011). Borko suggests that teacher learning needs to be studied taking into account "both the individual teacher-learners and the social systems in which they are participants" (p. 4), while Vermunt and Endedijk conducted empirical research into models of patterns in teacher learning, and found that teacher-learning patterns are directly related to both personal (personality characteristics, personal experience in teaching and learning, and gender) and contextual factors. These authors suggest that the most direct factor in teacher learning is the learning environment. For in-service teachers, the learning environment includes the social environment (fellow teachers and students); the type of intervention used (such as peer coaching, informal learning, collaboration); and the wider school climate (in terms of openness to innovation) (Vermunt & Endedijk, 2011).

Opfer and Pedder (2011), in their review of literature on teacher learning, also identified the role of the learning activity (or process) as important as that of school factors and individual teacher characteristics. They used a complexity theory lens to study the interrelations among factors in teacher learning, and critiqued the linearity and discreteness of other approaches to studying teacher learning. In a longitudinal study of secondary school teacher learning at their workplace (schools), Bakkenes, Vermunt, and Wubbels (2010) adopt a definition of teacher learning as an active process in which teachers engage in activities that lead to a change in knowledge and beliefs (cognition) and/or teaching practices (behaviour) (p. 538).

Although research is still inconclusive about the impact of individual or collective factors in teacher learning, there is agreement that teacher professional learning represents an important, but "subtle," shift in how we perceive professional education and professional development of teachers (Feiman-Nemser, 2008).

### **Online Social Networking Sites**

Social networks such as Facebook, Twitter, and YouTube have traditionally been associated with young people's desire to make their social relationships public and visible (Greenhow, Robelia, & Hughes, 2009), but have been transitioning into other areas of life such as education (Roblyer, McDaniel, Webb, Herman, & Witty, 2010). The combination of synchronous and asynchronous Web 2.0 tools, such as blogs, wikis, and chats, embedded on a social networking site (SNS) presents users with mechanisms to be connected to each other while supporting individual thoughts and actions and goals, even while being geographically dispersed. Learning in this context is less formal and structured (Dede, 2008), and as such can provide educators with the tools necessary to promote such an environment (Lockyer, Dawson, & Heathcote, 2010).

Teacher SNSs have been gaining ground in popularity in education, and *Global Educators for All*, *Teachers' Network*, and *Caribbean Educators Networks* provide live models of how SNSs can be used to engage teachers across large geographical spaces and educational contexts. These SNSs are somewhat different to popular SNSs like Facebook and Twitter as they allow a high degree of customization, and educational SNSs have been launched on platforms such as *Ning.com* and *Spruz.com*. This higher degree of customization is favoured in education while still maximizing the potential for connectivity and data sharing that SNSs are known for (Brady, Holcomb, & Smith, 2010). Teachers in Trinidad and Tobago who join these large-scale networks can interact with others from abroad and engage in a number of global issues, but they do not adequately allow for conversations about topical issues or provide for local teachers to connect more closely with each other. Further, there is a need for teachers here to engage with and through local contexts, as much of what is shared has to be adapted for local use and interpretation. This builds the case for an indigenous SNS, which caters to teachers of Trinidad and Tobago (and the wider Caribbean), to share and access culturally relevant resources and form local networks for teaching and learning support.

### **Theoretical Underpinnings**

It has been argued that conventional theories of behaviourism, cognitivism, and constructivism were designed at a time when it was inconceivable for learners of diverse backgrounds, races, and geography to participate in the same learning space (Siemens, 2005). Theories of social and online learning are important to understanding how learning was constructed in an informal and non-traditional space. Social learning theory proposes that individuals learn by observing the actions of others and the consequences of those actions. Constructivist theorists claim that learners interpret the world according to their personal reality, and that learning takes place based upon prior knowledge and experiences (Ally, 2008). The constructivist approach is based on ideas developed by educational philosophers such as Dewey; renowned educational psychologists such as Vygotsky, Bruner, and Piaget; and educational technology visionaries such as Papert. As such, social constructivism provided a framework for teacher participation on this SNS.

### **Frameworks for Understanding SNS**

In gaining an understanding of what learning on an SNS can be, participation seems to be of significance. Lave and Wenger (1991) describe learning as meaningful participation in learning activities, while Davies and Merchant (2009) do not describe online social spaces in terms of community, but draw upon Gee's (2004) ideas of affinity spaces and Bhaba's (1990) Third space to describe learning as easy and enabled through interactions among members. These accounts favour the importance of social interaction. Since participation is significant to learning and social interactions are important to learning, then socio-constructivism is a useful framework to explore how learning can take place on an SNS. Conole, Galley, and Culver (2011) argue that Web 2.0 tools allow for a shift from individualized learning through affordances of communication and collaboration, and suggest that learning is a social and participatory practice. Merchant (2009) also describes learning as social participation, where participants interact in an online space and build a participatory culture. Through designed activities, participants can construct new meanings from prior knowledge. A stated assumption here is that learning is considered across formal and informal learning spaces.

This literature suggests that SNSs can be useful in education and that learning is possible in non-traditional and informal ways. This paper reports on how secondary teachers participated in a designed SNS, and

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whether learning took place as a result of that participation. Specifically the study focused on answering these research questions:

1. *How did teachers participate in designed activities on the SNS?*
2. *What change in teacher learning, if any, took place as a result of participation in this SNS?*

## **Methodology**

### **Design**

A designed research study was used to answer the research questions about participation in online social networks with in-service secondary teachers. Design research is a form of action research that allows research using emerging media to be explored (Dede et al., 2009). This method was considered since there is a dearth of literature on appropriate and robust designs for research on learning in online spaces. While one can argue that teacher learning in face-to-face environments is well-researched, there is a need for caution in assuming variables and considerations are the same in online environments. A site was designed and hosted on *spruz.com*, since the cost was minimal and it allowed a range of Web 2.0 tools to be embedded. These were blogs, wikis, discussion forums, media (photo and video) sharing, file download and upload, online chats, user profiles, and building and customization of personal networks. Moreover, the site facilitated levels of privacy and customization needed to become an educational space for teachers.

### **Participants**

Teacher participants in this study were volunteers who demonstrated interest and competence in technology tools. Thirty-six participants were purposively sampled from all seven geographic districts in Trinidad. No teachers from Tobago participated even though they were sent invitations. There was a fair spread across all curricular areas, with Technology Education/Information Technology specializations being more common than others. There was a balance between male and female participants. Ages ranged from mid-20s to early 50s.

### **Data Collection**

A significant challenge to this research was that the data in this study were generated in the web and through the web. The field of Internet research is still a “shifting ground” (Baym & Markham, 2009) and research studies are not yet conclusive about choice of methods. Data were collected through the Internet and from the Internet, for a period of

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four months crossing the third term of the academic year. In this study, data were captured automatically on the website itself as digital talk and digitally created texts. The website is a repository of data reflecting conversations and connections among participants. Artifacts on the website include “naturally occurring talk” created by participation in activities such as blogs, wikis, and forums. Visual images uploaded by participants such as videos, photos, and hyperlinks are included. Some of these images are of the participants themselves or of their students, while others are not. Images of participants or their students can be useful to gain insights into participants’ practice. Moreover, a history of participation was automatically created through postings that provide data on the name of the poster, date posted, and the selected Web 2.0 tool. User-created profiles, login history, e-mails, participation in online courses, and opinions on polls were also generated on the site. As participants were free to engage in different activities on the website and to select Web tools of their choice, capturing data on the selection of these choices and the nature of the discourse among participants are important to this study, as these choices indicated how participants saw themselves and others on the website.

#### **Data Analysis**

In attempting to develop a model for analysing the data in this study, I decided to combine both qualitative and quantitative approaches according to the type of data analysis needed. While there is ongoing debate about the epistemological challenges in mixing methods in studying human behaviours and practices, analysing and interpreting data on social networking websites requires lenses that are non-traditional, as describing data from the website is problematic in itself, as data is in a state of flux and websites are not time or space bound. Webpages contain data that are captured live on the site as participants make multi-modal contributions to the site. In his description of social research methods, Bryman (2008) cites only two examples of analysis of websites: one using narrative analysis—a qualitative approach—and the other a quantitative approach. Bryman acknowledges that analysis of websites and webpages is a “new field that is very much in flux” (p. 629) and that new approaches are being developed at a rapid rate. Data in this study required a bricolage (Denzin & Lincoln, 2005) of approaches, which depended on the phenomenon that the researcher was interrogating in order to interpret and synthesize data (Kincheloe, 2001). A mixture of analytical techniques, including social network analysis and discourse analysis, was selected for use.

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### **Limitations of the Study**

This study was predicated on teachers' participation on the SNS and was limited to their technical familiarity with the tools therein. Also, for those teachers who were familiar with SNSs, there was an expectation that the site would more closely resemble popular social networks like Facebook. Further, the design of the SNS could have had limited participation in terms of its usability, and in fact may have caused anxiety among participants who may have been unfamiliar with SNSs and Web 2.0 tools. In addition, teachers were limited in accessing the site due to constraints of time, Internet access, and computer access. Attrition also took place over time and the number of participants varied across the period of the study. This would have directly affected participation and resulting discourses on the SNS. Finally, there are relatively few models of good practice to draw upon, and existing frameworks for examining learning on SNSs are inadequate for a nebulous cyberspace.

### **Findings**

The findings are aligned to the two research questions posed earlier. For the first question, an analysis of participation in designed activities enabled by different Web 2.0 tools is presented. For the question on teacher learning, analysis of artifacts of learning, such as the content generated by participants, is presented through coded themes. These themes are aligned to changes in teacher knowledge, beliefs, and attitudes—the essential components of teacher learning (Bakkenes et al., 2010).

#### **RQ1: Teachers' Participation in Site Activities**

The site allowed a number of activities for teachers to select for participation, afforded through various Web 2.0 tools embedded on the site. The findings are presented by looking at how participation took place and what it looked like in both synchronous and asynchronous activities. A sample of discussions is presented under selected activities. Artifacts of learning that are held on the site are selected for presentation and analysis.

*Participation took place on the site regardless of geography/location.* Participants came from all educational districts in Trinidad, with slightly more teachers from urban schools. They used mobile and desktop technologies to access the site directly or indirectly through a search. From analysing participant data, teachers seemed to access the site more regularly from home than at school.

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***Participation took place across time.*** Teachers visited the site at all times, but night visits seemed more popular. Teachers also visited the site differently over the duration of the study, and also varied the number of times they visited and how long they spent on it. Teachers preferred to visit the site during non-school hours and there was no particular day of the week that was preferred, except that the number of visits to the site increased significantly during a public holiday during the term. Teachers had greater participation during the school term than during the vacation period.

***Participation took place through the affordances of various asynchronous and synchronous Web 2.0 tools.*** The site allowed teachers to select activities for participation, afforded through various embedded Web 2.0 tools. Asynchronous activities included media sharing of lesson plan files, videos, photos; blogs; discussion forums; creating a user profile; adding colleagues; emails; signing on to an online course; and taking opinion polls. Synchronous activities are wikis, online chat, and Google docs; the last being facilitated offsite. Affordances varied significantly by activity. Blogs, media sharing, forums, and online chats brought a range of affordances to the participant. Blogs, discussion forums, and media-sharing activities are selected for further analysis.

#### **Activity: Blog posting**

A number of blog posts were created, including:

- *Experimenting with PPT*
- *My first Google docs document*
- *Information technology and me*
- *Configure your laptop*
- *My students and me – why oh why do they make these mistakes?*
- *How do you give feedback to your students?*
- *Using ppt as an interactive learning tool*
- *TTUTA's protest actions*
- *Collaborative classroom lessons*
- *CXC, CAPE Pure Math unit 2 p2 fiasco*
- *Technology integration is not about technology*
- *Introductions*

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In a selected example, LD [Pseudonyms are used to ensure anonymity] posted a blog entitled “*My first google docs document*” and introduced her thoughts. There were a number of views of this post. In the introductory paragraph, LD talked about a plan she has for her Form Ones, which indicates she is reflecting on her practice. In the second paragraph, she explored her plan and continued to reflect on her practice:

*Last night I started working on a Music Project I have had in mind for my Form Ones. (I think I will try it with the Form Twos for the new school year as they should all be more familiar with their laptops.)*

*I plan to give each child a printed copy of the interview questionnaire, however the project must be submitted online. The idea is that even if they do not have internet access at home they would use the school library computer to submit project. (I know this will take a lot of work on my part making sure the projects are actually done, I am looking forward to the challenge.)*

In the third paragraph, LD shared an opinion on Google Docs, then proceeded to share details of the plan with a hyperlink. Thus she was sharing a piece of knowledge that she had on the topic:

*I was looking at all the different things you can do with Google Docs and was particularly interested in the fact that it enabled me to do a template for an interview idea I have had for a while. What I particularly like is that Google Docs can do a summary of all projects submitted.*

*The Proposed Project: To interview a grandparent, parent or guardian about the type of music they listened to when they were your age.*

*Please follow the link to view proposed Project Questionnaire*

*[https://spreadsheets.google.com/spreadsheet/viewform?hl=en\\_US&formkey=dG0yck9rMzVUQlZiQ1ZPNU5Ed05CZHc6MQ#gid=0](https://spreadsheets.google.com/spreadsheet/viewform?hl=en_US&formkey=dG0yck9rMzVUQlZiQ1ZPNU5Ed05CZHc6MQ#gid=0)*

She concluded the post by saying ‘*I welcome your comments,*’ which suggests that she was actively seeking the opinions of her colleagues. In the posted comment, YEMS started off using “*I think this is a great idea!...*”, indicating her willingness to give LD emotional support for her post. She continued the post by giving her opinion on LD’s plan.

**Activity: Discussion forum post and response**

The forum is different from a blog tool as it allowed a number of queries/comments to be posted to a moderator for that section under pre-created categories. The forum page has a Curriculum, Technology, and Pedagogy category, with a moderator for each section. Discussion forums were set up under different curricular areas: Mathematics, Spanish, VAPA, and so on. Participants created forum topics under different curricular areas, such as:

- *The New Interactive Math Classroom*
- *Link to Spanish websites*
- *Go Animate*
- *Steelpan website*
- *VAPA curriculum*
- *Internet Access for Form 1 students*

A new topic was started under Mathematics about an interactive Math classroom. The forum allowed the participants to ‘talk’ with others on the topic of concern or respond to contributions. The question posed was “*Do your classrooms look like this?* <hyperlink given to video>. One response from a teacher, RR, indicated that she had looked at the video and gave a response. This response was in the context of her classroom experience. She reflected on her own practice and shared her opinion based on what she had experienced in the video:

*Not yet but as the first formers move up into third form with their laptops, I can foresee classrooms eventually looking like this one. Teachers & principals have to come on board and be more conducive to this kind of approach. In staff meetings, I would hear principals commending teachers that have their classrooms nice and quiet rather than like the one mentioned in the article.*

Forums also allowed for answers to questions. In the forum topic of “Technology,” ST asked:

*Anyone experiencing issues with their IT Technician? What exactly is their job description? An IT Technician who says his job is not to tote and carry equipment or set it up for teachers...is this true?*

There were two replies to this, which gave some sort of clarity on the question being asked. AN replied:

*The IT technician at our school seems willing to do whatever he is*

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*capable of to help. He and his assistant set up equipment before classes and return to remove the equipment-which is under their custody so it's only right that they take charge of it. We have many technical problems at our school but at least the technicians are easily approachable.*

MSW added:

*Well the IT technician at our school is always willing to assist and quite approachable. In fact, sometimes we share him with another school in the area as they are without a technician. So too, I have noticed that the Form One students and parents have gravitated to him with their numerous computer concerns. I personally do not know the job description of the IT technician but I usually set up my equipment with the assistance of the technician, if need be. However, I have seen him setting up equipment for teachers who were not in the know.*

The discussion forum allowed for teachers to express concerns, connect with colleagues, and share information that was previously unknown.

#### **Activity: Media sharing — photos and videos**

Photos and videos were uploaded, which were teacher-made materials or samples of student class activity. In this example, YH uploaded a photo of her students doing a class activity entitled “Students working on a Geography lesson on the Form 1 laptops.” It was photo 3 out of 4 of a collection called “Students PBL work.” While YH did not add comments to the photo initially, this form of digital text conveys messages that can be analysed. The photo showed students engaged in a project using a pair and share strategy, and the site allowed the contributor to share what she was doing in her classroom as she reflected on her practice as well. It can be interpreted as a way of showcasing her classroom work and connecting with her colleagues.

Additionally, DH uploaded a Powerpoint on “Problem Solving in Information Technology,” and wanted to share this with other colleagues:

*Be kind, the sound is a little off on the timing and some of the slides and text change a bit too fast but hopefully the more creative of you out there will appreciate the idea and come up with some better examples. Feedback is welcome.*

This contribution demonstrated DH’s willingness to share his classroom work with colleagues and solicit feedback. Thus the site provided an avenue for that sharing and request.

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**Activity: Online chat**

Online chats allowed for real-time conversations about topics of interest to participants. In this example, YH is having a conversation with me about a strategy that she wishes to try in an effort to assist a student with learning difficulties:

*6:22 PM YH: OK well..I am going to work on an article for the wiki, called making connections*

*6:23 PM YH: I realised one of my students that is his problem he has difficulty making connections so I have to design an entire set of worksheets now specific to his problem*

*6:25 PM Me: between topic areas?*

*6:26 PM YH: yes but in general between text*

*6:28 PM Me: so he is not integrating content?*

In another chat between Yems and myself, a conversation on lesson planning took place:

*[21:24] yems7218: ah! yes the follow up to the lesson*

*[21:24] Me: and adaptation for slow learners*

*[21:24] Me: then assessment*

*[21:25] yems7218: ah extensions i understand*

*[21:25] Me: actually the extension is not only for follow up it is for the students who finish the act*

*[21:25] yems7218: yes i iunderstand*

*[22:09] yems7218: i mean planning on the whole is not popular in schools*

*[22:10] yems7218: written lesson plans that is*

*[22:10] yems7218: lol*

*[22:10] yems7218: indeed*

*[22:10] yems7218: but in general i think the move to planning is increasing*

*[22:10] yems7218: so yes, it will be used, just will take time.*

*[22:11] yems7218: hmmm.*

*[22:12] yems7218: the problem is*

*[22:12] yems7218: that the union and the ministry are still arguing over terms like*

*[22:12] yems7218: 'lesson notes' and 'lesson plans'*

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*[22:12] yems7218: so at some schools, HODS follow the principal mandates to submit lesson plans*

*[22:12] yems7218: at others they don't*

It is also significant to note that this chat took place between 2100 and 2200 hours (that is 9 and 10 pm at night). This further shows that the site allowed for participation across time and space. Unfortunately, a large number of chats did not take place due to drops in Internet connectivity.

In summary, teachers participated over time and in a number of different activities on the SNS, enabled by Web 2.0 tools. Through participation, teachers interacted with each other and with me, and shared in a number of discourses. Artifacts of learning are held on the site and were produced by all participants on the site over the duration of the study. Blogs, discussion forums, and media-sharing were favoured activities, and a range of artifacts were seen, including videos, photos, and hyperlinks. From the content shared and the discourses, participants appeared to engage in knowledge sharing, opinion sharing, reflection on practice, willingness to explore new ideas, and making connections with other teachers.

## **RQ2: Learning Through Site Participation**

In order to explore this research question, themes from the previous section were collated and analysed. Analysis of participation in these activities suggests that a number of connections with colleagues were made as teachers interacted with each other. Knowledge exchanges took place, as well as sharing of opinions related to practice. Through site participation, emotional support was also sought and shared. In summary, participation in site activities afforded participants opportunities for (a) knowledge/opinion sharing, (b) exploring new ideas, and (c) reflection on classroom practice.

**Knowledge/Opinion sharing.** One of the recurring observations in teachers' discourse in activities such as blogs, wikis, discussion forums, chats, and media sharing is knowledge sharing. The participant shares something that he/she already knows on a certain topic. The participant adds content to the site by sharing this knowledge and contributes actively to site content. The knowledge was either a pedagogical strategy such as '*using laptops in pair and share activity*' or '*using Google docs as a template.*' Knowledge of content and pedagogy was shared in textual as well as in non-textual forms such as photos and hyperlinks. A number of activities simultaneously allowed knowledge exchanges among participants, and there were a number of examples where

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participants were seeking knowledge of some kind. Those wanting to learn something new did so by enrolling in an online course, or by asking questions on a blog or forum post. Questions were also asked in online chats. Included in knowledge sharing is the sharing of opinions such as “*I think the move to (lesson) planning is increasing.*” These findings indicate that both content knowledge and opinions were sought by participants, either when they shared a new idea or information they had or when they wanted feedback from colleagues. Sometimes participants wanted a specific answer to a posed question on technology use, or responses by colleagues on similarity of experiences with other teachers and schools. It seems that the idea of reciprocity (Hew & Hara, 2007) facilitates exchanges of knowledge, especially in conversations where there is a post, a response, then another response. This is particularly highlighted by the topic in the technology forum. So knowledge-sharing often took place together with knowledge-seeking (Phang, Kankanhalli, & Sabherwal, 2009). As such, teachers were learning by receiving information that was previously unknown.

**Exploring new ideas.** A number of postings seem to indicate that the teacher was exploring a new idea and seemed to be aimed at improving classroom practice. Participants were *thinking out loud* as it were, and sometimes they sought advice and opinions from colleagues. In this example, LD comments: “*The idea is that even if they do not have internet access at home they would use the school library computer to submit project.*” Another comment showing that the teacher was thinking of the future was: “*I can foresee classrooms eventually looking like this one*” after looking at a video on the site. This is a key to assessing whether or not learning took place, as it indicated that teachers were considering new ideas which could have influenced their attitude towards the problem at hand.

**Reflection on practice.** There were a few posts where teachers offered comments that were reflective of their classroom practice. These were facilitated through discussions in blogs, forums, online chats, and in media sharing. Two examples are selected to illustrate that the teacher was thinking about his/her classroom practice. For example, YH said in an online chat:

*I realised one of my students that is his problem he has difficulty making connections so I have to design an entire set of worksheets now specific to his problem.*

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In a discussion post, DH said:

*the sound is a little off on the timing and some of the slides and text change a bit too fast but hopefully the more creative of you out there will appreciate the idea and come up with some better examples.*

Further, reflection on school-wide practice was also evident when Yems spoke about the reality of lesson plans:

*so at some schools, HODS follow the principal mandates to submit lesson plans at others they don't.*

Findings in this section suggest that forums (Borko, Whitcomb, & Liston, 2009); online chats (Loving, Schroeder, Kang, Shimek, & Herbert, 2007); and discussions in media-sharing tools can allow similar affordances to blogs, which are well-known for promoting reflective practice (Deng & Yuen, 2011; Ray, Hocutt, & Patterson, 2005). Yet, I did not find extensive evidence of reflection on these blogs, even though teachers had time to reflect on what the issue was about. A number of tools did facilitate interactions through posting and responding along a topic of professional interest. Participants seemed to have some latitude in selecting a topic and revealing what and how they were feeling and thinking.

In order to examine learning, the definition provided by Bakkenes et. al. (2010) is useful. Themes from participant discourses in activities were analysed for changes in knowledge and beliefs, and/or teaching practices. Table 1 is used to demonstrate instances where teacher learning may be interpreted to have taken place.

**Table 1. Themes From Participant Discourses and Evidence of Learning**

<b>Themes</b>	<b>Examples</b>	<b>Teacher Learning</b>
<b>Knowledge/ Opinion Sharing</b>	I am uploading a photo of my students using laptops in a Geography class. The lesson is designed so that either I can use it as a group activity, with the entire class engaged with me, or students can use it on their own individually. My objective is to design a lesson that can be used as a whole class activity or autonomously by using interactive learning tools.	Change in knowledge Change in practice Change in attitude

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<b>Themes</b>	<b>Examples</b>	<b>Teacher Learning</b>
	I was looking at all the different things you can do with Google Docs and was particularly interested in the fact that it enabled me to do a template for an interview idea I have had for a while. What I particularly like is that Google Docs can do a summary of all projects submitted.	
<b>Explore New Ideas</b>	<p>Last night I started working on a Music Project I have had in mind for my Form Ones. (I think I will try it with the Form Twos for the new school year, as they should all be more familiar with their laptops.)...The idea is that even if they do not have internet access at home they would use the school library computer to submit project. (I know this will take a lot of work on my part making sure the projects are actually done, I am looking forward to the challenge.)</p> <p><i>I can foresee classrooms eventually looking like this one. Teachers &amp; principals have to come on board and be more conducive to this kind of approach...than like the one mentioned in the article.</i></p>	Change in beliefs/attitudes
<b>Reflection on Practice</b>	<p><i>I realised one of my students that is his problem he has difficulty making connections so I have to design an entire set of worksheets now specific to his problem</i></p> <p>The sound is a little off on the timing and some of the slides and text change a bit too fast but hopefully the more creative of you out there will appreciate the idea and come up with some better examples.</p>	Change in beliefs/attitudes Change in practice

These few examples are reflective of discussions on the site, and indicate that through participation on the site, knowledge, experience, and opinion sharing took place, as well as reflection on practice. Interactions with colleagues allowed voluntary sharing and collaboration through working on shared documents. All content on the site was constructed on the SNS. Teachers connected with colleagues and shared in discourses (Davies, 2006), and some evidence of teacher learning took

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place through activities facilitated by different Web 2.0 tools. The participation in embedded Web 2.0 tools generated content on the site and “allowed a social networking space to become a learning space” (Davies & Merchant, 2009, p. 121). Teachers shared information about strategies and ideas and so generated knowledge on the site. They also reflected on their classroom and school practice, which provided new knowledge to others and opportunities to change their practice.

### **Discussion**

Generally, teachers participated in all activities designed on the SNS and demonstrated exchanges in knowledge and opinions, reflection on their practice, and an exploration of new ideas/concepts. These exchanges, as well as other contributions, made up their artifacts of learning. Practical teaching resources often accompanied knowledge sharing. The sharing and soliciting of opinions is significant to the discussion of knowledge sharing, even though teacher education has focused more on the cognitive aspects of teaching. Teachers did discuss the intervention/strategy they were using or wished to use in their classroom (Google docs template and pair and share group activity); described their working environment (as in the case of the ICT technician); and even discussed school-wide practices (lesson plan policy and practice). These discussions align well with discourses of in-service teachers (Vermunt & Endedijk, 2011).

Artifacts of learning on this space contained images, comments, and views, and these artifacts showcase what teachers are experiencing in the classroom (Davies, 2006). However, the majority of their contributions took place through text rather than non-text forms. Teachers also used different Web 2.0 tools to facilitate these exchanges with other teachers, and were able to connect with colleagues that they did not know before. They seemed to favour blogs and forums; even though wikis and online chats did take place, they seemed less popular. Perhaps this is because of the synchronous nature of wikis and chats and the requirements for reliable Internet access. Perhaps the delay in response for blogs and forums allowed these to be more widely used (Deng & Yuen, 2011; Ray, Hocutt, & Patterson, 2005).

Teachers also exercised flexibility in time and space by interacting with others at times outside of school working hours, and often from at home instead of the workplace. This flexibility is seen as a major factor in the success of participation on this SNS (Davies, 2006). All the interactions took place online and a variety of tools were used by participants. Teachers interacted with colleagues who were previously

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unknown and distant (Lee & McLoughlin, 2008). On the other hand, time seemed to be significant to greater participation on the site, in spite of flexibility in time to access the space, such as at home or on weekends. During the July-August vacation, teachers did not access the site more than during the school term. As such, there is need for further research into teachers' use of time and a relationship with independent learning.

Through the site, teachers engaged in learning that was less formal and structured (Dede et. al., 2009) than what normally pertains through workshops and seminars. There is therefore evidence that a shift to teacher professional learning did take place through this SNS, and this has been described as important to effective practice (Feiman-Nemser, 2008). Teachers availed themselves of opportunities to connect and share with other teachers, which was made possible through this space that harnessed the affordances of Web 2.0 tools (Brady, Holcomb, & Smith, 2010; Davies & Merchant, 2009; Greenhow, Robelia, & Hughes, 2009).

### **Conclusions and Implications for the Future**

Participation on this SNS indicates that learning that is less structured and formal can take place in non-traditional spaces. There appears to be a link between participation in activities and learning, and this participation allowed a social networking space that is still under-used and under-researched in education to be considered as a learning space (Davies & Merchant, 2009). A shift in the concept of teacher learning can allow for future research in alternative spaces and modes of teacher education.

The flexibility in time and space is significant to future directions in research on SNSs in education, and the embedding of different tools to allow for both synchronous and asynchronous interactions (Lee & McLoughlin, 2008) can provide important information for facilitating teachers' reflection on practice and, hence, teacher learning. The conceptualization of learning as a change in knowledge/beliefs or attitudes, according to Bakkenes et al. (2010), was helpful to analyse teachers' discourses on the site.

However, it is unclear whether this SNS allowed for the building of a participatory culture, even though social and participatory processes were facilitated through the SNS (Conole et al., 2011). What is important is that this participation was democratic (Lieberman & Mace, 2010), as participants exercised control of their experiences on the SNS and selected activities of their choice in which to participate, instead of being

told when and what they had to learn—the norm in top-down types of teacher education programmes.

Exploration of teachers' interactions can prompt educators with an interest in learning online to pay attention to how students participate in online activities. This study did not focus on teachers' use of technology tools even though those concerns are significant to teacher education, but it is important not to look at technology in education with traditional lenses and to see its potential to reform educational practices and transform learning. This SNS for teachers can be viewed as empowering as it gave voice to teachers who perhaps can be considered marginalized in a traditional schooling system like Trinidad and Tobago's. While there is an expectation that educational reform requires teachers to be agents of change, they must be "empowered to do so" (Feraria, 2008, p. 277). If teachers avail themselves of the opportunity to participate on this designed site, then deeper research on teacher participation can take place and its linkages to teacher learning further explored.

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## LINGUISTIC LANDSCAPE AS A LANGUAGE LEARNING AND LITERACY RESOURCE IN CARIBBEAN CREOLE CONTEXTS<sup>1</sup>

*Iris Hewitt-Bradshaw*

Linguistic landscape (LL) refers to multimodal texts displayed in public places and spaces. It encompasses the range of language use in a speech community. This paper applies aspects of the concept of LL to Caribbean Creole language environments, and discusses a range of texts that can inform teacher classroom pedagogy and the design of teaching resources in language and literacy education. More specifically, the paper explores how public, out-of-school texts can be utilized in school settings to develop students' critical language awareness and increase their communicative competence. It is suggested that increased use of images from the environment in language and literacy instruction has the potential to make the process of language learning more motivating and appealing to Caribbean students.

### **Introduction**

Language use is pervasive in public spaces inside and outside of school settings. It generates texts that are conspicuous on public signage and materials in the environment. These are collectively labelled *linguistic landscape* (LL) in the literature (Cenoz & Gorter, 2008; Gorter, 2013; Shohamy & Gorter, 2009; Spolsky, 2009). Especially in culturally diverse societies, such texts are multi-modal, multi-lingual, and increasingly being researched and analysed to reveal information about the communities and societies in which they are found. Second language and foreign language researchers are also exploring the opportunities afforded by LL to develop learners' language acquisition and language learning (Sayer, 2010). Although verbal texts can also be categorized as elements of LL (Shohamy & Waksman, 2009), this paper focuses on written and graphic texts in the Caribbean LL, and explores their potential to develop the critical literacy and language awareness of language learners in a region where a variety of Creole language is the

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vernacular of the majority of speakers and Standard English is the official language of instruction (LOI).

There is a strong argument for the use of LL as an educational tool in multi-lingual and multi-dialectal contexts (Shohamy & Waksman, 2009). Such an argument is especially pertinent in English-speaking Caribbean language environments where two different language systems operate inside and outside of schools. The fact that the majority of students entering schools speak a Creole language while the official language of instruction is English has created challenges. This is primarily because students' achievement in school depends on their level of competence in the LOI. Continuing public expressions of concerns about levels of literacy in English of secondary school graduates suggest a need to develop language teaching methodologies that promote the acquisition of English, without minimizing the importance of students' first language. This is an important consideration in a situation in which negative and ambivalent attitudes to Creoles still persist despite increasing validation (Bryan, 2010). The need for more effective teaching methodologies is addressed in official documents such as language arts syllabi and statements on language and language policy in some Caribbean countries (Jamaica. Ministry of Education, Youth and Culture, 2001; Robertson, 2010; Trinidad and Tobago. Ministry of Education, 1999). The existence of written and visual texts in Creole, English, or a mixture of the two varieties in students' communities is an underutilized resource in literacy classrooms, and teachers often do not capitalize on the opportunity to use students' language to promote their literacy development in the target language. In addition, students are often not conscious of the linguistic differences between Creole and English (Craig, 2006).

In the Caribbean, limited attention has been paid to publicly displayed texts as sources for language learning and teaching. The use of public texts places literacy in a broader social context, and connects learning in school to learners' homes and community. In order to explore the potential role that LL can play in a Caribbean educational context, this paper addresses the main question: *How can signs, images, and objects in the Caribbean LL be used as teaching resources in literacy classrooms in Caribbean Creole environments?*

### **Language as Landscape**

LL is found everywhere and includes language used in a community—the heard and spoken word, as well as the represented and displayed (Shohamy & Gorter, 2009). Thus it comprises texts in different modes and media, including print, electronic, audio-visual, and graphic. Posters,

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signs, advertisements, notices, and local songs such as the lyrics of reggae and calypso are examples of LL. Some of these have long been categorized as environmental print (Goodman, 1986), but electronic media have transformed the language use landscape so dramatically that paper-based texts now share space with the products of digitalization afforded by new technologies. Discourse in language and literacy has to take account of these developments. Hence, increasingly, reference is made in the literature to new literacies or multiple literacies (Cope & Kalantzis, 2000; Lankshear & Knobel, 2011; Mills, 2011).

Advanced technologies have not only opened up new channels to communicate but have also expanded the semiotic codes through which meaning is conveyed. Such technologies generate new forms of textual production using computer and other electronic devices in real and virtual spaces. The position of the National Council of Teachers of English (NCTE) on literacy reflects this expanded view of literacy, which is socio-cultural in orientation:

Literacy has always been a collection of cultural and communicative practices shared among members of particular groups. As society and technology change, so does literacy. Because technology has increased the intensity and complexity of literate environments, the twenty-first century demands that a literate person possess a wide range of abilities and competencies, many literacies. These literacies – from reading online newspapers to participating in virtual classrooms – are multiple, dynamic, and malleable. (NCTE, 2008)

LL generally reflects language in use that is multi-modal. Text is produced through different modes: written/printed, pictorial/visual, aural/oral, gestural. LL can also be multi-lingual or multi-dialectal. Especially in linguistically contested regions such as the Caribbean, the use of one language instead of another is significant and open to linguistic and socio-linguistic analysis. The texts of LL are also multi-functional and represent varied speech acts in diverse social contexts. Some inform, but many are emotive and interactional (Cenoz & Gorter, 2008).

### **Benefits of Using Linguistic Landscape**

Multi-genre, multi-modal texts that exist in public spaces hold much potential to propel language and literacy development. The use of LL as a resource in teaching recognizes the social context of language learning and language use, and offers educators many opportunities to create

meaningful experiences for learners. Some of the benefits of using social and historical texts occurring in the environment are discussed below.

LL as an educational tool engages students in authentic literacy activities that extend beyond the classroom and school walls, and thereby links learners' life in school to their community existence. Such an engagement with community-specific texts encourages students to understand their literacy development in a broader social context—a potentially enabling process for students whose first language is often not valued in schools, and not visible in the school texts that they use. In addition, the use of environmental print and signage in classrooms has the potential to increase the effectiveness of programmes aimed at improving literacy levels on a nationwide scale. Too often, such programmes do not address the needs of all students because resources and materials are usually textbook-based and foreign to learners' language, background, culture, and experience.

Since the landscape contains diverse texts in different formats, a study of the linguistic aspects of their surroundings gives students an opportunity to develop their knowledge of genre, and the appropriateness of language use in social domains of activity. Depending on the nature of the classroom projects that are used, teachers obtain opportunities to foster a culture of inquiry and innovation in teaching contexts where indigenous languages compete with global languages such as English.

Language is closely tied to culture and functions as a symbol of national identity (Curtin, 2009). Many texts in the landscape are identity texts, which provide indigenous sources of knowledge about self and community, and thus provide educators with opportunities to engage students in ways that allow them to read, understand, and analyse community texts, and, further, to question such texts in more socially responsive ways. In this sense, LL can be viewed as language in use that represents individual, collective, and national identities. Through the study of the language landscape that surrounds them, students learn to understand their history and culture, of which their indigenous language is a part.

Additionally, when LL is used as a teaching resource, students develop awareness of the role that different languages or dialects play in the social communication network of their community (Sayer, 2010). A more significant role for LL in language arts curricula provides educators with an opportunity to indigenize resources for language and literacy teaching and learning. Students also learn to critically analyse information from diverse sources. This skill is especially crucial in the 21<sup>st</sup> century when information is shared and consumed by global communities on the Internet and other electronic media (Mills, 2011).

### **Language in the Caribbean Landscape**

The Caribbean language context is not a homogeneous one since territories have different histories of immigration and colonialism that have influenced the demographic make-up of nation states, and thus the languages or dialects that are used for communication. In the English-speaking Caribbean, the official language is English. However, in some territories such as St. Lucia, the vernacular is not an English-related Creole, but a French-lexicon Creole or *patois*. Whether English or French based, Creole vernacular languages serve many communicative needs in the Caribbean societies where they are found. A full discussion of the language situation in the Caribbean is found in Roberts (1998), Craig (2006), and Simmons-McDonald (2004). The historical context is important because it establishes that the societies of the Caribbean are post-colonial, having been subjected to years of exploitation by Britain, France, Spain, Portugal, and the Netherlands, and explains the negative status of vernacular languages. These languages and dialects that serve as means of communication are testimony to the dynamic language processes that took place since the time of slavery and migration, indentureship, and emancipation. The mixture of West African, European, Indian, and other languages has resulted in a complex language situation that makes generalizations about language forms and language use difficult. Even unitary states like Trinidad and Tobago exhibit stark differences in the language varieties in use in the two islands.

With respect to the relationship between the Creole and its European counterpart from which a Creole draws much of its vocabulary, the European standard variety is usually considered the superior, more correct language. Thus, in many territories, Standard English is the official language and the language of education. It enjoys a higher status and is the preferred variety in formal situations. Any English-related Creole language existing alongside the Standard variety is still largely considered inferior and judged by many as lacking grammatical structure and a “broken” version of English. Historically, then, a Creole language was forged out of a communicative need in social, political, geographic, and demographic conditions that were unique to specific speech communities. This partly explains the variation in Caribbean Creoles and need for caution in making generalizations about form, structure, function, and attitudes across territories.

In her analysis and discussion of language teaching and learning in Caribbean Creole contexts, Bryan (2010) explored the concept of language as an arena, at different spatial levels: situational or physical,

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social and cultural (p. ix ). She expanded the arena to advance the notion of language as performance and display, and, finally, the competitive, contested nature of language in the arena where, in the post-colonial setting of Caribbean states, English as the official language competes with Creole languages, the natural cultural expression of identity of Caribbean people. This suggests that the language of the land plays a crucial role in the lives and identity of Caribbean people, even though attitudes to Creole may vary from one community to the next and in the same community over time. Because many Caribbean Creoles have no standardized orthographic writing system, the belief persists in some quarters that they are not real languages. Close examination of the LL would reveal to students the extent to which Creole is an integral part of Caribbean being and affirm that it is a valid language.

### **Language Awareness and Linguistic Landscape**

Language awareness refers to the consciousness about language form, structure, and function. Such consciousness is particularly important in language learning situations in which languages in a speech community are historically related to each other, though they may be unequal in status. As a principle for language teaching and learning, the concept has evolved over time to now include different dimensions of language consciousness: linguistic, sociolinguistic, and stylistic (Bryan, 2010). In the socio-linguistic environment of the Caribbean, which is characterized by an overlap in the language varieties in use, Craig (2006) argues for the development of Caribbean students' awareness of the differences between their first language, Creole, and English. The process would involve a pedagogical focus on differences in vocabulary and grammatical structures of the two language systems, as well as attention to the role of each variety in society. Students' language and literacy learning would also be aided when they are able to differentiate between their Creole and English, and when they can identify instances of code-mixing and code-switching—two natural linguistic processes in multi-lingual and multi-dialectal situations.

Language teaching pedagogy that promotes language awareness enables educators to “expand beyond school languages, recognize minority languages and raise awareness of language diversity” (Dagenais, Moore, Sabatier, Lamarre, & Armand, 2009, p. 258). The process also allows students to develop a more positive attitude to the value of their vernacular by making its usefulness for important communicative functions more visible to them. Additionally, if a critical language awareness approach is adopted, students develop competence

in reading to uncover the ideologies inherent in texts they encounter in their landscape. They are then better able to identify whose interest those texts promote and, importantly, whose interests are excluded.

### **Collecting and Analysing Caribbean Linguistic Landscape Data**

As in other geographic regions, LL can be found in both rural and urban spaces throughout the Caribbean. Data are everywhere in the environment, in concrete and virtual spaces; on walls and billboards; newspapers and flyers; and on clothing (see Figure 1).



*Figure 1.* T-shirt with Jamaican Creole.

Diverse approaches and methodologies can be utilized to collect and analyse such data in different disciplines (Shohamy & Gorter, 2009). Rogers and Schaenen (2013), for example, show how critical discourse analysis (CDA) is useful to execute careful, systematic analysis of public texts and unearth the underlying power relations and ideologies embedded in such texts. According to Kamberelis and Dimitriadis (2005), CDA includes techniques for analysis at three levels of discourse organization: *text*, *discursive practices*, and *social practices*. Critical analysis of text allows the systematic unpacking of lexical, semantic, grammatical structure of *text* to determine how the text portrays social facts as natural/unnatural, normal/abnormal, include/exclude positions. Analysis of *discursive practices* maps the production, distribution, and consumption practices involved in the circulation of texts, while analysis of *social practices* involves mapping the possible conditions that make particular ideas or lived experiences seem powerful and pervasive for a given social group at a given period of time (Kamberelis & Dimitriadis, 2005, p. 120).

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Critical discourse analysis is not the only approach that can be adopted to analyse LL. Systemic-functional linguistic theory explains language use and variation in terms of the communicative choices language users make to achieve different functions (Halliday, 1978). The theory advances that texts are produced in a social context, and different structures and processes in the social system produce different texts. An important aspect of systemic-functional theory seeks to uncover how the textual patterns and cohesive devices work to unify the parts of a text to make it coherent. Applied to LL, analysis from this theoretical framework would investigate the ways in which the variety of language or register is appropriate to a particular social situation. A *register* links a particular oral, written, or visual text to its context, and is itself a creation of the conditions or events that occur in that specific context. For example, the text in Figure 1 uses Jamaican Creole on a T-shirt and is assertive in its statement of identity. The power and possibility of its simplicity can easily be overlooked, yet it presents an opportunity for students to be asked to collect, identify, translate, and discuss the suitability of language use in this specific context. In an integrated curriculum, students in visual arts classrooms improve their ability to design and reproduce this writing genre in an authentic, functional display of language use.

The three levels posited by Kamberelis and Dimitriadis (2005) can also be applied to Figure 2, which depicts a mural on a wall in an urban community in Jamaica. The wall conveys the text of a message from an organization, “Mountain View United Council,” that “We choose peace,” and “We support community policing.” This option is offered as “The way to peace.” A graphic image depicting three individuals reinforces the written text: a policeman, a member of the Rastafarian movement, and another individual. All three are male; the police officer is positioned in the middle, touching the other two men who are shaking hands.

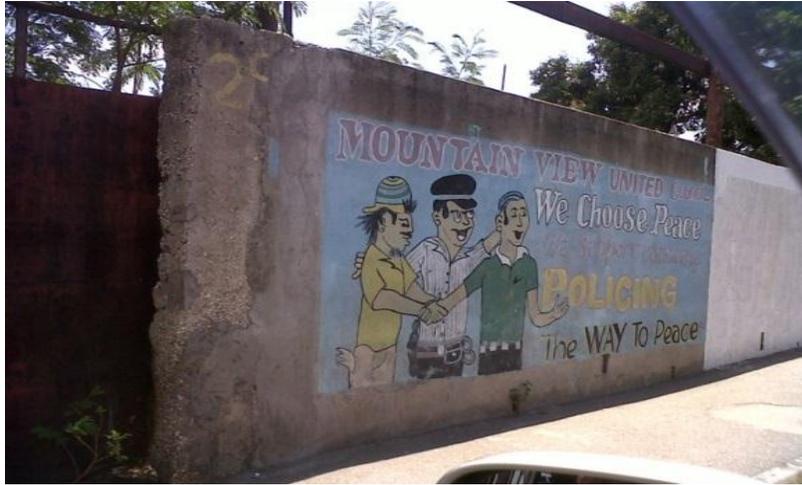


Figure 2. Mountain View United mural in Jamaica.

At the level of *text*, classroom discussion and analysis can focus on the lexical and semantic choices and their implications. For example, the idea of choosing “peace” is offered as a more acceptable position than the alternative—a lack of peace or war. Choosing “peace” is “The way,” and the stance that the Council supports. The text is structured to begin on a note of “peace” and end on a similar note, giving agency to “we.” The suggestion of inclusion and togetherness is also implied, and further supported by the image of the three men touching each other in solidarity. The text “sells” an idea and depends on the targeted audience to buy into the proposition. This is not an uncommon media strategy to persuade readers to uncritically accept the message of a text; however, it is important for teachers to guide students’ critical reading to consider the intention of the creator of the text.

Grammatical features of the language also help to achieve the writer’s goal. The language of the text is largely conventional English, not Jamaican Creole. The choice of English to communicate the message in a context where crime in an urban space is a concern is also significant and open to interrogation. If this sample of LL is used in a literacy classroom, having discussed the context in which the text occurs in the community and the target audience, the teacher and students can usefully explore questions such as the following: *What language would you expect the text to be written in? Why? Do you think the language used in the text would affect the impact/effectiveness of the message?* Students can then be engaged in a range of literacy activities and cross-curricular activities centred on the mural. For example, students’ creative responses can

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include a translation of the text, a debate on the effectiveness of the use of Creole or Standard English, and letters to the Mountain View United Council commenting on the reasons why the text is effective (commendation) or ineffective (critical).

The language of the mural in Figure 2 is different from that on a billboard erected along a highway in Trinidad (Figure 3). The first uses English whilst the second uses Creole. Apart from the informative and persuasive function that the two instances of LL serve, they perform a symbolic function as well. Landry and Bourhis (1997) suggested that when one variety of language is selected for use over another language, the use of one variety and absence of another influence the value and status that members of a speech community attribute to the language varieties operating in their environment. This suggests that choice of language in public signage is strategic and deserves further investigation. In classrooms, the study of the language of signs and images in their environment, such as those in Figures 1 and 2, provides students with opportunities to investigate and understand language choice.



*Figure 3.* Billboard along a highway in Trinidad.

An analysis of *discursive practice* would focus on who produced the text, how this text is being circulated, and who is the intended audience. In Figure 2, readers are led to conclude that the text originates from the Mountain View United Council, who chose the medium of printed and graphic text on a community wall to proclaim its message. To whom the term *we* refers in the text is subject to debate. Does the term include the actual members of the Council, the individuals in the accompanying

image, or all members of the community? Is it coercive in intent? This is another linguistic level at which the landscape functions, and a topic that students at different levels of the school system can critically address.

The artefacts in Figures 1 and 2 represent different discursive practices in the same society. The text on the T-shirt can be mass-produced and distributed on a scale that would be impossible for the message on the mural to replicate. As language teaching resources, students get opportunities to explore the different ways in which texts are produced, distributed, and consumed. These are connected to the purpose of the text, the target audience, and the mode. Classroom activities that involve comparison and contrast of authentic texts would extend the language range and communicative competence of students. Such activities would be accompanied by focal questions on the discursive features of the selected texts and elicitation of the ways in which they are similar and different, as well as analysis of appropriateness and effectiveness. Additional benefits include the development of students' ability to select effective or appropriate ways to market their own messages when they wish to communicate in the wider society; or even to criticize the ways in which messages are marketed in their communities. For example, students can debate the probable effectiveness of the text on the mural in their community.

An application of the concept of social practice, as suggested in Kamberelis and Dimitriadis (2005), would examine the conditions that made the specific ideas or lived experiences reflected in the text important for the social group in that specific community, at that period of time. This is the historical perspective. The photograph was taken in 2013, but the mural might have been in existence a long time before that. The reference to "peace" and "policing" suggests that the text was created in response to the incidence of crime affecting the community at the time. The idea of "community policing" is commonly introduced as a strategy to combat increasing levels of criminal activity by bringing different groups together in the community to aid officers in law enforcement. The gendered lens through which the message is delivered might also be significant in mapping the conditions that gave rise to this signage in the Jamaican landscape. How can the absence of a female individual be explained? Is the intended audience only, or primarily, young males? Is ethnicity a factor? Ethnographic investigation would perhaps yield more information to inform analysis, or students who live in the community would be more likely to give greater insight into the "story."

Classroom activities such as those discussed above teach students that language use is not neutral but negotiated and contested. If diverse text

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types that shape public sphere are used to achieve these outcomes, students get an opportunity to develop pragmatic competence; that is, the ability to use appropriate forms of language in context. Pragmatic competence is considered an important feature of second language acquisition and a component of communicative competence (Cenoz & Gorter, 2008). Students also learn that phonological differences between languages result in public signage with incorrect spelling (Figure 4). This provides a rich source for linguistic exploration and discussion in classrooms. In Figure 4, the spelling of the English word *stand* reflects the phonological process of the reduction of a final consonant cluster that is typical of the oral speech of speakers of many English-related Creoles. The sign thus reflects a sound difference between English and Creole that teachers can use to raise students awareness of this linguistic feature. Students are then able to identify and analyse other instances that they observe in their community. Such a language teaching focus is already accommodated in syllabi such as that for Communication Studies in the Caribbean Advanced Proficiency Examinations (CAPE) administered by the Caribbean Examinations Council (CXC). The sign in the clothing store (Figure 5) offers other possibilities for use as a teaching resource if teachers facilitate student discussion at different levels of linguistic analysis. Some students may not be aware that *platted* is used where the writer intended to use the word *pleated*. Such exploration of the LL also provides the opportunity for teachers to address the incorrect notion that students may have that every incorrect use of English is an instance of Creole. This belief in some quarters is partly responsible for persistence of negative attitudes to Creole and a characterization of the language system as “bad English”



*Figure 4.* Sign on a transport shelter in Trinidad.



*Figure 5.* Sign in a clothing store in Trinidad.

Apart from the use of static, printed texts, LL as classroom resources includes the kinds of digital texts that students consume and produce when they use the Internet, social media, and other electronic media. In those spaces, students engage with new forms of textual production and re-production. This forms the basis for new classroom pedagogy that responds to the digital and multi-modal environment marked by global networking. In this environment, there are blurred lines between reality and illusion, truth and fiction, and dynamic use of different varieties of language: sometimes English, sometimes Creole, many times a mixing of the two. Effective language teaching, however, takes learners beyond language as form to an appreciation of how meaning is communicated, and how texts are connected, sometimes with only a title and a picture. The image of the boat in Figure 6 exemplifies this.



*Figure 6.* Photo-shopped image circulated on the internet.

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In Figure 6, the context of the photo-shopped image is critical for meaning-making and understanding the use of language. The image appeared on the Internet in the middle of an election campaign in Trinidad and Tobago in 2013 when one candidate claimed, on a political platform, that a boat with Indians from Calcutta was waiting to sail to Tobago if the predominantly Afro-dominated party lost the Tobago House of Assembly elections. The image of the “Calcutta Express” is real to the extent that it exists as a picture of a ferry, but it does not represent an actual ship; it was created using the photograph of an actual ferry—the *Tobago Express*—in the intensity of the political event. Both images are artefacts of the landscape, but can both be considered “real” in the same way? Classroom instruction that engages students in discussion of such texts develops their critical literacy. The process allows students to examine and discuss inter-textual links among different texts that treat with similar issues in different ways, thereby raising their awareness and knowledge of different genres. More importantly, students understand how language is used in complex ways, across diverse contexts, and for different purposes. For example, the issue of racial tensions in a multi-cultural society was introduced on a political platform, taken up in the photo as a ship—the Calcutta Express—and also appeared in the daily newspapers (see Figure 7). The modes employed and the motives of the creators of the texts might have been different. How the texts were interpreted by different groups in the society might also have varied. Situations such as these provide valuable teaching opportunities for educators and learning opportunities for students in disciplines across the school curriculum.



*Figure 7.* Headline from the *Newsday* newspaper.

Social relationships and attitudes are thus reflected in the language found in public spaces (Byram, 2012). LL adds to an understanding of language, society, and people, and, when used in classroom pedagogy, has the potential to develop students' language competence and critical thinking skills. This includes the perceived relationship between events and objects. In this last instance, LL can be used to promote critical evaluation of texts and highlight forces that divide and privilege groups in society.

### **Future Research**

An extensive and diverse LL is freely available for use in language and literacy instruction in the Caribbean as educational resources, and its use in language and literacy instruction at every level of the education system is a worthwhile area of teacher action research. The process would require educators to design, use, and research the impact of the use of LL on the development of students' language competence and their attitude to language, since language attitude affects language learning. Apart from the development of teaching resources using visual and printed signage, extensive use of spoken text is also useful. For example, taped advertisements, talk shows, and speeches offer rich opportunities for contrastive exploration of language in use. Other possible areas of research include studies of the ways in which readers interpret and understand the multi-lingual, multi-dialectal, and multi-modal LL in their environment.

### **Conclusion**

From early in their lives, children are continually bombarded with information from a multiplicity of sources. This makes the use of the landscape around them ideal educational tools to develop their literacy. If educators use such texts to integrate content in the school curriculum, students might find literacy resources more motivating and engaging, since LL reflects authentic language use in diverse ways that are familiar to students. The fact that texts in landscape are visible does not mean that students always see them, pay attention to them, read them, or understand how they work. Language teaching methodologies that target students' language awareness can make students conscious of linguistic features of their landscape that they may have previously taken for granted. An important part of the process is a pedagogical approach that allows students to recognize public space as an arena in which different players, such as advertisers, politicians, and businessmen, exercise

influence in ways that are often hidden or covert. LL is therefore useful to develop students' critical literacy as well as their pragmatic competence, so that they are able to use language in appropriate contexts while recognizing the ways in which the landscape seeks to influence them. Finally, incorporating LL of Caribbean societies in the process of education provides diverse opportunities to link language and culture, and indigenize educational resources to motivate and extend student learning.

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**LEADING SCHOOL IMPROVEMENT  
THROUGH COLLABORATION:  
An Evidence-Based Model**

*Freddy James*

This paper reports on a study that explored educational reform in the secondary sector in Trinidad and Tobago (T&T) by analysing the Ministry of Education's policy documents and examining perspectives on the impact of the current reform agenda from the point of view of practitioners: school supervisors, principals, and teachers. A qualitative interpretive research design was used, which employed a range of data collection methods including questionnaires, document analysis, and interviews. The paper argues that a different, more inclusive and participatory approach to leading context-specific school improvement is required for policy initiatives to be successful. An evidence-based model that takes this approach into consideration is proposed. The model, though premised on findings within the T&T context, can be applicable to other contexts.

**Introduction**

The study that this paper reports on captures the multifaceted nature of school improvement (SI) by exploring its most salient aspects, thus complementing the existing, though scant, knowledge base on SI in the Trinidad and Tobago (T&T) context. It presents insights into the country's SI initiatives from the perspective of a range of stakeholders, including teachers, school principals, and supervisors. Most SI research and models are rooted in larger education systems where devolution of power and authority and professionalization of teaching is already a reality (Hallinger & Kantamara, 2001; Lauglo, 1995). The current study shows that the cultural and contextual realities implicated in policy borrowing can restrict or readjust the application of models or initiatives adopted without appropriate consideration for the specificities of the host system. Nevertheless, as Harris (2009) and Gronn and Ribbins (2003) propose, the main issue is the extent to which the host system can use the model or initiatives to its advantage and make useful modifications of practice.

This study provides an evidence-based beginning for construction of a model for leading SI grounded in the realities of Caribbean states. The

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model suggests an approach to leading SI that is essentially school-based, with schools as the centre of change (Hopkins, 2001), supported collaboratively by the wider community, including the central education agency and other schools within communities. However, it is recognized that the model itself will not engender improvement in student outcomes; this is dependent on the will and commitment of stakeholders to change and effect change through negotiation among themselves and students (Levin, 2008). Nevertheless, in a non-prescriptive way, the model creates the conditions and environment for the process of such negotiations to take place, whereby common purposes and meanings can be established, which can lead to the affirmative action that brings about improvement in schools.

## **An Overview of the Literature**

### **The Nature and Purpose of School Improvement**

At one level school improvement is a way of schools achieving organizational development and growth. At another level school improvement has a moral purpose and is intrinsically linked to the life chances and achievement of all students. (Harris, 2002, p. 18)

Harris's comment captures the main purpose of SI and provides the philosophical base that should underpin any successful SI effort. Beyond the rhetoric of policy, research, and learning, education has a moral and social justice purpose to make a positive difference in the lives of members of the society (Dale, 1997; Fullan, 2001; Thrupp, 1999; Thrupp & Lupton, 2006). Improving schools and fulfilling the moral and social justice purposes is neither straightforward nor easy. On the contrary, it can be difficult and capricious, and this stems from the very contextualized, cultural, and subjective nature of this phenomenon.

SI is about changing culture (Fullan, 1991; Harris, 2002; Hopkins, 2001; Schoen & Teddlie, 2008; Stoll, 1999), which makes the concept subjective and problematic to define. Nevertheless, SI proponents emphasize three main conditions. Firstly, SI is a process-oriented activity, not a one-off event (Fullan, 1999; Joyce, Calhoun, & Hopkins, 1999; Harris, 2002). Secondly, SI involves educational change directed at enhancing student outcomes and improving the conditions of the learning environment (Fullan, 1999; Hopkins, 2001; Van Velzen, Miles, Ekholm, Hameyer, & Robin, 1985). Van Velzen et al. (1985) describe SI as "a systematic, sustained effort aimed at change in the learning

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conditions and other related internal conditions in one or more schools, with the ultimate aim of accomplishing educational goals more effectively” (p. 48). In other words, SI involves changing people and relationships, and its success is dependent on the responses of people to the changes that it initiates (Ainscow & West, 2006; Dalin, 1994; Fullan, 2001; Harris, 2002; Hopkins, 2001; Schmidt & White, 2004). Thirdly, SI is about building the capacity within schools to manage and sustain change and improvement over time (Barth, 1990; Datnow, 2005; Fullan, 2008; Hargreaves and Fink, 2006; Harris & Lambert, 2003; Hopkins & Jackson, 2003).

Hopkins (2001) defines SI as “a distinct approach to educational change that aims to enhance student outcomes as well as strengthening the school’s capacity for managing change” (p. 2). Barth (1990) defines SI as “an effort to determine and provide, from within and without, conditions under which the adults and youngsters who inhabit schools will promote and sustain learning among them” (p. 45). According to these definitions, the purpose of SI is to impact on the relationship between the teaching and learning process and the conditions that support it. Further, Hopkins (2001) suggests that the change which should take place as a result of the SI effort should not merely reflect an implementation of policies, but rather “innovations or adaptations of practice that intervene in, or modify the learning process to achieve the greatest impact on students, teachers and schools” (p. 37) (see also Hargreaves, 1994).

SI therefore involves some reform and educational change, which ultimately can come in various forms (Dalin, 1994; Fullan, 1999; Giroux & Schmidt, 2004). Reform efforts can be large-scale; centralized; small-scale; decentralized; externally initiated (by a centralized education body or international initiatives); or internally initiated (by a single school, school district, or community). Most reform or SI efforts follow the agenda of some policy formulated either at the site of change (schools), or externally by the policy makers. Some ambivalence about the value and success of large-scale reform efforts and externally driven initiatives has been expressed (Hargreaves & Fink, 2006; Harris & Chrispeels, 2006; Hopkins, 2001; Schoen & Teddlie, 2008; Wang, Haertel, & Walberg, 1993). Dalin (1994), for example, states that:

Both local and central initiatives work. An innovative idea that starts locally, nationally or with external donors can succeed, if programmes meet the criteria of national commitment, local capacity building and linkage, in a configuration that makes sense for the particular country. (p. 252)

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Chapman (2005) concurs that large-scale and externally driven reform can work, provided that schools are not treated as a homogeneous group. According to Thrupp and Lupton (2006), an understanding of context can help policy makers make more adequate and effective educational provisions to increase student achievement. Thrupp (1999) pays attention to the weaknesses in the SI system, especially focusing on the realities of schools facing challenging circumstances, and the inadequate efforts of policy makers toward effectively addressing the issues impacting the performance of students of low socio-economic backgrounds.

### **Culture and school improvement**

Although culture is a context-specific phenomenon, there are cross-cultural commonalities in how it should be treated and examined theoretically and practically (Angelides & Ainscow, 2000; Hallinger & Kantamara, 2001). In the T&T context, SI is wedded to significant political eras of the country's development (James, 2013). Hallinger and Kantamara (2001), reporting on the Thai context, emphasize an approach to leading change by fiat (orders or mandate), predicated on an assumption that change adoption and implementation are synonymous. They submit that within the current globalized context this approach is no longer culturally viable, and this view is supported elsewhere within the SI literature (Harris, 2009; James, 2008; Lee & Williams, 2006).

Differentiating between the school's culture and the national culture may be difficult, especially in Caribbean country contexts, which are multi-cultural and multi-ethnic societies, having emerged from colonialism (James, 2013). As Dimmock (2000) noted, cultural boundaries are not synonymous with national boundaries; differences can be commonly found within as well as across national boundaries. This is certainly true in the T&T context. Globalization has contributed to further blurring and diluting cultures, as information is transferred across cultures (Hallinger & Kantamara, 2001; Lee & Williams, 2006). This makes it even more difficult to tailor SI to fit the particular cultural context in which the innovations are being implemented, when these contexts themselves are not easily defined.

### **Capacity building**

Schools need to develop the capacity to improve. This involves staff and student development activities and building leadership capacity (Harris & Lambert, 2003; James, 2010). Harris (2002) states that "staff development activities should be task-specific and geared to teachers' concern and skill" (p. 9). Inherent in this notion of developing capacity is

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the school's capacity to manage change, which is essential to SI. Building capacity to improve also involves giving all stakeholders the opportunity to have a voice (West, Ainscow, & Stanford, 2006). Further, capacity building involves reflection on practice and reflective enquiry (Halsall, 1998; Harris & Lambert, 2003; Stoll, 2009). Since schools are dynamic institutions that are constantly responding to internal and external changes, reflective and reflexive practices are critical to help schools adjust and respond effectively to changes and maintain their equilibrium. In this regard, the role of leadership is very important, and, particularly, distributive leadership (Harris 2008). The leadership function is critical in providing the impetus for change, interpreting the effect changes would have on the people in the organization, anticipating their responses, and devising a plan of action.

#### **Top-down versus bottom-up approaches**

Top-down approaches to SI tend not to work, largely because educational change involves changing people and cultures more than structures (Dalin, 1994; Elmore, 2004; Fullan 1991; Gray, Reynolds, Fitz-Gibbon, & Jesson, 1996; Stoll & Fink, 1996). Fullan (1991) states that "real change, then, whether desired or not represents a serious personal and collective experience characterized by ambivalence and uncertainty" (p. 32). Still, some writers state that neither purely top-down nor purely bottom-up approaches to SI work, suggesting that a combination of the two approaches might be more effective (Fullan, 1999; Gray et al., 1996; Hopkins, 2001; Smith & O'Day, 1991). Nevertheless, a mixed approach does not guarantee improvement (Datnow, Hubbard, & Mehan, 2002; Harris & Chrispeels, 2006).

Similarly, while research has shown that bottom-up approaches have greater chances of engendering successful SI (Fullan, 1999; Hargreaves & Fink, 2006; Hopkins, 2001), it is wrong to assume that by virtue of using this approach successful SI is automatic. Additionally, whether a top-down, bottom-up, or mixed approach is utilized depends on the degree of autonomy within schools. Where schools have greater freedom to act, they may adopt bottom-up or mixed approaches, but where their autonomy is limited, more top-down approaches may be evident. Even some of the features of these approaches may be quite cosmetic in nature, for example, teacher training, where it is sometimes expected that teachers can learn the mastery of instruction and delivery in a one-day workshop, whereas a more effective approach might be to build the capacity of leadership at the departmental level (Harris & Lambert, 2003). Nevertheless, as stated previously, no singular approach in itself

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is a guarantee to success; contextual factors, the implementation process, and the people engaged in the reform play a huge part in making it successful.

### **Methodology**

The analysis presented in this paper is based on the findings of a study that explored SI in the non-private secondary school sector in T&T. The research approach was qualitative and utilized the case study design in exploring the case of SI in T&T. The methods of data collection included document analysis, interviews, and questionnaires. Collecting data from a variety of sources and using different methods helped in triangulating the study. Fourteen school principals or acting principals across schools in seven educational divisions/districts and six school supervisors were interviewed for this study. One hundred teachers from 12 schools from seven of the eight educational divisions/districts responded to questionnaires. Purposive sampling was used to ensure that the sample included varying school types representative of the secondary school sector in T&T. The interviews and questionnaires sought to elicit the views of participants on a number of themes related to improving schools, including: contextual and cultural issues, leadership, stakeholder participation, factors facilitating and inhibiting SI, capacity building, and teaching and learning.

Three main research questions guided the study:

1. *What school improvement initiatives have emerged in the secondary school sector in T&T?*
2. *What relations can be established between the school improvement initiatives being implemented in the secondary school sector in T&T and international perspectives on the theory and practice of SI?*
3. *What do these relations indicate for improvement in: (a) student outcomes and (b) organizational conditions of school?*

### **Findings and Interpretation**

This section provides a critical analysis of the data across the four data sets (document analysis, teachers, school principals, and supervisors) comparing the documented data, which is the espoused policy, with the other data sets, which gives an interpretation of the policies in practice. The intention was to unify the data from the four sources to highlight what is significant across the data sets. The results of the empirical data analysis were synthesized with the literature review and discussed with

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reference to the key issues investigated through the research questions and sub-questions. The results of this meta-analysis of the data and literature provide a synthesis of findings from which conclusions are made.

#### **What School Improvement Initiatives Have Emerged in the Secondary School Sector in T&T?**

Documentary data were sourced from policy documents and statements produced by the Ministry of Education (MOE) in T&T that relate to the period 1993–2008. Four main documents were reviewed, respectively: the *Education Policy Paper (1993–2003)* (T&T. National Task Force on Education, 1993); *Quality Education for All Young People: Challenges, Trends and Priorities* (Manning, n.d.); the *Strategic Plan (2002–2006)* (T&T. MOE, 2002); and the *Corporate Plan 2007–2010* (T&T. MOE, 2007).

The MOE's *Corporate Plan 2007–2010* (T&T. MOE, 2007) provided the most current SI initiatives being implemented. These initiatives and their main delivery mechanisms for the secondary school sector, as stated in the plan (pp. 11–12), are outlined below. The corporate plan listed six main initiatives:

1. To introduce school based management (SBM), including the establishment of local school boards.
2. Reconfiguration and streamlining of the Ministry's structure and services at the levels of school, local school boards, education districts/offices, and the ministry's head office.
3. Institutional strengthening of the ministry's head offices to improve capacity and human resources to enable delivery of an improved service.
4. Making the reform process more systemic by creating alliances with other public services.
5. Integrating information and communication technology.
6. Establishing a team to coordinate the school improvement implementation process.

According to the corporate plan, through streamlining its activities, the MOE hoped to facilitate improved student achievement and greater effectiveness at schools. Streamlining of the education district offices was expected to bring about improvement in supervision, monitoring, and evaluation of the implementation of the SI initiatives at the school level. The education district offices' mandate was also to provide support

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to schools, which included provision of resources, site-based support, mentoring, and carrying out research.

The plan further indicated that a strong and comprehensive communication system and strategy had been put in place to ensure consistency in communication and promotion of the Ministry's initiatives through the use of various media, including talk shows, documentaries, and the Ministry's website. This implies that the Ministry is dedicated to informing the public about what it is doing. However, it is significant that there is no mention in this section of how the MOE intended to communicate the SI policies and initiatives to those people, like teachers, who are situated at the critical site of change, which is the schools, and who would in the final analysis have to implement the policies and initiatives.

In the interest of confidentiality and anonymity, principal participants were labelled G to T. Participants indicated a wide range of initiatives that were being implemented in secondary schools in T&T. The initiatives identified by principals were collated into five main categories, illustrated in Table 1.

**Table 1. School Improvement Initiatives Principals Felt Were Being Implemented in Schools**

<b>Category of Improvement</b>	<b>Initiatives</b>	<b>Participants</b>
1. Leadership and management	<ul style="list-style-type: none"> <li>• Decentralization</li> <li>• SBM</li> <li>• Appointment of Heads of departments and Deans</li> <li>• Greater administrative power to principals and vice-principals</li> <li>• Introduction of Performance Management Appraisal (PMAP)</li> </ul>	G, I, H, L, K
2. Plant improvement	<ul style="list-style-type: none"> <li>• Upgrading physical plant resources, building laboratories for CVQ and ICT libraries</li> </ul>	J, K, G, H, R, N, M, S, P, Q
3. Professional development	<ul style="list-style-type: none"> <li>• Staff training for teachers, principals, and vice-principals</li> </ul>	O, K, G, I, H

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Category of Improvement	Initiatives	Participants
4. Teaching and learning	<ul style="list-style-type: none"> <li>• Remedial reading programmes for non-readers</li> <li>• Programmes to enhance discipline in schools, e.g., PEACE and Together We Light the Way (TWLWTW)</li> </ul>	G, L, J, I
5. Educational policy	<ul style="list-style-type: none"> <li>• De-shifting, which is changing former 3-year schools to 5-year schools</li> <li>• The Secondary Education Modernization Programme</li> <li>• Transport system for students and the provision of school meals</li> <li>• Education for All</li> </ul>	G, T, R, S

Plant improvement was the SI initiative that the majority of principals (10) identified, with leadership and management and professional development coming second, both having been identified by five participants respectively. The principals' comments indicated that there are a number of SI policies being implemented at the same time, and different initiatives are being implemented in different schools. Participants expressed concern that implementing the initiatives was problematic. They cited poor communication between the MOE and the schools, a lack of collaboration among the ministry's units, a lack of knowledge on the part of the planners, and the politicization of education in T&T as reasons.

Participant O stated that with regard to teacher training a lot of what was learnt from courses was not applied in classrooms. In his words: *"It is not getting down to students. This is because teaching is not taken as a profession, it is not respected."* G stated that although the MOE said they had introduced SBM, if they had to get things done at the school, they still had to wait on permission and resources from the ministry, which stymied the change process. M said while the policies may be good, the *"problem is the different agencies who need to collaborate don't."* S indicated that the problematic implementation of policies was because

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*“the planners lack knowledge and this is why we are having all these problems. There is a lack of communication. Education too politicized.”*

School supervisors were ascribed the labels A to F to maintain anonymity and confidentiality in the study. The findings from the school supervisors are presented in Table 2.

**Table 2. School Improvement Initiatives SSIIs Felt Were Being Implemented in Schools**

<b>Category of Improvement</b>	<b>Initiatives</b>	<b>Participants</b>
1. Leadership and management	<ul style="list-style-type: none"> <li>• SBM, setting up safety and crisis teams, establishment of middle managers: appointment of HODs and Deans</li> <li>• Establishment of non-denominational school boards</li> <li>• Decentralization</li> <li>• Performance Management Appraisal Process (PMAP)</li> <li>• Having functioning PTAs and making PTAs autonomous</li> <li>• Establishment of management teams</li> </ul>	F, D, A, C, E
2. Plant improvement	<ul style="list-style-type: none"> <li>• Outfitting schools</li> </ul>	B
3. Professional development		
4. Teaching and learning	<ul style="list-style-type: none"> <li>• Curriculum reform: introduction of ‘core’ subjects and broadening the curriculum</li> <li>• ICT as a teaching tool</li> <li>• Values education</li> <li>• Increasing staff in terms of teacher/student ratio and broadening curriculum</li> </ul>	E, D, C, F, B

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Category of Improvement	Initiatives	Participants
	<ul style="list-style-type: none"> <li>• Broadening student support</li> <li>• Student programmes, e.g., student council and abstinence club</li> </ul>	
5. Educational policy	<ul style="list-style-type: none"> <li>• Putting steelbands in schools</li> </ul>	E, C, B

The information in Table 2 shows that, like the principals, the school supervisors presented a wide and varied range of SI initiatives currently being implemented in secondary schools in T&T. However, the focus of initiatives being implemented for both groups differed. The majority of SSIIIs (5) identified leadership and management and teaching and learning as the initiatives being implemented. There is congruence across principals and SSIIIs in the leadership and management category, but not necessarily in the other categories. This is significant, because school supervisors are expected to communicate the SI initiatives to schools and monitor and evaluate these initiatives.

Teachers mentioned 30 different initiatives that they felt were being implemented in schools. These responses were collated and are represented in Table 3. A sixth category labelled *none* was included on the table. Seventy-six teachers responded and 24 teachers did not respond to this question. The majority of teachers who responded (27) indicated that no SI policies were being implemented. Plant improvement was the initiative that most (22) teachers felt was being implemented. Twenty-one indicated that leadership and management matters were being implemented, and 20 indicated teaching and learning. Thirteen indicated initiatives related to educational policy.

**Table 3. Teachers Views on School Improvement Initiatives Being Implemented**

Category of Improvement	Initiatives	No of Participants
1. Leadership and management	<ul style="list-style-type: none"> <li>• SBM</li> <li>• Introduction of school boards</li> </ul>	21

<b>Category of Improvement</b>	<b>Initiatives</b>	<b>No of Participants</b>
	<ul style="list-style-type: none"> <li>• Performance management appraisal programme for teachers</li> <li>• Appointment of Heads of departments and Deans</li> <li>• Strategic planning</li> <li>• Decentralization</li> <li>• Personnel safety</li> </ul>	
2. Plant improvement	<ul style="list-style-type: none"> <li>• Infrastructural development in schools: upgrading ICT equipment, equipping libraries, and building more classrooms</li> </ul>	22
3. Professional development	<ul style="list-style-type: none"> <li>• Teacher professional development</li> </ul>	
4. Teaching and learning	<ul style="list-style-type: none"> <li>• Curriculum re-design</li> <li>• Intervention strategies to deal with troubled students</li> <li>• Improved assessment methods</li> <li>• Introduction of remedial reading</li> </ul>	20
5. Educational policy	<ul style="list-style-type: none"> <li>• Secondary Education Modernization Programme</li> <li>• Education for All</li> <li>• Eradicating the shift system in schools</li> <li>• Implementation of school boards</li> <li>• Vision 2020</li> <li>• White paper on education, No child left behind</li> <li>• Seamless and holistic education</li> </ul>	25
6. None		27

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These results from the teachers are more aligned to those of the principals. The majority of both groups indicated that plant improvements, leadership and management initiatives, and teaching and learning initiatives were being implemented in schools. This alignment can mean that both groups are focused on the same SI issues. Nevertheless, it is significant that only a few of the teachers indicated that professional development was an initiative being implemented. Additionally, the fact that more than a quarter of the sample did not believe that any SI policies were being implemented is significant, because their role is critical in enacting policies and engaging students in ways that bring about improvement.

This disparity between policy awareness among the various groups of stakeholders can be indicative of an ineffective communication system, which fails to adequately orient teachers, in particular about changes. However, while the Ministry may be partly responsible for the issues in communication, the problem does not seem to rest only with them. Both principals and schools supervisors have shown that they are aware of the initiatives. Further, it is their responsibility to mediate the curriculum and social contexts of the schools to ensure that initiatives are communicated to staff, parents, and students, in a manner that makes teaching and learning relevant and suitably differentiated (Ainscow & West, 2006; Busher, 2006).

### **What Relations Can Be Established Between the School Improvement Initiatives Being Implemented in the Secondary School Sector in T&T and International Perspectives on the Theory and Practice of SI?**

The SI initiatives currently being implemented in T&T are modelled after “international best practices,” and as such relate to international theories and practice. The SI changes relate to structural changes of the education system, curriculum changes, and delivery of its services. The introduction of school/site-based management and decentralization are strategies that have been used, for example, in the English system to engender improvement.

On the issue of centralization versus decentralization, the literature suggests that neither of these strategies work (Fullan, 1991) if the conditions to support either strategy is not in place (Datnow et al., 2002; Elmore, 2000; Fullan, 2005; Harris & Chrispeels, 2006; Hopkins, 2001; Hopkins & Lagerweij, 1996). Fullan (1991) states:

Neither centralization nor decentralization really works. Mandates make people resist change. Leaving it to the school denies the

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benefit of coordinated support and problem solving. Decentralization-such as school-or site-based management-is problematic either because individual schools lack the capacity to manage change or because assessment of attempted changes cannot be tracked. (pp. 200–201)

The main challenge is to find a balance between centralized policy initiatives and empowering schools to develop their own initiatives. The findings reveal that discovering this balance is proving to be problematic in the T&T context for various reasons. The principals commented as follows. J stated that *“the MOE initiatives are good, but they don’t fulfil at the designated time, implementation of initiatives is the problem.”* G stated that although the MOE said they had introduced SBM, if they had to get things done at the school, they still had to wait on permission and resources from the ministry, which stymied the change process. M said while the policies may be good, the *“problem is the different agencies who need to collaborate don’t.”*

The data from the school supervisors corroborated that of the principals. F’s comments encapsulates the views of the majority of participants:

*MOE manages from the top and therefore constrains people and success. However, some principals look at their situation and do what is necessary to get a programme going that is suited for the students, he may enlist the help of parents or members in the communities, but these are the risk takers and get people to buy into your plans and the authoritarian type of leadership will not lead to this. In the schools we have managers and not leaders. MOE talks about leadership but they really want managers, they don’t leave schools and principals to operate. Principals need to think outside the box to get things done.*

Participant E stated that *“MOE orchestrates site-based management but they are still controlling. They want decentralization but at the same time they over centralizing.”*

The findings of this research study suggest that decentralization has come in the form of delegation rather than devolution. Whereby the former means committing some powers but not giving full authority and autonomy, and the latter means transferring powers, authority, and autonomy, in this case to schools. Further, the centralized authority (the Ministry) seems to be initiating SI reform, and leaving the implementation of it to the schools.

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In the T&T context, there is a danger of focusing the SI agenda on changing structures and systems, even processes, without recognizing that structures and systems cannot move and adjust themselves, they need people to do so. The SI initiatives being implemented in secondary schools in T&T, based on research and practice from developed countries, are premised on an assumption that teachers' interpretation of, and response to, the policy implementation process is the same regardless of their prior knowledge and experience. This is a false assumption. Policy implementers who apply a cognitive framework to researching the policy implementation process note that implementers' prior knowledge; the understandings they make between new ideas and their existing ones; and their social situation, past and current, influence how they interpret, process, and respond to policy (Ball, 1994; Cohen & Weiss, 1993; Lin, 2000; Spillane, 2000; Spillane, Reiser, & Reimer, 2002; Yanow, 1996).

The majority of teachers who participated in this study indicated that they had no formal pedagogical training to teach, even though they had been teaching for more than five years in some instances. Of the 91 teachers who responded to the question on whether they were formally trained to teach, 54% indicated that they were not, and 37% indicated that they had been formally trained to teach. The current SI initiatives being implemented in secondary schools in T&T are premised on constructivist and student-centred approaches to learning, which may not be known to the implementers who are not formally trained teachers, or who may not have received an orientation to teaching as in-service training. Thus, the reality might be that teachers who have to implement policies may not understand the deeper purposes of the policy because of their limited pedagogical knowledge. This can negatively affect policy implementation.

SI theorists contend that "restructuring, "as a systemic approach to improvement, will not by itself lead to changes in student outcomes (Datnow, 2005; Elmore, Peterson, & McCarthey, 1996; Harris, 2003a). Reform efforts must connect directly with classroom teaching and learning and instruction (Elmore, 2000; McKinsey & Company, 2007). To realize improvement in student outcomes is as much a factor of the system and student input as it is the teacher input (Ainscow, 2007; Thrupp, 2005). Participants in this study indicated that the factor most inhibiting improvement in student outcomes in schools in T&T is the MOE's top-down approach. The top-down approach negates meaningful stakeholder input in the formulation of policies (see Table 4 for principals' and supervisors' views and Figure 1 for teachers' views).

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Arguably, this input is crucial to creating the differentiated type of policies that contextually and culturally fit the varying school types.

**Table 4. School Supervisors' and Principals' Opinions on Factors That Are Inhibiting School Improvement in Secondary Schools in T&T**

	<b>Inhibitors</b>	<b>Participants</b>	<b>% of Participants</b>
1	The Ministry's top-down approach to SI	L, G, O, P, J, T, I, H, N, Q, M, S, E, A, B, D, F	85%
2	Problematic implementation process	L, J, O, I, Q, R, M, S, N, P, J, K, D, C, B, A, F	85%
3	MOE not providing resources in a timely fashion	L, P, J, T, Q, O, M, S, H, K, N, R, C, D, E, F	80%
4	SI policies not clearly communicated by MOE to implementers	P, H, S, G, L, J, O, K, M, I, N, Q, B, A, D, F	80%
5	Inadequate, unstructured, unclear, and untimely training programmes to implement SI policies	H, O, M, S, I, P, R, G, J, K, L, B, A, D, E, F	80%
6	Poor monitoring and supervision of implementation of SI policies	L, O, K, H, N, Q, M, S, I, A, C, D, E, F	75%
7	Individual schools' context not taken into consideration when designing SI policy	L, P, I, H, N, Q, M, S, G, O, R, A, B, D	70%
8	Culture of superficial stakeholder consultations	L, P, O, I, R, N, Q, S, M, H, K, B, D, E	70%
9	Limited capacity building support for implementing policies	L, N, H, Q, S, I, K, R, C, D, F	55%

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	<b>Inhibitors</b>	<b>Participants</b>	<b>% of Participants</b>
10	Lack of stakeholder involvement: stakeholders' opinions not taken on board	L, O, G, H, N, Q, S, P, I, M, E	55%
11	Externally driven SI policies at variance with the national culture	I, R, Q, S, H, B, A, D, E, F	50%
12	Poor dissemination of information from MOE to schools	P, H, S, M, N, L, I, D, A, F	50%
13	Lack of teacher professionalism	O, Q, S, K, G, I, R, M, B	45%
14	Externally driven SI based on foreign models and theories	L, O, I, Q, M, S, A, B, D	45%
15	Ineffective school leadership	L, S, H, R, A, D, E, F	40%
16	Lack of collaboration and coordination among departments at the MOE	P, I, H, M, N, B, D, F	40%
17	MOE not implementing on a timely basis	L, P, J, K, O, S, E, D	40%
18	Lack of parental support	J, O, I, K, R, C, D, F	40%
19	Poor evaluation of implementation process	E, D, B, A, O, H, S	35%
20	MOE does not give principals enough autonomy	O, I, H, Q, S, E, F	35%
21	Unclear and ineffective SI implementation strategy	P, H, S, J, I, G, B	35%
22	Information from training courses not filtering down into the classrooms	O, H, S, T, A, D	30%
23	Difficulty in changing culture and mindset	O, Q, L, H, S, T	30%
24	Lack of proper evaluation strategy	O, H, D, E, B	25%
25	Education system too politicized	R, L, S, B, F	25%
26	Too many initiatives at one time without the capacity to implement them	L, O, S, I, F	25%
27	Teachers with no pre-service training	L, R, Q, B	20%
28	With T&T culture education is not valued by some	L, M, I, R	20%

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	<b>Inhibitors</b>	<b>Participants</b>	<b>% of Participants</b>
29	Policy makers who are not education specialists	H, S, D, F	20%
30	Lack of student empowerment	H, M, S, D	20%
31	Lack of teacher accountability	L, Q, K, B	20%
32	No quality controls	L, M, E	15%
33	Lack of adequate time to prepare for implementing policies	P, J, F	15%
34	The schools' culture is at variance with the national culture	O, I, S	15%
35	Meritocratic system of education	S, R, F	15%
36	Lack of a systematic approach to SI	Q, C, D	15%
37	Schools not engaging in research, e.g., action research	F, D	10%
38	Poor relationships across the education fraternity, lack of trust, respect, and collegiality	N, E	10%
39	Lack of provision of support systems for disadvantaged homes	K, C	10%
40	Insufficient time for teachers to prepare for teaching and learning	K	5%
41	Large class sizes	T	5%
42	Limited stakeholder buy-in	D	5%
43	SSIII's who are not doing their job	D	5%

The SI literature also stresses that orienting teachers toward change must be a part of the process of developing leadership capacity. This involves ensuring that they participate in decisions about how to change, motivating teachers to change, and ensuring that support for teachers is built into the process of change (Ainscow, 2007; Beresford, 2000; Harris, 2003b; Hopkins, Ainscow, & West, 1997).

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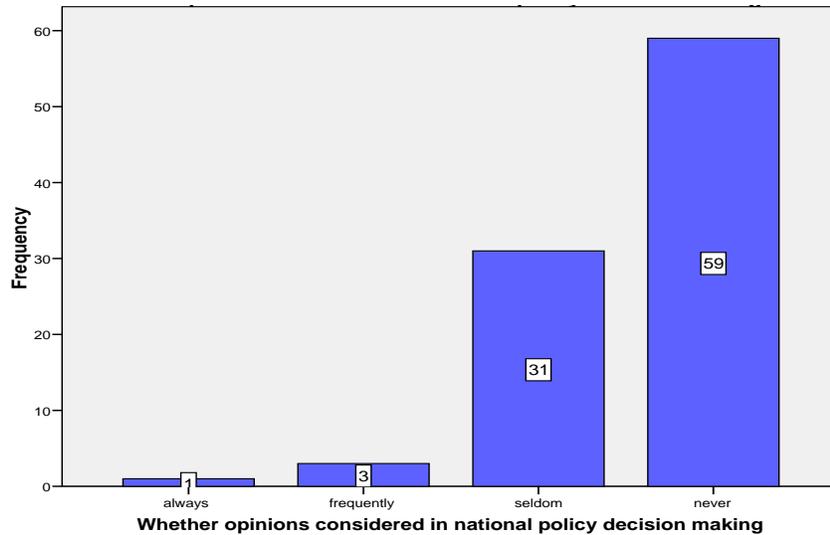


Figure 1. Whether teachers' opinions are considered in national policy decision making.

The McKinsey Report (2007) drew attention to the failure of many well-intentioned and well-funded interventions to impact positively on student learning outcomes because they did not pay enough attention to the teacher input. Nevertheless, there are examples within the literature (Hargreaves & Fink, 2006; Harris & Chrispeels, 2006) of SI projects that have been successful, for example, the Manitoba School Improvement Program, and the High Reliability Schools Project. However, Harris and Chrispeels (2006) caution that success in SI tends to be non-transferable unless customization of practices and processes to suit particular contexts occurs. Further, when one examines the models of SI that have succeeded, they show that capacity building, and internal as well as external support, played critical roles in engendering the success of these programmes. Still further, it can also be noted that programmes were successful when the school and its practitioners took ownership of the change, and were strategically involved in the reform process. An example is the High Reliability Schools Project in England. This is not the case with the current reform in T&T, as participants in this study note that they do not have the capacity to enact policies for which they have had limited or no orientation.

Further, the MOE has devolved responsibilities to educational district offices and introduced school-based management to agencies that, according to the findings of this study, are limited in their capacity to

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perform these duties effectively. There are manpower shortages and not all staff are trained, although training is ongoing. The Ministry's documents indicate that schools should come up with their own SI policies, but the participants state that the Ministry is still mandating the changes that they should make and excluding their opinions in policy decisions. The situation in T&T confirms the insights from the literature that neither decentralization nor centralization works when schools are not adequately supported nor have the capacity to manage and sustain change (Dalin, 2006; Datnow et al., 2002; Elmore, 2000; Fullan, 2005; Harris & Chrispeels, 2006; Hopkins, 2001).

**What do These Relations Indicate for Improvement in: (a) Student Outcomes and (b) Organizational Conditions of Schools?**

The concept of student outcomes can be context-specific and can vary from one school to another. For the purposes of this study, the concept of student outcomes has been defined in terms of attainment: academic attainment, citizenship, fulfilling human resource needs, and attainment of moral and social values. The MOE's stated goals in terms of student outcomes are to develop imagination, intellect, and spirit for creating committed, enterprising citizens and global leaders. Organizational conditions of schools refers to the educational processes and structures in schools, which span, but are not limited to, relationship building, vision building, strategic planning, leadership, and organization of departments.

Teachers were asked to rank a list of persons whose SI initiatives most led to school improvement. Table 5 shows how teachers ranked the initiatives.

**Table 5. Teachers' Ranking of Persons Whose SI Initiatives Most Led to Improved Student Achievement**

Initiatives	Ranked				
	1st	2nd	3rd	4th	5th
Teacher-led	37	21	11	1	3
School-led	14	31	17	10	2
National initiatives	6	4	15	19	23
Parent-led	5	8	13	20	27
Student-led	14	9	19	21	9

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The figures show that most teachers (37) ranked teacher led initiatives as most likely to improve student outcomes. School- and student-led initiatives were ranked by teachers as the second highest. Parent-led initiatives were ranked as the least likely to engender improvement in student outcomes. The teachers also ranked national SI initiatives low, with 23 ranking it as fifth. Only six teachers ranked it first.

The data from school supervisors and principals corroborate that of the teachers, in that the majority of them indicated that the factor that most facilitated SI was school-driven SI policies. According to these two groups of participants, national policies initiated by the MOE least facilitated SI (see Table 6).

**Table 6. School Supervisors’ and Principals’ Opinions on Factors That Are Facilitating School Improvement in Secondary Schools in T&T**

	<b>Facilitators</b>	<b>Participants</b>	<b>% of Participants</b>
1	Some school-driven SI policies	J, K, G, H, R, N, M, B	40%
2	Principals who are risk takers	L, S, Q, E, F	25%
3	Good SI initiatives	L, J, S, C, D	25%
4	Appointment of middle management teams of HODs and Deans to help with supervision in schools	L, K, A, B	20%
5	Willing and capable teaching staff	J, G, B, C	20%
6	MOE recognition of the need for specialized rather than “one size fits all”	G, A, E	15%
7	MOE beginning to take schools’ contexts into consideration	G, A, E	15%
8	Interacting with the wider school community	J	5%
9	Some improvement has occurred because of MOE principals’ training (M.Ed.)	O	5%

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The following exposition notes school supervisors' comments on what they felt were the key SI issues in T&T affecting student outcomes and organizational conditions at schools. E stated:

*We must decide if we will effectively decentralize and live out the mandate if we are going to empower the schools. Stop preaching one thing and practising another. Are we really giving the tools, in terms of finance, curriculum change, and so on, and autonomy for all the reforms to be engrained and working? You can't give directive from the top and expect it to work from the other end. It is too much control by MOE and they can't handle it.*

Participant F stated that *"for a school to improve the principal should be able to recruit and have more autonomy."* F also commented that *"schools need to use research more. Schools don't use action research to develop programmes."* Participant C stated that *"there must be a more systematic linkage between education, health and social services."*

Participant B suggested that *"school improvement should be more bottom-up than top-down."* Participant B additionally noted the results of a survey which indicated that teachers are ready to cooperate and collaborate with the MOE to engender change in secondary schools. B stated that *"a teacher survey that was done by Ministry of Education consultants indicates that teachers are positive about education and are ready to work with the Ministry of Education"*; however, B emphasized that *"this is a little known fact and that is not being utilized by the bureaucracy of the ministry to create more improvement."*

Participant D felt that the educational structure and subsequent relationships in T&T were inhibiting SI success. D commented that *"there are many great ideas like puzzle parts, but not connecting...if persons move away from power and status and deal with the rank and file it would be better."* Like other participants, D felt the *"need to involve all the stakeholders."* Further, D commented on the issue of having non-educational technocrats running the education system and stated that *"you need persons who are educators and not public servants to run education."*

There were a number of issues that principals felt were important to note about SI in secondary schools in T&T. Participant L commented:

*I feel MOE has laudable initiatives but the implementation, monitoring, and accountability rate is very low. School support is very limited. Too many initiatives coming at one time. We should prioritize and do two things at a time. Don't do too many when you don't have the capacity to implement.*

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Participant J highlighted the fact that the MOE was “*not providing resources in a timely fashion,*” but also commented that “*a burning issue is parental support.*” J suggested that “*schools do well because parents are supportive in values and assist the school, not only financially, but coming into the school and offering their skills and services.*”

Participant O commented that SI in T&T required “*changing mindset,*” which O stated is “*the greatest thing to bring about change in student outcomes and school conditions,*” because “*getting teachers to change is difficult and takes time.*” O also suggested that it was “*difficult to change mindset because principals in schools do not have authority.*” Another issue that O pointed out as important to engender improvement was professional development. However, O was critical of the way in which professional development was being done in T&T, which involved taking teachers out of schools. O felt that “*it should happen in the schools,*” and suggested that there was a culture in T&T whereby “*teachers are suspicious about educational theory.*” O further noted that “*the school’s culture is sometimes at variance with the national culture which is being foisted on the school.*”

Participant S also commented on teacher professionalism, but in a different way. S felt that teachers were not filtering the knowledge gained through professional development sessions into the classroom. S commented that there were “*teachers and educators who access professional development and it makes no difference in their practice.*” S credited this to the fact that “*we are a certificate driven society, not practicing, we are into knowledge acquisition not practice.*”

K made the following comments on issues related more specifically to teaching and learning, such as teacher preparedness and student outcomes: “*I think in education less emphasis needs to be placed on the financial cost, consider the outcome. Teachers need more time to prepare for teaching and learning.*”

Participant G commented that the issue of stakeholder participation in SI was important, and stated that the “*MOE should involve the people who have to implement the changes from the initiation stage.*” G also felt that there was need for “*more persons to supervise at the district level,*” and that the “*MOE should fast track its decentralization process.*”

A recurrent theme in the comments made by participants was the issue of culture. Participant I questioned whether the use of external SI models in T&T was creating problems in engendering improvement in schools. Participant I suggested that the external models may be at variance with the national culture in Trinidad and Tobago:

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*Is it that we are following too much of the US or UK and is this why we are experiencing problems. We need to revisit our values and ensure they are not eroded in this process of reform. Look for best practices from others but ensure it fits into our culture so we can gain the best from it.*

Participant I also cited poor implementation, lack of support, and poor communication and professionalism as major inhibitors to SI in T&T. Participant I stated:

*Our problem has always been implementation. I think major changes need to be made at the MOE and they are doing some of it. Sometimes departments don't know what is going on, documents are lost, and there is tardiness. I think the committed people need more support in terms of disciplining students.*

K felt that leadership at every layer of the education system in T&T was a critical issue. K also linked leadership to wider cultural issues steeped in T&T's colonial past, and stated:

*The leader has to have passion, vision, and be service oriented. You must have enthusiasm and passion, be reflective, go with instinct or gut feeling, and just go for it! The board also needs to work as a team. They sit up there like "massah" and give dictates and that is their failure. That is why schools like these still operate like plantation. The board sees their role as a "big stick": autocratic and authoritarian. The board is not participatory. The board needs to be aware of educational theory and so on. The board needs educational training.*

Participant R felt that the Trinidad culture did not support the behaviours and practices that can usually lead to improvement in schools, and commented: "*I think we need to look at the Trinidad culture and how education fits into this and is the Trinidad culture one of planning and executing and maintaining?*" R also believed that education did not fit with the dominant culture in T&T, and that the cultural expressions of Trinidadians and Tobagonians were not fostering education and this also required reflection. R explained: "*We need to look at our cultural experiences and see how that shapes our education. It is a carnival, fete mentality, where anything goes, we need to develop a culture of excellence.*"

Q highlighted the important issue of schools' contexts and related it to recruitment and the need for greater autonomy for school principals. Q stated:

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*I think when teachers for a school are interviewed the principal or a delegate should be present because all schools have their peculiarities. Principals should have more autonomy in recruitment of teachers. There is a lot of 'drift wood' in the system [referring to teachers].*

M commented on the need to ensure that the huge financial input into SI was engendering the desired outcomes, and noted that “*putting equipment will not get the outcome the human aspect is important.*”

### **Summary**

The findings of this study show that greater responsibility for SI has been entrusted to schools, but not necessarily the concomitant authority and power that can allow them to act independently, for example, having the authority to recruit and dismiss staff. Practitioners who were interviewed (school supervisors and principals) and surveyed (teachers) assert that policies are not contextually or culturally fitted to the educational environment in T&T. They make this assertion, firstly, on the basis that the Ministry disseminates a broad policy and school principals are meant to fit it to their schools' contexts via school-based management; secondly, because their opinions are not taken into consideration in national policy decisions, even when they make specific suggestions for improving their schools.

Both school principals and supervisors state that SBM is not working properly. In essence, school supervisors and principals are saying that decentralization is rhetoric while centralization is the practice. Nevertheless, school supervisors indicated that regardless of the Ministry's shortcomings in instituting decentralization, some principals may not have the commitment to change and take risks, and this is inhibiting improvement in student outcomes and organizational conditions at schools.

In terms of improving organizational conditions at schools, the current structural reform; upgrading of schools; establishment of leadership teams, departmental heads, and year deans within schools; and ongoing training of personnel are positive indicators. However, whether these structural changes have any impact depends on how well stakeholders are oriented towards the change and their involvement in decisions about how to change. The majority of participants in the study noted that their opinions were not taken into consideration in the design of national SI policies, throwing doubt on the extent of the stakeholder buy-in to ensure that change in the organizational conditions at schools does indeed occur.

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It will undoubtedly take some time for stakeholders' commitment to change to become manifest in school practices. Indeed, this is consistent with international SI theory and practice (Dalin, 1994; Fullan 1991; Harris & Chrispeels, 2006; Hopkins, 2001; Schmidt & White, 2004; Van Velzen et al., 1985). SI is not a one-off event, but a sustained effort to change and improve the conditions of the learning environment.

### **Towards a Model for School Improvement in Trinidad and Tobago**

The proposed model is normative, underscored by a collaborative theoretical approach borne out from evidence within the study that suggests a desire on the part of stakeholders for greater participation in policy formulation, decision making, and implementation. In other words, there is a desire to make SI more school-based in practice and not just in policy statements. Recognizing that such a transformation can mainly be facilitated through collaboration and negotiation (Ainscow & West, 2006; Levin, 2008), the model proposes that change should be school-based, and dialogue on how to improve schools and raise student achievement should emanate from schools as a result of collaborations with members of the wider community (including other schools); educational districts; school staff; teachers' trade unions; and parents and students to arrive at shared values, mutual understandings, and agreements. Further, that similar collaboration on how to improve schools and raise student achievement takes place among the central MOE and other ministries, for example, health, that are symbiotically connected to education, to arrive at shared values, mutual understandings, and agreements.

Evidence from the study shows that stakeholders want to participate in decision making, but that what they get from the MOE at the moment is limited. Hence, to ensure that there is real and not superficial stakeholder participation, when these groups meet to negotiate, the model proposes that there should be a formal legitimized space at the national level, comprised of representatives across the two groups mentioned with responsibility for policy formulation and implementation. This model therefore suggests a hybrid mixed approach that includes elements of both centralization and decentralization, with schools developing strategies for improvement in conjunction with support from the educational district and central ministry.

The model seeks to unite all the agents of change that influence teaching and learning to devise policies that are suited to improving individual schools, rather than the "one size fits all" approach that

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characterizes current SI initiatives. In this way, ambiguity of policies as they are incorporated into schools' development plans may be minimized, as implementers should have greater clarity of the plans they are enacting, because through representation at the policy-making level, in essence the policy makers and implementers are the same. Additionally, engendering shared purposes and understandings among stakeholders is more likely because all stakeholder groups are represented in policy decision making and implementation (see Figure 2).

The model identifies the roles of the singular stakeholder groups in engendering improvement in schools and the ways in which they should interact. The three coloured rectangular-shaped figures represent the different stakeholder groups. The curved arrows indicate continuous collective collaboration, dialogue, negotiation, engagement, and feedback among these stakeholders about teaching and learning, to fulfil shared goals to realize improvement for individual schools and students. The blue rectangle represents the policy-making space that unites representatives of various stakeholder groups to make decisions on SI policies and strategies for their implementation, while cognizant that customization may be necessary to fit individual school needs at the point of implementation. The model recognizes that there may also be singular roles for the National Parent Teachers Association (NPTA) and the teachers' trade union, the Trinidad and Tobago Unified Teachers Association (TTUTA). There is overlap among the roles of some agencies, particularly in terms of leadership, monitoring, accountability, support, and capacity building. This is intentional, as the study highlighted that the performance of these roles, which are most necessary for improving schools, are most ineffective.

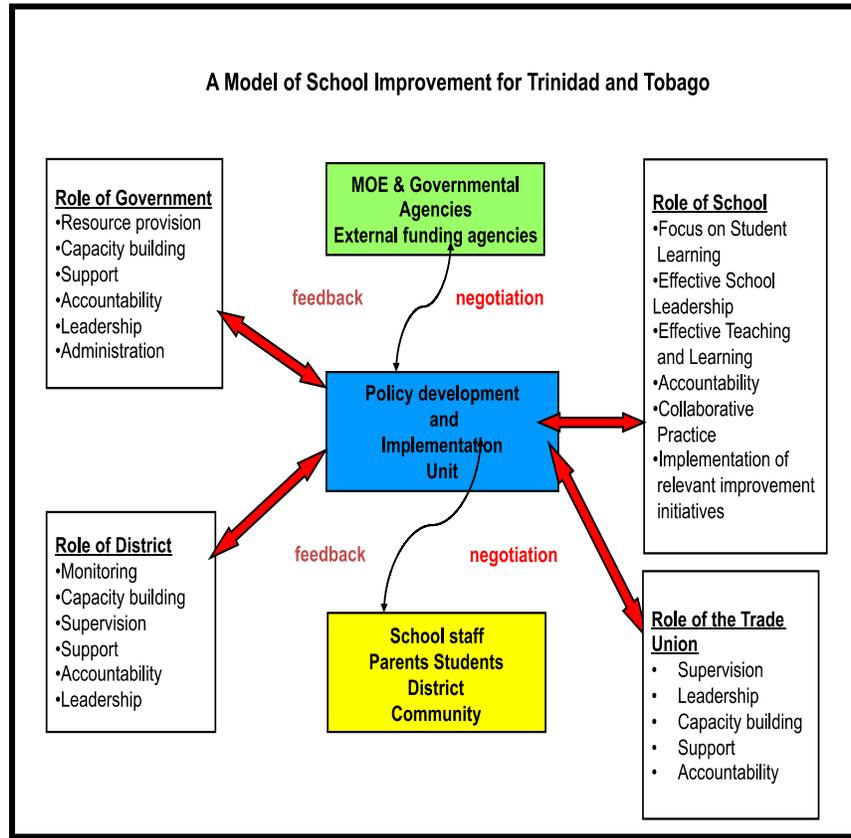


Figure 2. A model of school improvement for Trinidad and Tobago.

### Conclusion

Educational reform in secondary schools in T&T is necessary, particularly as the country envisages acquiring developed status by 2020, and as such the Ministry's attempt to engender improvement is creditable. The current reforms are being undertaken with substantial resources and it is important to evaluate whether this financial investment is realizing good results, particularly in terms of raising student achievement and improving organizational conditions at schools. This was the primary aim of this research, and the evidence from the majority of practitioners who participated in the study reveals that the current reform is not sufficiently engendering improvement in student outcomes and organizational conditions at schools, mainly because:

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1. school improvement practices derived from foreign contexts are not sufficiently customized to suit T&T school context and culture;
2. the Ministry's approach to the reform tends to be more prescriptive than facilitative, that is, top-down;
3. the Ministry is not engaging meaningfully with stakeholders, particularly policy implementers, to find out what school improvement looks like from their point of view, and using their opinions to formulate policies and initiatives;
4. monitoring and supervision of the implementation are insufficiently rigorous;
5. capacity building support in terms of resources and training are inadequate; and
6. some school leaders are not sufficiently empowered to lead improvement at their schools.

Notwithstanding the views of practitioners in the study, the Ministry's stated approach to educational reform is that it is bottom-up—school, student, and community focused—consultative, and supportive. This stated approach stands in contrast to the views of the majority of practitioners in this study. Hence the paper argues that for the current initiatives to effectively contribute to raising student achievement and improving organizational conditions of schools, the rhetoric of context-specific SI and stakeholder participation must be transformed into the reality of practice.

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