SUBSCRIPTION INFORMATION: Caribbean Curriculum is published once a year. **Price per issue**: TT $20.00 in Trinidad and Tobago. US $5.00 in the Caribbean, and US $10.00 elsewhere. *Prices include postage and handling*.

ISSN 1017-5636

CARIBBEAN CURRICULUM

Volume 20

2013

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Caribbean Curriculum
Vol. 20, 2013, 1–29.

POETRY TO RAPSO:
Localized Narrative in the Classroom

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This qualitative research paper explores the experiences and perspectives of two long-standing teachers and poetry enthusiasts who use poetry and Rapso in their classrooms. The researchers use self-study of teaching and narrative analysis to share their stories and explore the ways in which personal and localized materials inform their teaching. They employ a "critical friend" to facilitate verification of the narratives and findings. The emergent themes, while identifying challenges, portray Rapso in the Poetry and the Poetry in the Rapso as rich in relevance and opportunities for nurturing a joy for learning and teaching generally, and reading and cultural identity more specifically.

"West Indian children live poetry," asserts the Caribbean Examinations Council (2011, p. 8), yet they are deficient in their appreciation and understanding of this very creative expression. Teachers are encouraged to address this inadequacy by placing the learners' knowledge, aesthetics, and individual sensitivities centre stage. In Trinidad and Tobago, the emphasis on the Secondary Entrance Assessment (SEA) at the primary level—and further high-stakes assessments to come—leaves poetry, as in similar contexts elsewhere, at risk of being marginalized (Hughes, 2007). Many teachers who may have used poetry in their pedagogy are inclined to yield to the pressure of time and resistance from colleagues and parents.

There is a need to encourage such teachers to continue their use of poetry, while practising cultural modelling and student-centred pedagogy that incorporates popular oral literary and communicative styles. We assert that rather than continue the emphasis on Eurocentric poetry, still common in many former colonies, this love and use of poetry can also be used to explore and embrace local art forms as well as problematize local sociocultural and socio-economic issues.

Poetry to Rapso: The Context

Education has for a long time been espoused as the most effective tool for the future development and progress of nation states. Given this assumption, the Government of the Republic of Trinidad and Tobago has committed itself to ensuring that all of its citizens, regardless of their gender, class, culture, and ethnic origin, are given the opportunity to access positive learning opportunities (Trinidad and Tobago. Ministry of Education [MOE], 2008). To this end, it has invested heavily in its education system, and has ambitious plans for improving quality as it seeks to achieve developed nation status by the year 2020. However, an analysis of National Test results for 2005–2009 showed that 53% of Standard 1 and 57% of Standard 3 students performed below the standard in Language (De Lisle, Smith, & Jules, 2010). This approach to the selection of students for secondary education and that of its forerunner, the Common Entrance Examination, follow the College Exhibition model of the colonial period. De Lisle (2012) contends that despite concerns inherent with high-stakes models, high societal legitimacy, expectations, and values continue to be associated with these tests. As such, there is an overarching emphasis on test scores for secondary school entrance, which compromises reform initiatives, including more student-centred and culturally responsive pedagogy.

Literacy

One critical reform initiative is in the area of literacy, which is central to facilitating national, community, and personal growth. Students facing significant challenges with reading, or those who have been disaffected based on their experiences, are subsequently at a higher risk of reading underachievement in secondary schools (Stanovich, 2000). In Trinidad and Tobago, as elsewhere, this group is largely comprised of boys from low-income families (Allington, 2006; Miller, 1994). One important approach to addressing this literacy challenge has been the shift in pedagogical style from teacher as "dispenser of knowledge" to more constructivist or interactive roles. This incorporates the learners' sociocultural background, prior knowledge, skills, and abilities within a more relationally engaging classroom context that facilitates cultural modelling, student centred pedagogy, and the use of oral traditions (Accioly de Amorim, 2009; Freire, 2000).

Using poetry for literacy development. Poetry offers an approach to literacy development that incorporates performance, self-reflection, culturally and socially relevant curricula, accessible resources, and

opportunities for enhanced relationships within the schools (Hughes, 2007). Poetry can also encourage learners to share thoughts and feelings, which would not otherwise be expressed, in a non-threatening way (Lynch, 2009). Learners can feel safe to express anger, fear, hostility, and other negative emotions, which facilitates learning and creates space to focus on positive liberating emotions.

Poetry can be used effectively to engage all genders, interests, and microcultures. Tompkins (1998) notes that poetry has broadened its identity to include songs and raps, word pictures, memories, riddles, observations, questions, odes, and rhymes. Poetry can include actions like clapping, dancing, rapping, and tapping rhythms that embrace diverse learning styles. One observes how quickly children learn the jingles of advertisements, an indication of language awareness and a prerequisite for literacy. Rhymes have been used in education as an aid to memorization, and after several years many still remember, "Can a pig dance a jig for a fig?" and "Dan is the man in the van" (Mighty Sparrow, 1963). Furthermore, poetry reflects the sound patterns of the language we use, reinforcing phonics and spelling. This can be used to enhance the skills needed to become good readers, writers, and speakers. Poetry can also enrich learners by offering new experiences and worldviews, while embracing a variety of learning styles (Weaver, 2007).

Why consider local forms of poetry? The majority of Trinidadians and Tobagonians (Trinbagonians), regardless of socio-economic status, use the vernacular when speaking with peers or in informal situations. Language and dialect are the direct voice of the people and can facilitate unique connections:

> A group's sacred history is told in the vernacular not only to give each member of the group an understanding of where they come from but also to impart to them proper behavior and the ways in which they maintain group cohesion through ritualism and ceremony. (Holm, Pearson, & Chavis, 2003, p. 14)

Working against social inequalities and towards enhanced and improved learning environments, we must make classroom material relevant to the student's daily experiences and understandings (Ladson-Billings, 1995).

Failure to value the local, along with the interpretations and perspectives our students bring to the classroom, means *othering* ourselves. At the very least, we should provide equal forums for the exploration of local art forms. We may indeed encounter significant resistance both to and through Rapso, but the educational value of the art

form in history, social studies, and literature classes, and beyond, is worth any challenges we may face as educators.

Rapso as Poetry

Among the localized art forms in Trinidad and Tobago, identified as the poetry of Calypso, is the musical form of Rapso. Described as the power of the word in the rhythm of the word, the consciousness of Soca, and as street poetry (Côté, 2012), Rapso, with anthropological connections to the chantwell or West African griot (from which the Calypso was also born; Aiyejina, 2005), continues to grow in popularity nationally and internationally. The term *griot/griotte* refers to the oral historian and commentator—the archivist of the people's tradition. The roles of the griot(te) are manifested through song as historian, storyteller, poet, philosopher, genealogist, advisor, social commentator, and advocate (Hale, 2007). Griots/griottes need to be able to wittily extemporize and maintain the traditional message without error (Oliver, 1970). The terms *griot* and *griotte* have been increasingly used to represent artistes in the oral tradition.

Rapso reflects the biting lyrical mastery of the Midnight Robber and the Pierrot Grenade—traditional Carnival characters—and is identified as more than just art; it is viewed as a nationalist, anti-colonial movement with roots in the Black Power movement of Trinidad and Tobago in the 1970s (Boyce-Davies, 2008). The main advocates and artistes associated with Rapso are committed to placing localized music centre stage and making a statement against neo-colonial elements (Sadre-Orafi, 2005). The blending of the poetic style with skin- and/or steelband-drumming is called Rapso *riddum* [rhythm] (Boyce-Davies, 2008), which historically evolved simultaneously with Jamaica's dub and the US's rap music forms. As this street poetry stands at the doorway of the classroom, Rapso artistes threaten to "boom up" his-story (and her-story) and to retell the story, demystify the truths, and set us free (3 Canal, 2008). These elements of Rapso, combined with those of more traditional poetry, offer a means of bringing literacy to the students in ways that offer increased engagement and learning.

The Challenges

There has been some resistance to the time and energy invested in the use of poetry in primary and secondary classrooms, as well as concerns about classroom management. Some educators and parents might contend that incorporating or increasing poetry holds more challenges than advantages, given the hangar-type school designs and student

dispositions in many high-needs primary and secondary schools. London (2003) posits that one of the problems in the education system is its predilection for teaching to the test to prepare students for the next level. Indeed, in our experience, many teachers view student behaviour as a central issue and so consider such activities as being more potentially disruptive than engaging. For such teachers, the priorities remain the completion of the syllabus and helping students to develop the test skills necessary for gaining admission to a secondary school or institute of higher education in a competitive environment. They may be more inclined towards teacher-centred pedagogy and more traditional approaches to classroom management (George, Mohammed, & Quamina-Aiyejina, 2003).

As the focus on education continues to be on testing, more highly esteemed subjects like science, technology, and mathematics compete with poetry (De Lisle et al., 2010). Learners conceptualize, then, that poetry is not important, or at least not as important as reading comprehension, essay writing, and mathematics. How do we then frame and support the case of the teacher who recognizes student knowledge as the centre of pedagogy and practice, the power of the localized language and literature in helping our learners develop the language to talk about language, and the importance of recognizing and communicating nuances of feeling, tone, and meaning to citizenship education?

Specific to Rapso as a form of poetic spoken word, the use of the vernacular in academic settings has created much contention and is often deemed inappropriate in these situations (MacIntosh, 1999; Siegel, 2007). Since 1975, the Government of Trinidad and Tobago has acknowledged Trinbagonian Creole as a language in its own right (Youssef, 2004); however, it is rarely utilized purposefully in classrooms and is primarily considered a transitional concession for students in the primary grades (MacIntosh, 1999). It is within these contexts that we seek to share the perspectives and lessons of two teachers who utilize poetry in their classrooms and their journeys to the use of the localized poetic form—Rapso.

The Researchers

Neither Beulah nor Dennis had teaching as their first choice for careers; they both wanted to be writers of poems . . . of stories. Beulah's father, a labourer in government service, wanted her to become a public servant and thereby achieve upward mobility. She chose teaching due to the affordability and access of teacher education programmes. Coming from an urban setting in northwestern Trinidad, Beulah has been teaching in

the primary school sector for about 40 years in both urban and suburban settings. She has always written poems and has had a willing audience of her fellow teachers through the years. She obtained her master's degree in Educational Studies from the University of Sheffield, with special emphasis in Caribbean Studies. She is currently a doctoral student and has a special interest in investigating how our historical and cultural heritage shapes our educational plans and policies.

For Dennis, there was no plan. It was essentially a journey of opportunity. He believes that everything got in the way of writing as a career. First there was a question of funding and the fact that writing was not seen as part of any realistic expectation; his parents expected him to pursue a more grounded career. He was guided toward a career in teaching by an employer. While having a love for poetry, Dennis has not shared his mini-excursions into poetry writing. Over the years he has occasionally been moved to write a poem that primarily reflects his perspectives on various events. He teaches courses in Diversity Studies, Inclusive Education, and Special Education in rural New York.

Jointly reflecting on our journeys of teaching and learning, we have found the path exciting, harrowing, frustrating, rewarding, and rich. Our interest in this research began during a conversation that occurred after we [Beulah and Dennis] had been out of touch for many years. We had met some 38 years ago when we were colleagues at an urban elementary school. We began to reminisce about our experiences in and out of school, especially related to poetry and spoken word.

As teachers and partners in a collaborative community of learners, we invited a much younger colleague, Dyanis, also in education, to share her perspectives as our critical friend (Samaras, 2010). Dyanis, too, has a special interest in poetry, as its catharsis guided her through adolescence. She is currently a doctoral student in Virginia doing research in multicultural education, critical pedagogy, and the teaching of English as a Second Language. Dyanis, also from Trinidad and Tobago, has known us both since childhood, and although she has not interacted with Beulah since that time, felt comfortable offering critiques and lending her voice to the discourse.

The Inquiry

We began this exploration of the ways in which our shared experiences have brought us to the intersection of Rapso and pedagogy in our diverse learning and teaching contexts with a self-study approach. We chose this approach due to our belief that it would best help us to reflectively move toward truly understanding our teaching (Loughran, 2004), and to

navigate the resistance and joys of teaching as it relates to poetry and indeed personal, professional, and cultural identity.

Self-study research is an emerging methodology with borrowed methods, and is both praised and criticized for its mongrel form (Bullough & Pinnegar, 2001). Hamilton and Pinnegar (1998) define self-study as:

> The study of one's self, one's actions, one's ideas, as well as the 'not self'. It is autobiographical, historical, cultural, and political . . . [and] also involves a thoughtful look at texts read, experiences had, people known, and ideas considered. (p. 236)

To truly be considered research, however, self-study must connect biology and history to context and ethos (Bullough & Pinnegar, 2001). LaBoskey's (2004) five elements of self-study guided our research to be self-initiated, focused, aimed at enhancing our practice, and collaborative; to use multiple, mainly qualitative methods of data collection; and to define validity in terms of trustworthiness.

We began our self-study through the composition of autoethnographic narratives addressing our experiences with and of poetry through three naturally emerging general lines of inquiry: poetry and ourselves, poetry and our teaching, poetry and student achievement. Narrative is central to the methods used in self-study research (Craig, 2009), and our use of an autoethnographic lens provided the space to explore all the issues we identify as crucial to answering the key questions (Feldman, 2003), including how our evolving selves affect pedagogy (Coia & Taylor, 2006). Our initial narratives responded to:

- What are our memories of poetry as students?
- How did we become teachers and lovers of poetry?
- How have we used poetry in our teaching?
- How have we used localized/local art forms?
- What are/were some of the challenges we faced?
- How might we use this inquiry to improve our teaching?

These early autoethnographic narratives allowed us to focus on the influences of culture on our [the authors'] lives, as well as to make connections to our cultural contexts and learning communities (Reed-Danahay, 1997); and to critique our *situatedness* in relation to others (Starr, 2010).

In addition to these narratives, we also used memory-work (Hamilton, Smith, & Worthington, 2008; Samaras & Freese, 2009) to reflect on past observations and to recall evocative pieces to be used as evidence. We

took notes during analysis of each other's initial narratives and used them to facilitate additional reflection, the development of new questions, and the expansion of our ideas as we connected poetry in practice to Rapso in the classroom, local and global social contexts, and the general educational context.

Collaboration, as one of the defining characteristics of self-study (Berry & Crowe, 2006; LaBoskey, 2004), guided our entire process from conception to final edits. Like Berry and Crowe, our distance necessitated that we conduct our collaborative enquiry primarily through email, which allowed each researcher to thoughtfully investigate each other's narratives and perspectives around the broad framework offered by self-study: How do we improve both our practice and the learning of our students? Our email exchanges allowed us to be both reflective and responsive about our classroom philosophies, practices, and objectives. As well, they aided us in streamlining the project as our discussion grew from poetry, into Rapso, and their numerous possibilities and intersections: "Reflective teaching [and researching] is effective when teachers have ownership of their learning process and when they are able to construct their own questions, use their own teaching examples, and theorize for themselves" (Coia & Taylor, 2006, p. 59). In this instance, we are at once the objects of the inquiry while at the same time conducting the inquiry.

Bullough and Pinnegar (2001) lend additional guidance to self-studies conducted using correspondence and/or email. They note that scholarly self-studies which rely on correspondence should provide the reader with a view of the inner thoughts and feelings of the participants; be coherent, structured, and provide convincing evidence; demonstrate wholeness; reveal and interrogate truths and contradictions; and provide engaging exchanges. We intended to go beyond the auto*biographical* self-study described by Bullough and Pinnegar, and to approach our data collection and presentation auto*ethnographically*, as detailed above, connecting our initial discussions and findings to the social context.

It is at this stage and with this intent that our critical friend Dyanis joined the conversation. The role of critical friend is significant as she is a trusted participant who:

> asks provocative questions, provides data to be examined through another lens, and offers critique. . . . takes the time to fully understand the context of the work presented; the outcomes that a person or group is working toward [and] is an advocate for the success of that work. (Costa & Kallick, 1993, p. 50)

In this role, Dyanis had to navigate the depth and breadth of *constructive* criticism, focusing on the goals and objectives of the self-study. Our critical friend helps to address the concerns for verifiability/validity in self-study methodology, and enhances the development of trustworthiness in the narratives, challenging or seeking clarification to the assumptions and responses of the primary participants (Bullough & Pinnegar, 2001). Much of this interaction also took place via email, though Dennis and Dyanis spoke several times by phone as they were both in the same country during that period. With our critical friend, we created space as mutual co-researchers to repeatedly review, reflect, reconsider, and revise until our central themes became clear.

Throughout all stages of this process, we employed aspects of narrative analysis, and were guided by Clandinin, Pushor, and Orr's (2007) eight design elements of narrative analysis. Representing the first two elements, our initial narratives addressed the personal, practical, and social justifications for our study, and in so doing named the phenomenon. Additionally, we were careful and intentional when considering the methods used to collect data, our analyses and interpretation processes, our positioning relative to other research, the style of our study, ethical issues, and the way in which we chose to represent both our process and our findings. We considered the contextual and the relational, examined and described the *commonplaces* in our data and analyses, and continued to think of our writing and research as a narrative act.

This process led us through our memories of poetry to unexpected explorations of the local, and specifically of Rapso. Through sharing this journey, we hope to contribute to the discussions of poetry use in the classroom, the appreciation of local art forms and cultural representations, and the application of these art forms to literacy education, affective education, and social justice.

The subsequent excerpts and analysis provide value for the construction, interpretation, and appreciation of the primary researchers as learners and teachers, while we [all the co-researchers] share, reflect, and learn from each other (Poirier, 1992). Trotman and Kerr (2001) remind us that personal reflection is critical to knowledge construction and related generalized insights. We purposefully use the combined *we/our* in order to distinguish individual narrative excerpts from notes resulting from joint analysis; our conclusions include the voice of our critical friend. Through this self-study we co-construct our narratives, and open up ourselves and our experiences to our critical friend and the community of readers, intending that the lessons learned and shared will primarily improve our teaching and learning. Far from being an exercise

in scholarly narcissism (Kaplan, 2006), we also hope that our findings and stories will inform school curricula, policy, and subsequent reform in the interest of the students.

Insights and Applications: The Lessons Learned

This study is the beginning of a social and pedagogical exploration; one on which we hope to be joined by other poets, Rapso artistes, and educators. As we moved through the cycle of review, reflection, reconsideration, and revision, we grouped our responses into five areas/themes. These comprise: remembering poetry, Rapso as spoken word, perspectives on poetry in pedagogy, resistance, and wider applications in education and beyond. We share with you a glimpse of our journey through excerpts from our autoethnographic narratives and poems; and hope, through our shared perspectives and developing analyses, to contribute to the conversation around the social and pedagogical possibilities of using poetry and Rapso in the classroom.

Remembering Poetry

Our memories of poetry [Beulah and Dennis] include an exciting blend of teacher voices and words like "elocution", "enunciate!", "t.h.a.t. That not 'dat' Dennis. Say the 'th'!" It included walks to the Savannah, passing cedar trees, mini field trips, and sitting or standing in circles for recitation or choral speaking. We both share early positive experiences of poetry. Beulah asserts that her early colonial pre-independence education in Trinidad and Tobago was "highly flavoured" with J. O. Cutteridge's (1986) *Nelson's West Indian Readers*. This also provided her first introduction to poetry.

> *These poems, after nursery rhymes which were predominantly English featured, of course, the English poets. Thus, the Beggar Maid by Tennyson telling the story of African King Cophetua's acquisition of a bride and Elizabeth Turner's "How to Write a Letter" and the poignant tale of Mary's drowning painted in vivid language in the "Sands O' Dee" by Charles Kingsley were among my earliest exciting journeys into poetic language.* [Beulah]

Beulah adds that British poets wrote even those poems dubbed West Indian. These included "Sonnet" by J. C. Squire (De La Mare, 1923, p. 369), which highlighted the terror of the localized person's first encounter with Columbus' ships and crew, along with "Trinidad: Iere

Land of the Humming-Bird" and "El Dorado" by Allister MacMillan (1922, pp. 9, 53).

For Dennis, also, poetry was a major part of his primary school experience. He submits that one of his earliest remembered poems, "The Seed," evokes rich memories of enunciation, and pausing, and even drama:

> *My elementary days were filled with poetry from West Indian Readers. Other poems that stay with me include "My Shadow," "The Spider and the Fly," "Dirty Jim," "The Last Buccaneer," "The Beggar Maid" [I still can visualize the drawing from the reading book] and "The Burial of Sir John Moore.*" [Dennis]

He associates poetry reading with short field trips and microteaching sessions on history or geography. For him, it was an exciting time of the school day, which was replicated in other classes. He describes another teacher's style:

> *She would wear pants [which was a big thing then] and had a bamboo mat that she would spread on the ground. We all would form a semi-circle around her. She would read a poem very expressively and we would start the process of exploring words, enunciation, meanings, and synonyms. It would be both as a choral /group reading and individual reading . . . but many associations would be made to history*. [Dennis]

However, poetry during those years was not limited to the classroom; he can still easily recall both the lines of a poem memorized for a village competition and of "Apodocca," which he associated with his father's Saturday morning list of chores in particular.

We contend that it was not until much later that we encountered poetry written by West Indian poets. Beulah encountered Martin Carter and Slade Hopkinson, both Guyanese, as an adult; and for Dennis, it wasn't until teachers' college that he reconnected to poetry and even more slowly to a recognition and appreciation of *Caribbean* poetry.

These recollections were echoed in our conversations with our critical friend who is more than 20 years our junior. Poetry, mostly based on Eurocentric norms, had played a very important part in Dyanis' life as well. Our notes and conversations highlight the role of poetry in the lives of children and the pedagogical possibilities of tapping into that prior knowledge. They also bring to the forefront the continued emphasis on European-authored classical and contemporary literature, which, directly or indirectly, devalues the work of Caribbean authors. Although Caribbean poetry and literature are more visible in contemporary

Caribbean classrooms and society in general, we still have far to go to change the perception of the local in the minds of many educators (Carrington, 1999; Dowdy, 1999).

Perspectives on Poetry in Pedagogy

We both consider poetry to be one of the richest and most fulfilling experiences that a child can have:

> *The Trinbagonian child especially seems to be born with a knack for rhythm as can be seen whenever we see a baby at a function where music is being played. That child would move and sway as to the manner born*. [Beulah]

While celebrating the varied benefits of poetry, Beulah advises that educators using poetry to encourage students should also project poetry as performance and not just as written words to be analysed. For her, written words sometimes need the assistance of the voice to make meaning and feelings come alive. Poetry is best enjoyed and remembered when it is spoken with all the emotions in play, thus appealing to all the senses with its use of figurative language and its rhymes, rhythms, and reasons.

Dennis takes a more personal perspective in sharing his views of poetry as pedagogy, relating it first to his experiences as a student:

> *I think from since my earliest experiences of learning and teaching, poetry was recognized as pedagogy. I associate it with learning as edutainment. Focused, purposeful fun*. [Dennis]

Poetry remains for him the strongest source of this energy and a means of engaging students, and he infuses poems through many of the courses he teaches at graduate school:

> *I celebrate the reality and the escapes that could be afforded through the use of poetry in class. My students laugh, they argue, they get angry, they are offended, and they deconstruct and reconstruct meanings and perspectives. It brings emotion and rhythm to the classroom and to learning*. [Dennis]

When teacher-candidates utilize poetry as forms of representation, expression, and engagement, their appreciation of poetry is enhanced. They are more likely to utilize it in their future classrooms to the benefit of their students, including those with exceptionalities. Benefits include increased comprehension, appreciation, social skills, and a sense of community (National Reading Panel, 2000; Westgate Pesola, 2008).

One of Dennis's greatest challenges as a lecturer, like so many others in our experience, is time:

> *For so many of my students they want to get it over with - the book chapter, the content mastery, or the exam. It becomes an ongoing struggle semester after semester to share with them that college is not just training for an occupation; it is preparation for a better way of life and appreciation of life and those who live. I strive to blend poetry into the curriculum so that my students can recognize poetry as medium and that they might "see' the multilingualism of poetry. I teach courses on inclusive pedagogy, leadership, and advocacy leadership*. [Dennis]

Including the Localized: Rapso as Spoken Word

Embracing the localized was somewhat of an issue for Dennis. Associating with steelband enthusiasts, calypsonians, and the like was generally frowned upon. He had however developed a love for theatre and then, while in teachers' college, educational drama. Much of his initial appreciation of the localized art forms was due to the extraordinary commitment of Freddie Kissoon and the drama group, The Strolling Players. Dennis recalls that while he was at teachers' college, he was exposed to what might have been Rapso:

> *I identified with the message but never got into it; nor did I see it as poetry in the sense that I see it now. My early impression was that it was a form of social protest dialect poetry, accompanied with drumming. It was a time when I was shifting my creative energy from poetry to drama. That era was characterized by a lot of protest; I saw Black Power as really anti-White and anti-establishment protest. Then, too, poetry to me was mostly something shared in Standard English even if addressing local issues*. [Dennis]

A deepening appreciation of calypso and the lyrics of calypso as social commentary, along with his first teaching of a Caribbean Studies class on Resistance, brought Dennis to calypso for use with his New York graduate students, and by extension to calypso as poetry. The class readings of calypsoes as poetry helped his American students to navigate accent and musical rhythm. This in turn brought him face to face with Rapso. He would use it to engage his students, to have them construct poetry and link it to calypso or Rapso rhythms. It is through the performance that the students actually connected to the narrative, Dennis notes:

> *That was easy since I hold the view that Rapso is really calypso as the spoken work in Trinidadianese with the drum and performance as core aspects. Any poem restructured into a local style [Trinbagonian] of speaking and performed using drumming as a vehicle might become a Rapso. While it might have roots in the African experience, the transformative Trinbagonianizing of it as ours allows the adding of a chutney or parang rhythm or a dholak or a sitar or a mandolin or a cello for that matter*. [Dennis]

It is the performance that makes Rapso so intriguing, Beulah contends. Yet while acknowledging the role of performance and its artistry, she shares that she did not always support the idea of Rapso as pedagogy:

> *At first, I thought that at best it could be used for enjoyment . . . the 'riddum' of the word as opposed to the power of the word. However, during the academic year 2009–2010, I observed that our children were not as enthusiastic about reading and literature as former pupils*. [Beulah]

We both felt the need to employ the use of poetry to ignite or reignite their passion for learning. Language was so much more than reading and writing. It was about articulation, joy, confidence building, enhanced communication, collaboration, and friendship. Poetry was not simply passages to test comprehension found in examinations. It was "us," something living and vital; something to be enjoyed that made one feel alive:

> *We read and analyzed yes, but we also created our own poems and performed them along with others' works. Pupils were exposed to a variety of genres. It was an easy transition into Rap and Rapso and Calypso*. [Beulah]

Resistance to and through Rapso. Unlike Dennis with the freedom to negotiate the curriculum at university level, Beulah has to deal with resistance that could include some educators and parents:

> *When I introduced Rapso to pupils, it was at first a hard sell. I found that it was not at all known. These [Trinidadian] pupils were more aware of American and Jamaican art forms and preferred the rap that we were previously practising. Nor was it an easy sell to the adults—myself included—it is not easy to sell the idea of using local art forms as a teaching tool; the use of the vernacular being one reason for this reluctance. As a matter of*

> *fact, I was not always keen on Rapso as poetry at all until I really listened and then the rhythm in the word 'caught' me*. [Beulah]

Educators and parents alike react to the evidence from the National Test scores, contends Beulah. Having spent so many years in the classroom, Beulah can attest to the fact that Trinbagonian children are experiencing tremendous difficulty in switching from their native vernacular to the standard form of English. Standard English is the language of the books and the language of the examinations. Beulah, however, questions whether the answer to this dilemma is to be found in denying students the only form of expression some have:

> *I think not. If we are going to ask our children to express themselves orally or through writing in their own context we are automatically entering the realm of the vernacular, the language of the home, the village, the community. Children are inundated with this language at various times and especially at Carnival. It is the language of the oral tradition; the folk tales, the robber talk, the calypsos, the soca and chutney soca, and the Rapso. They sing it, they dance to it, and they enjoy it. It is communication and not something of which to be ashamed. It is the language of our Caribbean ancestors*. [Beulah]

Rapso as deficit pedagogy. Beulah's narratives highlighted a concern that the emphasis on Standard English, and the perception of the vernacular as an inferior language, might foster disrespect and the misunderstanding of local art forms and the elders that communicate them, "*especially in a time when respect is so greatly needed*":

> *I believe that what we ought to do instead is to better communicate to our students that we have two languages and that they may be appropriate to use in differing circumstances. The Standard English is important not because it is better but because it is universally understood and accepted. Thus we must become proficient enough to make the switch easily from one to the other*. [Beulah]

Beulah suggests that localized art forms should not be negated because some educators and parents might fear that utilizing them in the classroom would be counterproductive in efforts at achieving success in teaching Standard English:

> *These forms belong to us and even if we neglect them at school, children will still be exposed to them in their daily lives. So let us*

> *use poetry in our teaching/learning and let us proudly embrace and include our art forms as part of our heritage*. [Beulah]

This position is supported by Sontag (1992), who argues that native dialects are not inferior but, rather, should be celebrated as a second language that serves as a bridge to students' personal and professional development. Siegel (2008) contends that a positive use of dialects serves to motivate students and provide many critical literacy opportunities. More recently, George and Lewis (2011) asserted the need for educators to bring localized knowledge, including language use, into the classroom. This, they contend, is critical if we are to really understand the role of knowledge in our education. Seunarinesingh (2010) has identified the use of authentic texts that reflect localized knowledge as an important element in teaching language arts using Trinidad Creole as a first dialect.

Beyond the concern about using local dialect(s), there are other challenges and considerations when we begin to conceive of Rapso as pedagogy. Trinidad and Tobago, as a twin-island state of just about 1.3 million people, proudly celebrates its multi-ethnic and multi-religious society. In addition to religious objections, Beulah expresses concern about how some educators from the East Indian diaspora might respond to Rapso, with its roots in African rhythms, drumology, and artifacts: "*especially when some [members of the East Indian diaspora] seem to be having difficulties with accepting the steelband, which is the nation's national musical instrument*."

Then there is the religious element. We wonder about the readiness of fellow educators, parents, and other stakeholders to accept Rapso as a positive pedagogical tool for all:

> *Bear in mind, that there are those who still associate calypso, pan, Carnival, Chutney, Eid, Divali as belonging to the* ***other****. We still have some journeying before we embrace all that makes us Trinbagonian. And this is not limited to religion or ethnicity*. [Dennis]

Beulah reflects on the challenge of encouraging educators and parent stakeholders to recognize Rapso as another form of social consciousness on the part of the community:

> *. . . awakening consciousness to universal human condition . . . humans everywhere oppressed, dispossessed, downtrodden; not simply a black rebellion thing strengthened by the 1970 Black Power Movement*. [Beulah]

Further, Beulah adds: "*Rapso is not just about protest. It is about expressing hopes and dreams for a brighter, more just society where everyone has the right to equality and happiness*." Rapso as poetry with rhythm can be used to raise the consciousness levels of students as future citizens, many of whom function in a "*culture of silence.*" She also acknowledges the possibility that some educators might see Rapso as a course in rebellion, and that it would take those educators who have broken through the silence to feel free enough to encourage others to use Rapso.

While recognizing the differing contexts that impact Beulah's use of Rapso as poetry, Dennis offered a different perspective:

> *Should we have to be given the ok to use Rapso? It's ours. It's our core feelings! The nation's core feelings. While I know there are some that might have issues with the local language or dialect as some might prefer to describe it, this is just a colonial vestige. We need to move beyond Trinbagonianese [Trinidad or Tobago Creole] as "bad English" not appropriate for school contexts*. [Dennis]

Dennis suggests that the real challenge is the attitude of the *same* people, including educators, who frown at the use of the pan in schools or churches, and the use of shirt-jacs and Nehru-cut shirts or dashikis:

> *I remember when theatre as performed by the Strolling Players which used local 'dialect' was not considered as representative of the educated theatre goers. That has certainly changed. This is not just a class issue: there is also a race issue and a potential church issue. Nevertheless this is Trinidad and Tobago and using Rapso should be no less accepted as ours. It should be welcomed along with Parang . . . and Chutney . . . .* [Dennis]

We as educators need to respond to contemporary challenges to address social inequalities, transform lives, and address diversity in education. We need to be more conscious of the role of culturally responsive teaching and citizenship education in a multicultural society:

> *Certainly to make Rapso acceptable, and in the interest of our anthem's insistence and determination that every creed and race should find an equal place, there must also be a readiness to embrace and infuse into our education other art forms which embrace our cultural diversity*. [Beulah]

One solution to the problem of failure in Standard English could be found in giving more exercises in code-mixing, a form of code-switching

(Cheng & Butler, 1989), to support what Youssef (1996, 2004) terms our cultural *varilingualism*; or, more specifically, our communicative competence on the continuum of basilectal, masolectal, and acrolectal Creole, and Standard English in specific and appropriate social situations. A strategy she uses is to sometimes ask students to translate a piece of writing from the vernacular to the standard, and vice versa. For example, students can be asked to rewrite this piece of Rapso into Standard English:

> I come to drink from yuh horn ah plenty
> For right now ah say meh belly empty
> I come to drink from yuh horn ah plenty
> For right now ah say meh belly empty
> They belly full but we hungry
> An right about now we angry
> An the reason that we angry
> Is because we belly hungry
> A hungry man, is a angry man
> Ah just want yuh to understand
> Yuh know they say empty bag can't stand
> A hungry man is a angry man (3 Canal, 2009)

Similarly, Beulah notes:

> *This moves a poetry lesson into the realm of grammar lesson. These types of activities are practical examples in curriculum integration and can generate lots of enjoyment especially if they are done in groups and pupils are afforded the opportunity for sharing with their peers*. [Beulah]

Going even further in this exploration, Dennis has used 3 Canal's "Boom up History," Shadow's "Poverty is Hell," and Ella Andall's "Missing Generation" for critical analysis, and as Rap and Rapso [without the accent] with his graduate course "Diversity and Advocacy in Education":

> *Once we paraphrase the lyrics to ensure that they understand the terms and explore the contexts, I find my students to be most engrossed and engaged. They have volunteered the lyrics of popular rap and American pop songs and we have found it to be a powerful means of mobilizing class community and a sense of advocacy and appreciation for the importance of social change*. [Dennis]

Influence on Pedagogy

Beulah shares her perspective, after decades of teaching, that many teachers who are faced with open, overcrowded classes focus on completing the syllabus and successful completion of the exam. Discipline and productivity are the overall goals, and as such the key pedagogical tools are control and power. Her concern is that with the emphasis on discipline and productivity, we run the risk of "silencing" the student and stunting his/her growth. As part of the responsive process, she shares:

> Cut out the tongue
> So that he cannot speak
> Cut off the hands
> So that he can no longer write
> Cut off the feet
> So that he cannot walk the distance
> It takes to complete the journey
> To freedom.
> Squeeze him into submission
> Then press him into the mould
> Of the acceptable child
> Chain his mind
> Let him not explore nor analyze
> Or think higher thoughts
> Tell him to shut up
> Keep him even as you are
> Silent in the face of ills
> Rejoice that you have made him
> Into the image of yourself. [Beulah]

It is this concern that pushed Beulah from her poetry being personal to her readiness to use poetry, choral speaking, Rapso, and any other pedagogical tools to harness the creativity of the students she interacts with.

For Dennis, his concern is that there are increasing numbers of persons becoming teachers, even special education teachers, who have no *hunger* for learning, and no *fire* to become advocates or to empower marginalized students. Dennis sees this attitude that "*It's just a job*" as a threat to quality education. He is inclined to challenge his teacher-education candidates to review their philosophical bases, their understandings of the purpose of education, and their readiness to see the "other" as partners. He pushes for their recognition of their privilege;

even challenging them to be experts of their own learning. Here, Dennis too shares a poem:

> *Differing Perspectives on Teaching and Learning*
> I came to this place to teach teachers
> to help with their liberation
> to inspire towards a position
> where students are not subjects but partners
> I travelled across the sea, over mountains
> from a multi-coloured to a white world
> from the heat to a cold
> to share that learning is not a cup but a fountain
> yet you like the forest I flew from
> want me to be Papa Bois protector . . . invigilator
> assuming that you the learner
> must learn the rhythm without beating the drum [Dennis]

Our concern for our students goes beyond that of their schooling, toward a broader concept of education. These two reflective and responsive pieces of poetry offer insight into how, as researchers, we each connect our practice and our personal perspectives, while always holding the concerns and interests of our students at the forefront of our lesson planning and instructional strategies. Poetry and Rapso, as poetry in the classroom, have not only diversified our classroom activities, but have also enriched our understanding of effective and meaningful teaching and learning.

Wider Applications: Citizenship Education and Social Justice

The inspiration to use localized poetic expressions is also a manifestation of concern, and even anger, about the role of education in personal and academic liberation. We both, coming from working-class homes and being first generation university-educated, have a strong sense of the role of educators and education in providing hope to students in depressed or socio-economically disadvantaged communities.

We strive to give voice to our students, so that they might illustrate their own need for social justice. Here, Beulah shares a poem from one of her students as an example of this type of expression. She was a Standard 4 [Grade 5] student who felt keenly that one comment to a friend should not merit the wrath of her former teacher and the embarrassment of being made to stand out. One of the sad things about

this poem was that 'sir' [the teacher] died later that year and the students of the class were very distraught. Beulah adds: "*I don't know how she coped with his death. I did ask the class to express their feelings in writing but she did not turn in any*."

A Sad Day

I spoke in class to my friend today,
It was something simple that I had to say,
Sir saw me,
Called me, and made me stand up,
I felt like a little wet pup.
Facing the wall, I wanted to cry
I felt so sad; I just wished I could fly,
Away to you Lord, who see everything,
And can understand why I did such a thing.
I hated sir then, did not like him at all,
Because all my friends saw me there by the wall
I felt tired and ashamed all by myself
And I really wished Lord that you would send sir away.
But you don't want us to hate anyone,
You want us to obey and love everyone,
Especially Sir, who Mummy says loves me,
So I forgive him, Lord,
That I may be happy ©*MW*

Using Rapso in the classroom as more than a musical interlude is only the first step in the exploration of its potential to be the voice of a new generation. As students find lyricism within challenging life experiences and understand *the power of the word*, they can become both powerful orators and actors for social change. We find Rapso to be a dynamic means of presenting, expressing, engaging with, and constructing transformative knowledge. We expect that our initial analysis will bring critical perspectives to the discussion table, and believe that in sharing our experiences and voices as educators, other teachers will be motivated to utilize Rapso and other local and localized poetic approaches to engage and empower learners. This conversation can extend beyond the Caribbean into any community discussing the use of the vernacular, or other localized expressions and art forms, in education.

Conclusion

We see Rapso as a Trinbagonian representation of spoken word. It is performance poetry that simultaneously builds on and enriches the art form. For many of us, the traditional sonnets of English class seemed so far removed from our realities, that a chance to explore multiple forms of poetry would have provided a more well-rounded literary experience; Rapso is a form of poetry that bridges the classical and the cultural.

Using Rapso in the classroom should not be any more complicated than selecting any other content for the class. Institutional support is welcome but not a necessary part of the successful classroom application of Rapso. The way that Rapso can be used in the classroom depends on the objectives for the course, but once these objectives are set, it is not difficult to find ways to use multiple poetic forms to achieve them. It can be used if the desire to do so is there. Teachers may not be able to use it in their classes every week, but they can include it as a form of the written art when considering individual pieces for inclusion. Due to some of the uniquely cultural messages in Rapso, its relevance in Caribbean classrooms is clear. Once we discard the perception that foreign authors and literature are more important, Rapso and other local literary forms would no longer be relegated to Carnival time but would be infused throughout our curriculum as a unique art form.

Education is more than just about the content students need to gain certification for employment or further study; it can also be a form of personal and political commentary for disenfranchised youth, and a space of openness and freedom. Rapso, in turn, can be used for far more than just the exploration of the artistry of the written form; it has both the potential as an art form to foster space for teaching and learning and for unpacking social practice. Teachers and learners can investigate knowledge construction, and how and why knowledge is legitimized by the dominant culture of the European ideal. Rapso is the voice of social justice spoken in the language of the common man. Making the use of Rapso in the classroom inclusive of all macro and micro cultural groups can be instrumental in fostering the types of intellectual resistance needed for the continued development of a united, just, and equitable society.

The narratives reveal poetry and Rapso as poetry as very much alive in popular culture. We acknowledge that some stakeholders might be resistant to Rapso as a curriculum initiative because of its association with "resistance," as this could prove to be a distracting element when students should be fully engaged in academic activities. These distractions, though, can be monitored and directed by teachers as they

focus on the objectives of the activity. Another perspective sees Rapso as a dynamic means of presenting, expressing, engaging with, and constructing transformative knowledge. It is not just rooted in African culture; it is Trinbagonian. Rapso continues to evolve, blending different rhythms and representations, while essentially maintaining its mission for advocacy and social change. We want to extend this to citizenship education.

Self-study was particularly helpful toward this goal as it encouraged us to investigate the self and how it relates to our pedagogy:

> It is only when you change the lens through which you view student learning—or your own practice—that you discover whether a new focus is better or worse. But if you never change the lens, you limit your vision. (Costa & Kallick, 1993, p. 49)

Using an autoethnographic lens to look at our professional practice and personal values within an educational context created the space for us to expand this exploration within the broader context of local and even global society. Like Loughran (2004), we find that the use of self-study created:

> a focal point for those pursuing a better knowledge of their particular practice setting and the work of those with a concern for teaching and learning in parallel fields (such as reflection, action research, teacher research, participant research and practitioner research). (p. 9)

Without the addition of our personal experiences we would have been unable to examine the ways in which Rapso is (and can be) manifested and utilized beyond our classrooms and comfort zones. This combination was in fact vital to our ability to explore Rapso's potential as more than artistic representation.

We all [Beulah, Dennis, and Dyanis] share our pleasure with having the opportunity to reflect collaboratively as co-researchers, friends, poetry lovers, and teachers committed to student-centred, culturally responsive pedagogy. The experience facilitated much reflective practice, celebration, and opportunity for change and renewal. In sharing our stories and discussing the implications of the use of poetry and Rapso in our teaching contexts, we have found an element of motivation and sustenance. We propose to continue using Rapso as a pedagogical tool that facilitates greater levels of engagement by students, a dynamic interactive approach to presenting content to students, and a means by which students can memorize key information, demonstrate their learning, and advocate on behalf of themselves and others.

We anticipate that this self-study could be used to further explore the relevance of and challenges to culturally responsive pedagogy, bringing needed focus to the role of citizenship education and social justice teaching and learning in multiculturally rich countries like Trinidad and Tobago. Further, we believe that in sharing the experiences and voices of these educators, we will be expanding and sharing knowledge (Trotman & Kerr, 2001), and that other teachers will be motivated to utilize Rapso and other localized poetic approaches to engage learners. Reflections should always bring positive change:

> *Looking back at the pleasure that poetry has always brought to my life inspires me to want to share more of that love and to encourage other teachers to do so. We who have had such a rich exposure should, if we are in place to do so, try to promote poetry as a great teaching tool. So come let's read to them a poem*. [Beulah]

We conclude with a collaborative piece:

> Learned and still learning friends
> and companions
> This is a son and two daughters
> of the notorious rambunctious
> scurrilous mischievous
> Papa Lexicon
> King of the Pleasure Readers
> or so yesterday he called himself.
> Please do not confuse us
> with our cousin
> Peirrot Grenade or further
> Forest keeper, Uncle Papa Bois.
> We're not here for scaring
> Nor despairing
> but for sharing
> how this paper
> through collaborating
> strengthened us!
> We rediscovered hope
> lost in 'plantation' schooling,
> Respect for the 'Other'
> diverse learners *inclusive*.
> Using emails and texts
> We remembered
> Our role to inspire

young citizens with joy of reading.
Time was scarce . . . and there was
no shortage of
Frustrations on finding
Emergent themes that improve teaching
Collective narratives exploring
Cultural ties
as our Nation sighs . . .
'Signs of the Times'.

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Caribbean Curriculum
Vol. 20, 2013, 31–51.

DIFFERENTIATING INSTRUCTION: Experiences of Pre-Service and In-Service Trained Teachers

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This study sought to investigate what pre-service and in-service trained teachers understand by *differentiated instruction*, and the extent to which they practised differentiating instruction in their classrooms. Three hundred and seventy-nine participants were randomly drawn from selected primary and secondary schools situated in the north-eastern, central, southern, and western parts of Trinidad. Findings of the study revealed that 58% of the respondents understood the concept of differentiated instruction. However, the majority of teachers did not differentiate content and product in their classrooms. While responses from participants in the questionnaire survey indicated that teachers generally understand and engage in process differentiation, responses from focus group interviews suggested that this type of differentiation is not a planned and conscious strategy. The study also highlighted various challenges related to implementation of differentiated instruction. These include the lack of time for planning adequate teaching, limited space for group work, and lack of administrative support.

Introduction

A major objective of many teacher education programmes is that prospective teachers develop sound pedagogical skills and competencies to meet the varying needs of learners in the classrooms. However, this ideal is not always achieved since some graduate teachers continue to experience severe challenges in bridging the gap between theory and effective classroom practice. If this is the general experience of pre-service and in-service trained teachers, then a case can be made for teacher preparation institutions to transform their programmes to reflect the realities of 21st century schools (Chesley & Jordan, 2012). One way to accomplish this is to emphasize differentiated instruction not merely as an instructional strategy, but rather as a critical teaching and learning philosophy that all prospective teachers should be exposed to in teacher education programmes (Ireh & Ibeneme, 2010). This philosophy, according to Tomlinson and Imbeau (2010), is based on the following set of beliefs: (a) students who are the same age differ in their readiness to

learn, their interests, their styles of learning, their experiences, and their life circumstances; (b) the differences in students are significant enough to make a major impact on what students need to learn; (c) students will learn best when they can make connections between the curriculum and their interests and life experiences; and (d) the central job of schools is to maximize the capacity of each child.

Popularized by Carol Ann Tomlinson (2001), differentiated instruction is a deliberate and conscious method of planning and teaching to address student variance. It is an approach to teaching essential content in a way that addresses the varied learning needs of students, with the intention of maximizing the potential of each learner (Tomlinson, 2001). This approach is characterized by strategies that use assessment of each individual student for readiness, interest, and learning preference in order to modify instruction in one of three ways: by content, process, or product. Differentiation is strongly contrasted to traditional practices that use a whole-group lecture format, where student learning and participation are more passive and unresponsive to individual needs (Gibson & Hasbrouck, 2008; King-Shaver, 2008).

Differentiation is also contrasted to *tracking* or *streaming*, where students are grouped according to their varying abilities. This may be done either in separate classes as part of the formal operating structure of the school, or informally by means of special homogeneous instructional grouping within their respective classes (Ansalone, 2010). Early proponents of tracking argue that this practice facilitates individualized instruction, and eliminates the probability of boredom experienced by advanced students due to the participation of slower students (Kirkland, 1971). Opponents, however, believe that tracking represents a "veiled attempt to reproduce and legitimate the stratification system," which offers inferior educational opportunities to children of working-class parents (Ansalone, 2010, p. 6). In reviewing the research on tracking, Ansalone (2010) posits that in the final analysis, little support is available for the assumption that tracking improves the academic achievement of all students. He concludes that tracking is a "defective strategy that may create a restricted learning trajectory for students which can impact on academic competency" (p.14).

Key Elements of Differentiated Instruction

Tomlinson and Imbeau (2010) describe differentiation as "classroom practice with a balanced emphasis on individual students and course content" (p. 14). They posit that at the core of the classroom practice of differentiation is the modification of curriculum-related elements such as

content, process, and product, based on student readiness, interest, and learning profile.

Student readiness. If teachers are to effectively differentiate instruction, then they must not only understand the concept, but they must also feel motivated to integrate differentiation into the classroom (Latz, Speirs Neumeister, Adams, & Pierce, 2009). One way to begin this process is by paying attention to student readiness. Tomlinson and Imbeau (2010) caution that readiness is not a synonym for ability, and the two terms should not be used interchangeably. For them, *readiness* suggests a temporary condition that should change regularly as a result of high-quality teaching; whereas *ability* refers to a fixed state based on some form of innate or inborn trait. Tomlinson (2005a, 2005b) posits that the concept of student readiness encompasses student knowledge, understanding, and skills in relation to the instruction a teacher is planning. The goal of readiness differentiation is to ensure that all students are provided with appropriately challenging learning experiences (Santangelo & Tomlinson, 2009). For example, teachers may choose to differentiate based on student readiness by varying the levels of difficulty of the material studied in class (Anderson, 2007).

Student interest. Student interest refers to "that which engages the attention, curiosity, and involvement of a student" (Tomlinson & Imbeau, 2010, p. 16). Therefore, when teachers differentiate instruction according to students' existing interests, such students are motivated to connect what is being taught with things they already value. Interest-based differentiation also encourages students to discover "new interests" (Santangelo & Tomlinson, 2009). In a classroom setting, for example, teachers may choose to differentiate key skills and materials to be learned by aligning them with particular students' interests in several areas such as music, sports, or wildlife.

Student learning profile. When differentiation is based on learning profiles, students are provided with opportunities to learn in ways that are natural and efficient. For example, students may be given the opportunity to work alone, with partners, or as a group. They may also be provided with work spaces that are conducive to various learning preferences—a quiet place or with music playing; in a dimly lit room or one with bright lights; work spaces with tables instead of desks (Anderson, 2007). Key factors in student learning profiles include learning environment preferences, group orientation, cognitive styles, and intelligence preferences (Santangelo & Tomlinson, 2009).

Content differentiation. It is reasonable to assume that once teachers have a good understanding of students' level of readiness, interests, and learning profiles, they will be more likely to engage in effective and appropriate content, process, and product differentiation (Santangelo & Tomlinson, 2009). Tomlinson (2005a, 2005b) explains that content comprises not only *what* is taught, but *how* students access the material taught. She suggests that, to a large extent, *what* is taught should remain relatively constant across learners, with teachers varying *how* students get access to specified content to address learners' needs. Some strategies for content differentiation include: providing text materials at varied reading levels of complexity; curriculum compacting; using small group instruction to re-teach or reinforce content; providing text on audiotape; supplementing oral presentations with videotapes and visual demonstrations; providing note-taking organizers; highlighting or summarizing key portions of text; and using manipulatives (Tomlinson, 2005a, 2005b).

Clearly, differentiating content requires teachers to either modify or adapt how they give students access to the material they want the students to learn. Heacox (2002) concurs that one way teachers can differentiate the content or curriculum they teach is by providing students with the opportunity to choose a subtopic within a main topic or unit. As each student presents the information on their subtopic, the whole class learns more about the topic in general. Anderson (2007) suggests that teachers may choose to differentiate content by using flexible grouping, where students can work in pairs, small groups, or alone, using books, tape, or the Internet as a means of developing understanding and knowledge of the topic or concept. It is important to note that while all students should be encouraged to work at their own pace, each student has the responsibility for meeting specified deadlines for class projects.

Process (activities) differentiation. Like content differentiation, process can also be differentiated in response to readiness, interest, and learning profile (Tomlinson, 2005a, 2005b). According to Anderson (2007), differentiating the process within a lesson refers to "how the learners come to understand and assimilate facts, concepts, or skills" (p. 50). Strategies for effective process differentiation include: tiering activities to various levels of complexity to optimize every student's classroom experience; providing directions at varied levels of specificity; varying the pace of work; offering multiple options of expression; giving students alternative topics on which to focus; creating activities that are harmonious with students' preferred modalities of learning (Sylwester, 2003; Tomlinson, 2005a, 2005b). These activities are referred to as

"sense-making" activities, which allow students to increase their understanding of the topic being taught (Tomlinson, 2005a). It is important to note that the process is differentiated not only by how the teacher decides to teach (lecture for auditory learners; centres for tactile learners; small group and whole group), but also by the strategies the teachers encourage students to use to facilitate thorough exploration of the content taught. This can be done by way of higher-order thinking, open-ended thinking, discovery, reasoning, and research (Bailey & Williams-Black, 2008).

Product differentiation. Tomlinson (2005a, 2005b) suggests that products are culminating assessments that allow students to demonstrate how much they understand and how well they can apply their knowledge and skills after a significant segment of instruction. Product differentiation should offer students multiple pathways to show mastery of common learning goals. Effective product differentiation assignments should offer students clear and appropriate criteria for success; focus on real-world relevance and application; promote creative and critical thinking; and allow for varied modes of expression. Santangelo and Tomlinson (2009) also believe that it is important for teachers to provide students with adequate scaffolding and support, as well as opportunities for peer and self-evaluation. Bailey and Williams-Black (2008) suggest that differentiating the product allows students to self-select a way to show they have learned the material that was taught. They argue that when students self-select their product, they normally choose a method that will provide them success, which most likely will coincide with their own learning profiles.

Obstacles to Differentiating Instruction

Studies show that many teachers hesitate to integrate differentiation into the classroom for several reasons. These include: a general lack of administrative support (Hertberg-Davis & Brighton, 2006); fear of lowering student test scores by deviating from the prescribed curriculum (VanTassel-Baska, 2006); challenge of dealing with student behavioural problems (Hertberg-Davis & Brighton, 2004; Knopper & Fertig, 2005; Westberg, Archambault, Dobyns, & Salvin, 1993); teacher resistance to a change in teaching style (Tieso, 2004); lack of time to plan for differentiation (Hertberg-Davis & Brighton, 2006; Knopper & Fertig, 2005; Westberg et al., 2005); and uncertainty about parents' reaction to differentiation (Knopper & Fertig, 2005). Notwithstanding these obstacles, differentiation works best when teachers are motivated, and when principals and school administrators provide the enabling

environment to support the implementation of differentiation techniques in the classroom. Tomlinson and Imbeau (2010) concur that effective differentiated instruction is inseparable from a positive learning environment, high-quality curriculum, assessment to inform teacher decision making, and flexible classroom management.

Purpose of the Study

This study sought to investigate what pre-service and in-service trained teachers understand by differentiated instruction, and the extent to which these teachers practise differentiating instruction in their classrooms. Pre-service teachers are those who enter teacher education institutions to pursue a Bachelor of Education (B.Ed.) degree without any prior teaching experience. In-service teachers are those who enter teacher education institutions to pursue studies after they have taught for some time in the school system. Three research questions served to focus this investigation:

1. *What are teachers' understandings of differentiated instruction?*
2. *How do teachers differentiate their instruction at the primary and secondary school levels?*
3. *What factors hinder or encourage the implementation of differentiated instruction in schools?*

Methodology

This study utilized a survey instrument with 36 items, covering three objectives arising from the research questions outlined above. For most of the survey items, respondents were required to express their opinions on a 5-point Likert-type scale. Some of the responses required the use of open-ended items to elicit comments from respondents on their understanding of differentiated instruction and the extent to which they used differentiated instruction in their classrooms. The instrument was pilot-tested, and feedback was used to improve the instrument before distributing the questionnaire to the research sample.

One hundred part-time students studying for a B.Ed. degree were each given five questionnaires to distribute randomly to teachers in selected primary and secondary schools situated in the north-eastern, central, southern, and western parts of Trinidad. This exercise was done as part of the requirements of a curriculum studies course that focused on teachers' experiences in the workplace. Out of 500 questionnaires

distributed, 379 were completed and returned—an overall 76% response rate.

Focus group interviews were used as a complementary instrument to collect qualitative data for the study. A purposive sample was drawn to participate in focus group discussions. There were two heterogeneous focus groups comprising five persons each. All questions were the same for both groups to facilitate consistency in analysis. These questions were designed to obtain additional information about participants' attempts at differentiating process, and focused on strategies teachers used to assist students in exploring concepts taught in the lesson. The following five questions were used for 1-hour-long focus group discussions:

1. *What strategies do you use to assist students in exploring concepts taught in the lesson?*
2. *How often do you use graphic organizers in your teaching?*
3. *How often do you use role playing in your teaching?*
4. *What other types of learning strategies do you have students use to explore the content being taught?*
5. *Do you deliberately set out to differentiate or vary the activities in the lesson? Why? Why not?*

In this study, females made up the greater portion of respondents with teaching experience ranging from 0–4 years to over 30 years (see Table 1).

Table 1. Years of Teaching Experience

Years of Teaching	No. of Teachers
0–4	80
5–10	101
11–15	74
16–20	29
21–25	26
26–30	27
30+	42

Academic qualifications of teachers ranged from B.Ed. degrees in Primary Education, Secondary Education, Special Needs Education, and

Early Childhood Care and Education to diplomas in Education and Teaching. Based on the distribution of years of teaching experience in Table 1, 48% of the participants possess approximately 10 years' teaching experience, while 34% of respondents have 11–25 years' teaching experience. Only 18% of the participants of this study are veteran teachers with over 26 years' teaching experience. It is noteworthy that approximately 70% of the participants possess B.Ed. degrees and Teachers' Diplomas, as can be seen in Table 2.

Table 2. Teachers' Academic Qualifications

Qualifications	No. of Teachers
B.Ed. (Primary)	118
B.Ed. (Secondary	18
B.Ed. (ECCE)	10
B.Ed. (Special Needs)	13
Teachers' Diploma	105
Other	115

Table 3 shows that 71% of the participants teach at the primary level, while 29% of the teachers operate at the secondary level of the school system. The table also shows that the majority of the participants (64%) are in-service trained teachers, while 36% are pre-service trained teachers.

Table 3. Level of Teaching and Type of Training

Teaching Level	No. of Teachers	Type of Training	No. of Teachers
Primary	271	Pre-Service	137
Secondary	108	In-Service	242

Data Analysis

The data analysis process involved sorting, labelling, and categorizing all 379 survey questionnaires obtained from the study. Frequency tables were developed for recording and tabulating demographic responses with the aid of the Statistical Package for the Social Sciences (SPSS) software. These demographic responses included questions related to

gender, teaching experience, qualifications, level of teaching, and type of training. Using the SPSS software, variables from the survey were put in the correct form and checks were made for missing values. Totals from all responses were recorded and percentages were calculated for each response. Nine open-ended questions were included to capture qualitative responses on how participants defined differentiated instruction, as well as their experiences in implementing differentiated instruction in the classrooms. Focus group interviews were also conducted to obtain qualitative data for the study.

Qualitative data analysis for the open-ended questions and focus group interviews was done without the aid of a software program. The procedure for the open-ended questions involved careful checking for patterns in responses, identifying emerging themes, and paying attention to alternative explanations provided by participants. Both focus group sessions were audiotaped, and information from the recording was reviewed several times to obtain verbatim accounts of focus group interviews. Information from the focus group sessions served to clarify unclear elements of the study. Techniques used to ensure credibility or validity of the focus group process involved verbatim accounts of focus group interviews, use of recording devices to capture data, and participants' review of the researcher's synthesis of interviews.

Findings of Research Questions

Three hundred and seventy-nine teachers participated in a survey that required them to indicate, on a 5-point Likert-type scale, their understanding of differentiated instruction. They were also asked to indicate how they differentiated their instruction at the primary and secondary school levels, and what factors hindered or encouraged implementation of differentiated instruction in schools.

Discussion of Likert-Type Responses

Research Question 1

What are teachers' understandings of differentiated instruction?

Survey items 6–12 addressed this research question. Responses from participants indicated that 58% of the teachers understood the concept of differentiation. These responses mirrored those found in educational journals and textbooks on the concept of differentiated instruction. Responses from participants also indicated that a larger number of primary school teachers demonstrate understanding of the concept of

differentiation than their counterparts at the secondary level. When asked whether they felt that differentiated instruction should only be incorporated for gifted and talented students, the majority (88%) responded *no*, while only 12% responded *yes*.

Based on these responses, one can assume that the majority of teachers in the study have a clear understanding of differentiated instruction. However, this assumption was further tested by teachers' responses to three specific aspects of differentiation, namely, content, process, and product differentiation. In Table 4, survey items 6–12 addressed the issue of content differentiation by asking about the use of a variety of resource materials for handling differences in reading levels; grouping students according to readiness levels; exempting students who demonstrated mastery of the material; and the establishment of learning centres in the classroom.

Table 4. Percentage of Responses on Survey Items Relating to Content Differentiation

Survey Items	Very Freq.	Freq.	Occ.	Rarely	Never	No Resp.
6. I use a variety of resource materials for handling differences in reading levels	13.7	43.8	33.2	7.4	.5	1.5
7. I group students according to readiness levels	9.2	38.5	32.2	14.2	4.2	1.7
8. I re-teach to small groups who need support or further explanations	23.2	47.8	24.5	2.9	1.1	.5
9. I exempt those students who have already mastered the material	2.6	9.2	31.3	28.0	28.0	.9
10. I establish learning centres in my classroom	10.0	27.4	34.8	18.7	6.9	2.2
11. I allow students to work alone	18.5	40.4	31.1	7.9	1.3	.8
12. I allow students to work with peers	28.5	47.2	21.6	1.3	.3	1.1

In Table 5, survey items 13–15 and 24–26 addressed the issue of process differentiation to determine how students made sense of the content taught to them in class.

Table 5a. Percentage of Responses on Survey Items Relating to Process Differentiation

Survey Items	Very Freq.	Freq.	Occ.	Rarely	Never	No Resp.
13. I use a series of related tasks of varying complexity	14.0	53.8	27.7	3.7	0	.8
14. I use independent learning strategies	7.9	48.8	33.8	6.1	.8	2.6
15. I use peer teaching approaches	13.5	40.9	35.4	7.9	1.6	.8

Table 5b. Percentage of Responses on Survey Items Relating to Process Differentiation

Survey Items	Responses to Process Differentiation
24. How often do your students work in groups?	• 53% of respondents indicated that their students work in groups some of the time • 39% stated that their students work in groups most of the time • only 8% indicated that their students worked in groups all of the time
25. If your students do work in groups, how are the groups organized?	• 41% of respondents stated that groups were organized randomly • 34% of respondents indicated that they grouped students according to abilities • only 4% indicated that students were grouped according to interests • 12% indicated that their students were grouped according to learning profiles • 9% of respondents stated that they allowed students to choose their own groups

Survey Items	Responses to Process Differentiation
26. How often do groups change?	• 62% of respondents indicated that groups changed when there was a new unit or project • 28% of respondents reported that they changed groups when the behaviour warranted the change • only 2% indicated that group changes are made each time students request a change • 8% of respondents reported that learning groups were chosen and remained the same

Survey items 16–23 and 27 addressed the issue of product differentiation (see Table 6). These items were designed to discover how students demonstrated their knowledge or understanding of a topic taught in class. These survey items asked whether teachers exposed students to different forms of assessments and the extent to which choices are given in completing assignments.

Table 6. Percentage of Responses on Survey Items Relating to Product Differentiation

Survey Items	Very Freq.	Freq.	Occ.	Rarely	Never	No Resp.
16. I allow students to write a book report	3.7	14.8	34.8	24.0	19.3	3.4
17. I allow students to perform a play	5.3	22.7	43.8	18.2	8.4	1.6
18. I have students debate an issue	4.7	21.1	37.2	23.0	11.3	2.6
19. I have students investigate an issue	8.7	37.2	37.2	13.2	1.1	2.6
20. I have students design a game	4.5	8.7	25.9	39.3	18.7	2.9
21. I have students create a story	15.3	32.7	29.8	10.3	9.5	2.4
22. I have students compose a song	5.3	15.3	37.5	19.5	19.5	2.9

Survey Items	Very Freq.	Freq.	Occ.	Rarely	Never	No Resp.
23. I encourage students to compare and contrast	16.4	45.6	27.7	6.6	1.1	2.6
27. How often are students given choices in how they complete their assignments or projects?	1.1	12.7	60.7	17.4	5.8	2.3

Research Question 2

How do teachers differentiate their instruction at the primary and secondary school levels?

Survey items 29 and 30 addressed this research question. These responses were grouped into three categories—content differentiation, process differentiation, and product differentiation.

Table7. Percentage of Responses on Survey Items Relating to Content, Process, and Product Differentiation

Survey Items	Content Diff.	Process Diff.	Product Diff.	No Response
29. How do teachers in your school differentiate instruction?	6.5	87.9	1.3	4.3
30. How do you differentiate instruction in your classroom?	3.8	84.1	3.5	8.6

It is important to note that the majority of respondents who differentiated process were in-service trained primary school teachers with approximately 10 years' teaching experience, as opposed to their secondary school counterparts.

Discussion of Open-Ended Responses

Research Question 3

What factors hinder or encourage the implementation of differentiated instruction in schools?

Survey items 32, 33, 35, and 36 were open-ended questions that addressed research question 3. Major challenges identified included: time, resources, administrative support, and accommodation. It is

interesting to note that when asked whether what was learnt at their previous teacher education programme adequately prepared them for differentiation, more teachers with approximately 10 years' teaching experience responded *yes* than their counterparts with over 20 years' teaching experience.

When asked about possible challenges teachers experience in implementing differentiated instruction in the classroom, one participant with 16–20 years' teaching experience responded as follows:

> "*Group work and learning centres require space, and differentiating instruction is hard to do when there is limited space and very large numbers of students in class.*"

Another participant with 11–15 years' teaching experience said:

> "*The authority figures are not always willing to cooperate with this method."*

A teacher with 4 years' experience put it this way:

> "*There is only one challenge that I face which is, the traditional teachers believe that the old form of teaching is right and any new method is wrong.*"

When asked about some of the challenges in implementing differentiated instruction, a teacher with 16–20 years' experience identified the following:

> "*Lack of time for planning adequate teaching; limited space for group work; lack of support from administration.*"

Another teacher with 11–15 years' experience cited the following as a major challenge to implementing differentiated instruction:

> "*A loaded curriculum which is sometimes not suitable for the children's abilities, but must be done for examination purposes."*

A veteran teacher with over 30 years' experience admitted that a major challenge to implementation is "*time management, since differentiating instruction requires more preparation and planning.*"

Summary of Focus Group Findings

Two focus group sessions were conducted to probe deeper into teachers' understanding of process differentiation. This was necessary since survey findings revealed that while participants in the study did not engage in

content and product differentiation, the majority seemed to have a clear grasp of the techniques involved in process differentiation. Two major themes emerged from focus group discussions: (a) strategies teachers use to teach concepts; and (b) strategies students use to explore content.

Strategies Teachers Use to Teach Concepts

Findings from the question on teaching strategies revealed that teachers generally engaged in process differentiation by using a variety of approaches to assist students in exploring concepts taught in the lesson. Respondents from both focus groups indicated that they frequently used group work to facilitate interaction among students with varying abilities. The majority of teachers also frequently used graphic organizers, especially in creative writing classes, and role playing to assist students, mainly in the infant classes. One in-service trained teacher at a primary school said: "*my classes are very interactive with lots of manipulatives. I use guest speakers and often take students on field trips.*" However, one respondent explained that he did not use any of these strategies because his head of department insisted on the traditional lecture and drill method to ensure that students in the Standard 5 classes pass the Secondary Entrance Assessment (SEA) examination. He stated that: "*when the head of department is not around, I engage students in fun activities to stimulate learning.*"

Strategies Students Use to Explore Content

While the first theme focused on *how* teachers taught, this theme concentrated on *what* activities teachers encouraged students to use to explore the content taught in class. Findings from the question on strategies students use to explore content revealed that teachers frequently used strategies such as experimentation, library searches, video clips, and technology as a means of encouraging students to explore the content taught in class. One teacher from a privately-run primary school said that "*my seven-year-old students often develop their own power point slides for class presentations.*" Another teacher stated that "*I have students read in pairs so that the strong readers can help the weaker ones.*" An in-service trained teacher operating from a privately-run preschool said that "*the major teaching strategy is the use of play to teach concepts. I teach number concepts through play. At the preschool level, learning is done through play.*"

Discussion and Conclusions

Three research questions set the parameters for this study. The following is an analysis of each of these research questions.

Research Question 1

What are teachers' understandings of differentiated instruction?

Based on responses obtained from the survey, one can conclude that the majority of teachers demonstrate good understanding of the concept of differentiated instruction. Responses from participants also indicated that a larger number of primary school teachers demonstrate understanding of differentiation than their counterparts at the secondary school level. It was also observed that teachers with approximately 10 years' teaching experience showed a better understanding of differentiated instruction than those who had taught for over 20 years. However, upon closer examination of key components of differentiation, there is evidence to suggest that this understanding may be merely theoretical in some cases. Consider, for example, content differentiation that requires teachers to either modify or adapt how they give students access to learning materials. When asked about using a variety of resource materials for handling differences in reading levels, 58% of the participants indicated that they did so frequently. But less than half of the respondents indicated that they often grouped students according to readiness. The implied contradiction here is that while teachers are exploring a variety of ways to address differences in reading levels, little attempt is made to group students according to readiness. This goes against a major principle of content differentiation, which suggests that students should work at their own pace (Berger, 2000). Still, one can admit that there are also appropriate reasons for heterogeneous groupings based on the particular goals of the lesson.

Another point of contradiction has to do with teacher willingness to re-teach a lesson to small groups of students who needed additional support, yet the majority (58%) of these teachers rarely or never exempted students who demonstrated mastery of the material taught. This suggests that little attention is given to curriculum compacting or the use of acceleration techniques to cater to the needs of advanced learners. These apparent inconsistencies in responses may be a result of lack of clear understanding of the application of appropriate content differentiation strategies in the classroom.

A different picture emerges with process differentiation. Based on responses from participants on the questionnaire, it can be concluded that

teachers have a clear grasp of key techniques involved in differentiating process aimed at helping students make sense of the content taught to them in class. These teachers were largely in-service trained primary school practitioners with approximately 10 years' teaching experience, as opposed to their secondary school counterparts. The majority of these teachers indicated that they frequently used a series of tasks of varying complexity. They also indicated frequent use of peer teaching approaches and independent learning strategies. This was further emphasized in focus group sessions.

Findings from the study suggest that both in-service and pre-service trained teachers do not consciously engage in product differentiation. The majority of respondents indicated that they rarely or never provided students with various ways of demonstrating what they have learned from the unit of study. For example, teachers rarely or never gave assessment activities such as writing book reports, participating in debates, or performing a play. Other activities such as designing a game, creating a story, or composing a song were also not given to students as assessment options. Ireh and Ibeneme (2010) argue that differentiated products challenge students at all levels to make decisions and to be responsible for their own learning, as well as afford them the opportunities to demonstrate what they know through products that are representative of their unique learning preferences, interests, and strengths. It is interesting to note, however, that of all the options presented for product differentiation, teachers showed greater preference for *compare and contrast* as an assessment activity. This suggests that the majority of teachers in the study favoured the traditional cognitive-based assessment over those activities that generally appeal to students who are creative, artistic, and musical.

Research Question 2

How do teachers differentiate their instruction at the primary and secondary school levels?

Responses related to this research question were grouped into three categories—content differentiation, process differentiation, and product differentiation. Based on participants' responses, it is clear that the majority of teachers differentiate process in their classrooms. This is consistent with earlier findings where the majority of teachers demonstrated understanding of what it means to differentiate process by providing varied levels of support and accommodations. One can conclude that these teachers engage in activities that Santangelo and Tomlinson (2009) describe as harmonious with students' preferred

modalities of learning. These activities include: tiering student learning activities to various levels of complexity; giving students alternative topics on which to focus; and varying the pace of work. But further discussions in focus groups indicated that the majority of teachers did not deliberately set out to differentiate process.

While this may very well be the case, those teachers most likely to differentiate (deliberately or not) are primary teachers with approximately 10 years' teaching experience. As discovered earlier, these teachers seem to have a better understanding of differentiation than their counterparts in the secondary school system with over 20 years' teaching experience. One reason for this could be that teacher education institutions are now paying greater attention to exposing students to the concept of differentiated instruction than in previous years. The fact that more primary school teachers seem to demonstrate understanding of differentiation than secondary school teachers suggests that more can be done in teacher education programmes to deepen understanding of the concept among those studying to become secondary school teachers.

Research Question 3

What factors hinder or encourage the implementation of differentiated instruction in schools?

While it is expected that novice teachers would encounter difficulties in implementing differentiated instruction, this study found that all teachers, including veteran practitioners, encountered various obstacles to differentiating their instruction. These challenges ranged from limited time for planning and inadequate resources, to lack of administrative support and teacher resistance to change. Similar challenges to implementation were also highlighted in works by Hertberg-Davis and Brighton (2006); Knopper and Fertig (2005); and Tieso (2004). One of the respondents summed up the implementation challenge as follows: "*Lack of time for planning adequate teaching; limited space for group work; lack of support from administration.*"

Planning for differentiated instruction requires time, support, and adequate learning spaces for group interaction. If these requirements are not adequately met, then one can understand the challenge teachers face in attempting to integrate differentiation instruction in their classrooms. But the study highlighted a different type of challenge, which relates to teachers' ability to differentiate content and product. While responses from respondents indicated that they engage in process differentiation, one is uncertain about the extent to which this type of differentiation is a planned and conscious strategy. When asked whether they deliberately

set out to differentiate or vary the activities in their lessons, the majority of participants in the focus group sessions indicated that they did not deliberately set out to differentiate process (activities). However, the practice of varying activities comes naturally as part of what they learned as trained teachers. Only two participants from privately-run schools indicated that they consciously set out to vary activities since the principal of the school required them to do so.

Findings from this study revealed that while teachers generally understand the concept of differentiation, the majority of participants do not engage in content and product differentiation. Part of the reason is that teachers find it difficult to implement differentiation because of limited time and resources. The other part of the reason has to do with uncertainty among teachers about how to integrate content and product differentiation, given the preference by school officials for standardized testing at the primary and secondary levels. And while many teachers demonstrated ability to vary activities, they admitted that they did not consciously engage in process differentiation.

Given these findings, it seems that more can be done at teacher preparation institutions to expose prospective teachers to differentiated instruction through classroom teaching and modelling. To achieve this ideal, teacher education institutions may need to revise the existing curriculum in a way that would encourage greater participation among instructors in exploring differentiated instructional approaches to teaching at this level. No doubt, there will also be need for professional development to assist instructors in obtaining the necessary tools to effectively differentiate their instruction. Perhaps, there is need also for a follow-up study to determine whether this strategy will make a difference in prospective teachers' ability to engage in effective and appropriate content, process, and product differentiation. But even if prospective teachers are exposed to differentiated instruction at the teacher preparation institutions, upon entry into the classroom, these teachers will continue to experience a high level of frustration, unless school administrators provide the enabling environment to facilitate effective practice of differentiated instruction in response to students' readiness, interests, and learning profiles.

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Caribbean Curriculum
Vol. 20, 2013, 53–75.

IMPROVING TEACHER EDUCATION THROUGH A SELF-STUDY OF PRACTICUM PROGRAMMES: Conversations and Reflections of Two Teacher Educators

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Teacher educators are expected to compare, contrast, and explore field experiences from a holistic and global perspective. Yet, there is a paucity of comprehensive research examining the field experience, especially in the Caribbean. This paper uses collaborative self-study as a method for examining our practices of teacher education through a comparison of the practicum programme at a Caribbean university with that of an established American university. Our goals were to explore commonalities of each practicum programme and consider distinctive features that could be of benefit to each model. Perspectives are compared in terms of principles, structures, and other factors influencing the design and delivery of the practicum programmes that existed in these two institutions between September 2008 and April 2010. This exploration may be of interest to teacher educators in the Caribbean, where models of teacher education are being restructured in keeping with international trends. It may also be of interest to teacher educators in the United States, where a national strategy to transform teacher education through clinical practice has been proposed by the National Council for Accreditation of Teacher Education (NCATE).

Background, Context, and Purpose

> *The meaning of a teacher education program is to be found in its substance as well as in its structural characteristics. …With regard to the substantive aspects of teacher education programs, their meanings are to be found in the elaboration and enactment of particular program features rather than in their mere presence or absence*. (Zeichner & Conklin, 2008, p. 285)

Teacher educators recognize that the practicum—school/classroom observation and field-teaching experience—is one of the pivotal experiences for students to develop teacher efficacy. Yet, practicum experiences at teacher education institutions are structured differently. In their review of published research, Zeichner and Conklin (2008)

concluded that practicum programmes vary widely across institutions in terms of: the length of the student teaching internship; the timing of the internship; the location of the practicum experience; the degree of connection between the field and course components; the personnel involved in the supervision of the students; and the explicit expressed expectations of the field experience.

For us as teacher educators, these innate characteristics noted in practicum programmes were the catalyst for understanding what might be important for programme review, renewal, and reform in our individual programmes (Wimmer, 2008; Wyss, Siebert, & Dowling, 2012). As such, this paper emerged from a conversation between us, two Caribbean-born teacher educators, as we engaged in a comparison of our experiences in our practicum programmes. This study provided an opportunity for us as teacher educators in two different geographical contexts—one Caribbean and one North American—to engage in a personal and professional dialogue about the varied structure, design, and delivery of teacher education programmes. In so doing, we will be able to make more informed decisions about new ways of designing, organizing, and modifying our existing teacher education programmes.

As teacher researchers who seek to "better understand: [ourselves]; teaching; learning; and, the development of knowledge about these" (Loughran, 2004b, p. 9), we have been influenced by the growing movement of self-study in teaching during the past decade (Berry, 2007; Clift, 2004; Hamilton & Pinnegar, 1998; Pinnegar & Hamilton, 2009; Russell, 2005; Samaras, 2011). Therefore, we formalized our collaboration into a self-study to better make sense of the ways in which the practicum experiences in our individual programmes are conceptualized, delivered, monitored, and supervised, and how these observations could possibly serve as guidelines for developing and improving teacher education in both contexts.

At the time of the study, Joyanne was based at The University of Trinidad and Tobago (UTT) as the coordinator of the practicum in a Bachelor of Education programme. Deborah was the coordinator of the undergraduate Childhood/Early Childhood teacher education programme at State University of New York (SUNY) Potsdam. For both of us, the descriptors of being Afro-Caribbean born and educated, with university training and teaching experience in international arenas, were common threads in our professional development. We were also both content-area educators at our institutions. We both see ourselves as lifelong learners and our professional development as ongoing.

We explored perspectives on the principles and structure of the practicum in the teacher preparation programmes that existed at our two

institutions during the period September 2008 to April 2010. Our initial conversations and discussions revealed that while there are comprehensive accounts of the development of teacher education in American universities (see Labaree, 2008), there is very little information available on the development of teacher education programmes, and more specifically practicum experiences in teacher education programmes, in the Caribbean context. We also recognized that there were varying degrees of growth and development in specific teacher education programmes over time, often as a result of economic, political, or professional reform efforts (Darling-Hammond et al., 2005).

In this paper, we use the following three questions to frame the key findings and our analysis of our explorative study:

1. *What are the underlying principles and structures of the practicum programmes at our institutions?*
2. *In what ways did these underlying principles and structures influence our teaching?*
3. *What features of either practicum structure did we find that may be further explored in each context to improve our present practice*?

We trust that this paper will make a contribution in the area of the use of self-study in teacher education programme renewal, and encourage other teacher educators at different universities to engage in similar comparative work as they seek to establish, reform, and/or improve their teacher education programmes, their teaching, and their students' learning (Loughran, 2004a). Teacher educators may also gain insights into alternative ways of organizing and improving teacher education programmes.

Theoretical Perspectives

In exploring our experiences as teacher educators and comparing the policies, structures, and principles of our teacher education programmes, we located our perspectives within the theoretical frameworks of reflective practice and self-study (Pinnegar & Hamilton, 2009). Reflective practice is an ongoing discourse in teacher education. Reflection has been regarded as an indicator for effective professional practice and is essential to teacher education (Berry, 2007; Huntley, 2008; Schon, 1983, 1987). Teacher educators need to determine how they can foster a climate of critical inquiry into their own practice and improve teacher education by reflecting on their own practice. They need

to closely observe and critically analyse what climate and cultures are fostered and encouraged in their learning communities, and consider how these influence their decisions and teaching (O'Loughlin, 1992).

For teacher educators, this shift from teaching prospective teachers how to reflect, to teacher educators reflecting on their own practice, can be time-consuming, challenging, and uncomfortable (Lasley, 1998; Loughran, 2004a, 2004b; Magestro & Stanford-Blair, 2000). Additionally, teacher educators need to examine their own learning and development if they are to achieve change in teacher education and the programmes they are facilitating, as well as improvement in their teaching (Berry, 2007; Russell, 2005). By thinking about our practice, by taking time to think about our thinking, and by talking to one another and assessing our teaching behaviours and institutional structures, we, as researchers, hope to explore new ideas that can improve student learning.

Within the last two decades, teacher educators have begun to reflect on, study, and research their own practice of teaching and learning (Berry, 2007; Loughran, 2004b; Pinnegar & Hamilton, 2009; Schulte, 2009). Samaras (2011) suggests that self-study: draws on personal experience of practice; is collaborative; is for improved learning; is a "transparent and systematic research process requiring an open, honest, and clear description of questioning, framing, revisiting of data, and reframing of a researcher's interpretations" (p. 11); and contributes to a knowledge base. Self-study in teaching is also an analysis and reconstruction of oneself as a teacher. It is autobiographical, historical, cultural, and political, and involves a thoughtful look at texts read, experiences had, people known, and ideas considered (Hamilton & Pinnegar, 1998; Pinnegar & Hamilton, 2009).

This development of self-study research in education aims to help researchers better understand themselves, their teaching and learning, and the development of related knowledge. Like the work in the edited volume by Kosnik, Beck, Freese, and Samaras (2005), this paper marks the beginning of our journey to employ professional dialogue in critically exploring our own practice and narratives of experience.

Methods of Inquiry, Data Sources, and Analysis

We used narrative inquiry (Chiu-Ching & Yim-mei Chan, 2009; Clandinin & Connelly, 2000; Kitchen, 2009); dialogue method (East, Fitzgerald, & Heston, 2009); and document analysis (Creswell, 2007) in this research project. Narrative inquiry is based on "an interest in life experiences as narrated by those who live them" (Chase, 2011, p. 421). As a methodology, it helps researchers to understand themselves, their

context, and practice (Kitchen, 2009) because it enables personal reflection on experience and enables users to make meaning from that in-depth study of experience. The dialogue method (Arizona Group, 2005; East, Fitzgerald, & Heston, 2009) guided the ongoing analysis of our responses to our guiding questions. Document analysis enabled us to give voice and meaning through interpretation and coding of the public institutional documents.

Consequently, these methodologies made it possible for us to inquire into our practice, explore who we are as teacher educators, and reflect on and make sense of the factors that have influenced our pedagogical principles. We found opportunities to use our voices in a conversational style to authenticate our experiences, while asking how might we think differently about our practice and how might the process of reframing provide us with this insight. We also considered our audience, fellow teacher educators who can readily identify with our narratives, descriptions, and lessons learned as we seek to make sense of familiar ground.

We engaged in several phases of data collection and initial analysis between May and July 2010 (see Figure 1).

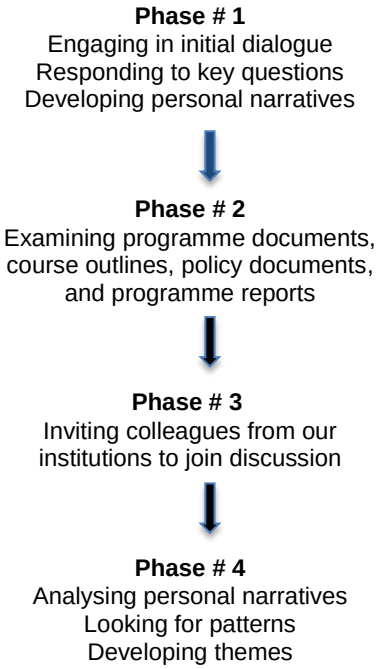

Figure 1. Phases of data collection.

The first phase involved participating in face-to-face discussions about our individual programmes, responding orally and in writing to our key questions, and developing individual personal narratives. These narratives were important because they were used to frame our discussions in our weekly dialogue sessions. Further, the narratives gave us an insight into each other's experiences on the issues and provided opportunities for us to compare aspects of our practice as teacher educators. From September 2010, our analysis continued through discussions about our individual responses, establishing the themes and emerging conceptualizations of our inquiry. This was facilitated through weekly Skype sessions.

The second phase of data collection involved examining and analysing programme documents, course outlines, policy documents, and programme reports related to the practicum programmes generated at both institutions during the period September 2008 to April 2010. These documents are public and available as hard copies or on the university's department websites. They provided us with the concrete descriptions of the programme and helped us to note those aspects of our programmes that were similar or dissimilar. This analysis enabled us to compare our reflections on the structures and principles of each programme and derive deeper understandings about our practicum programmes.

We acknowledge that a limitation of using our personal narratives and programme documents as data sources is our lack of first-hand knowledge on some issues. To compensate for this, we engaged in a third phase of data collection and invited colleagues from our institutions to join us in some discussions and to help us further clarify our ideas. Audiotaping was not included in the data collection process, but during each discussion we took notes on salient issues that provided us with perceptions of our institutions' approach to practicum experiences. Our collaboration allowed us to work jointly on the patterns that emerged and to interpret the findings.

A systematic analysis of the data was conducted by coding. Preliminary findings were organized by the research questions identified earlier. We began with the analysis of our personal narratives. Using Skype and Google Docs simultaneously, we re-read each other's narratives and looked for patterns in our responses. These were categorized by codes, which were later developed into themes. Our written responses and narratives were analysed for emerging themes according to the Constant Comparative Method (Corbin & Strauss, 1990). This method also allowed for comparison within and across programmes. Emerging themes were identified, recorded, and classified, then systematically and continuously compared.

Understandings

In this section we use our guiding questions as a framework to present our understandings. In responding to each question, we use reflections drawn from our narratives to share our voices. We also use examples from our programme documents to highlight our experiences in our specific contexts. We use a highly descriptive format to provide a detailed picture of our practicum programmes. We also use illustrative tables to highlight the similarities, and comment on each context so that readers may use these to see the big picture and draw their own comparisons as they review their programmes.

Underlying Principles and Structures of our Practicum Programmes

Our first question asked: "*What are the underlying principles and structures of the practicum programmes at our institutions?*" In order to answer this question, we carefully reviewed our programme documents, and summarized and discussed the principles and structures of the practicum programmes at both institutions. The main elements of the structure of both practicum programmes are included as comparative tables (see Tables 1 and 2).

Table 1. Overview of Practicum Structure at UTT and SUNY Potsdam

	Institution	Semester I	Semester II
Year 1	UTT	Practicum I On-campus classes; focus on reflective practice	Practicum II On-campus classes. 3 days field experience; Observations in groups. Focus on classroom observation
	SUNY Potsdam	No practicum experiences; students complete liberal arts courses	No practicum experiences; students complete liberal arts courses
Year 2	UTT	Practicum III On-campus classes; focus on lesson planning	Practicum IV On-campus classes. 5 days field experience as follows: Field Orientation Visit (1 day), Field Observation (2 days), and Field-teaching (2 days). Teaching in pairs or trios

	Institution	Semester I	Semester II
	SUNY Potsdam	No practicum experiences; students complete liberal arts courses	No practicum experiences; students complete liberal arts courses
Year 3	UTT	Practicum V On-campus classes. 5 days field experience as follows: Field Orientation Visit (1 day); Field-teaching (on Tuesdays for 4 days—2 back to back). Teaching in pairs	Practicum VI On-campus classes. 11 days field experience as follows: Field Orientation Visit (1 day); Field-teaching (2 one-week blocks, not back to back) Teaching in pairs
	SUNY Potsdam	*Pre-Professional Block* – Mentoring Experience	*Professional Block I* – Practicum Experience with methods courses in Math, Social Studies, and Special Education
Year 4	UTT	Practicum VII On-campus classes. 11 days field experience as follows: Field Orientation Visit (1 day); Field-teaching (1 two-week block in October). Individual Teaching	Practicum VIII 35 days field experience as follows: Field Orientation Visit (1-3 days); Field-teaching (1 six-week block from mid-January). Individual Teaching
	SUNY Potsdam	*Professional Block II* – Practicum Experience with methods courses in Literacy, Science, and Classroom Management	*Student Teaching Field Experience*

Table 2. Time Allocation for Field-Observation and Teaching Experiences at UTT and SUNY Potsdam

Time	Institution	Practicum Experiences	Days	Hours
Year 1, Semester II	UTT	Field observation and reflection on visits to schools and classrooms	3	18
	SUNY Potsdam	None	0	0

Time	Institution	Practicum Experiences	Days	Hours
Year 2, Semester II	UTT	Field observation, planning, teaching, and reflection in groups	4	24
	SUNY Potsdam	None	0	0
Year 3, Semester I	UTT	Field observation, planning, and teaching in pairs; individual reflection on experience	6	36
	SUNY Potsdam	On-campus lab for full semester and mentoring programme with school-age students; one-on-one teaching	10	12
Year 3, Semester II	UTT	Field observation, planning, and teaching in pairs; individual reflection on experience	11	66
	SUNY Potsdam	Field observation and teaching in groups and/or individually; 1 four-week block (2 days per week)	8	50
Year 4, Semester I	UTT	Individual field observation, planning, teaching, and reflection	11	48
	SUNY Potsdam	Individual teaching of a unit plan; 1 six-week block (2 days per week)	12	84
Year 4, Semester II	UTT	Individual field observation, planning, teaching, and reflection	35	210
	SUNY Potsdam	Student teaching experience; 2 eight-week blocks	75	525

UTT: 70 days/420 hours
SUNY Potsdam: 105 days/679 hours

Practicum principles and structure at UTT. The initial courses of the Practicum Programme at UTT were first run in the academic Year 2008–2009. By April 2010, all of the courses had been designed, created,

and taught at least once. These courses continued for the most part at the time of writing (see Table 1). The underlying philosophy of the practicum programme is stated in each course outline. These outlines are given to each student on the first day of each course. The practicum programme is based upon the "incremental professional development of prospective teachers, rather than training" (*All practicum course outlines*, January 2010, p. 2). The practicum courses are designed "to produce teachers who are reflective practitioners, critical thinkers, lifelong learners, creative planners, problem solvers, facilitators, change development agents, researchers, wise decision makers, collaborators, [and] effective teachers who are responsive to issues of diversity, special needs, democracy, equity and social justice" (*All course outlines*, January 2010, p. 2). Furthermore, the courses are designed:

i) To provide prospective teachers with practical experiences of teaching so that they can develop and deepen:
   - their understanding of the practical circumstances in which teachers work (*personal practical knowledge);*
   - their knowledge gained from classroom situations and the tasks of teaching *(classroom knowledge)*;
   - their knowledge of how to teach specific subject matter *(pedagogical content knowledge).*

ii) To provide opportunities for prospective teachers to link their theoretical understandings of teaching with their practical experiences of teaching and learning in an authentic learning environment (*All practicum course outlines*, January 2010, p. 2).

The Practicum Programme comprises eight distinct courses that are delivered one per semester (two courses per year) over the four years of the Bachelor of Education (see Table 1). The incremental structure and design of the Practicum Programme is intended to ensure that prospective teachers do not become overwhelmed by the challenges and complexities of classroom teaching too early in their practicum experiences. Additionally, different skills are emphasized and assessed in each course. Six of the courses have direct field observation and/or field-teaching experiences (see Table 2). Each practicum course is graded based on students' performance on written assignments, field-teaching, planning and preparation activities, simulated teaching, and classroom teaching. Students must pass all practicum courses to successfully complete the degree programme.

At the time of the study, there was no placement department for field teaching, nor were there separate clinical faculty to observe students in the field. The practicum advisors were all faculty members and were responsible for in-house/on-campus teaching, field observation, and field teaching assessments. Each practicum advisor was responsible for up to 12 students in each year group. Students were instructed in courses on specific teaching methods, student-centred pedagogy, classroom management, and assessment outside of the practicum programme.

The practicum at the UTT enables each student to spend a minimum of 420 hours in the field (see Table 2), engaged in orientation, observation, reflection, professional preparation, planning, and teaching. Students are taught in cohort groups based on specialization (Primary, Early Childhood, Special Education, Physical Education; or secondary specializations such as Mathematics, Language and Literature, Social Studies, Agriculture, and Integrated Science) by practicum advisors assigned to each group.

Practicum principles and structure at SUNY Potsdam. This description of the Practicum Programme at SUNY Potsdam relates to the period between September 2008 and April 2010. The preparation of pre-service teachers at SUNY Potsdam is a four-year Bachelor of Education degree in Childhood/Early Childhood Education, with teacher certification options in Birth through 2nd Grade, and the other certification in 1st through 6th Grade. The new certification options were in response to regional needs in local school districts and marks a period of transition for the overall programme. This practice continued at the time of writing.

Such programme changes are not unique; in fact, SUNY Potsdam has undergone many changes since its early establishment in the 1800s and later in mid-1900 when it became a teachers' college. Many of these changes were the result of educational reform efforts by state and local governments, and school administrators. For example, a noteworthy and significant change to the programme's overall philosophy occurred in 1999 when the State required that all of its teacher education programmes be revised and re-registered. As part of this process, SUNY Potsdam's education unit faculty revisited the mission statement and developed a conceptual framework organized around the vision statement, "*A Tradition of Excellence: Preparing Creative and Reflective Educators*." The three major strands in the framework are "*Well-Educated Citizen*," "*Reflective Practitioner*," and "*Principled Educator*." This framework has become the bedrock of the teaching/learning experience for the practicum activities (State University of New York at

Potsdam [SUNY Potsdam], 2007).

The practicum programme at SUNY Potsdam allows students to engage in the practice of teaching for a minimum of 679 hours (see Table 2). The practicum experience begins with an on-campus mentoring programme with school-age students in a Literacy Center. This is followed by 100 hours of continuous pre-student experiences progressing through two professional Blocks (see Table 1).

The student teaching experience consists of two 8-week (whole day) placements equalling a total of 75 days. Students completing the student teaching experience are required to fulfil general requirements (regular attendance in the field and student teaching seminars, weekly class activity schedules, reflective journals, lesson plans, self-analysis of teaching/learning experiences, and teacher work samples). Students are also required to maintain a professional disposition, measured by a disposition-tracking sheet. They complete a self-evaluation of their dispositions in addition to that completed by the university faculty.

Placements for the practicum are in selected schools in a specific geographical location. Supervisors move between two or three schools in a given school district. They develop partnerships between the college and P-6 schools in keeping with the mission of the Professional Development School (PDS). For both the practicum and student teaching experiences, the supervisors are full-time clinical faculty who may teach one of the methods courses. Experienced retired educators are also hired as part-time student teaching supervisors. Each supervisor may have a total of 8–10 students per semester.

Influences on Our Teaching

Our second question asked: "*In what ways did these underlying principles and structures influence our teaching?*" We acknowledge that while each institution had its own unique practicum programme structure, the underlying principles underscored the framework of the reflective practitioner. At both institutions, as students become grounded in instructional theory and practice they are also assisted in becoming reflective practitioners, as Deborah commented:

> *The overarching focus of the reflective practitioner coupled with State Education requirements and professional standards is a pivotal point influencing my teaching. I include the three major strands of the reflective practitioner as well as the expectations of curriculum standards framework and content and specialty standards. I use a disciplined inquiry approach, helping my students to develop a sense of themselves as learners. Early in*

> *my classes they are given the opportunity to identify their own biographical sketches as learner from both their earlier home and school experiences. By examining their own strengths, weaknesses, and beliefs about learning, they are able to reflect and consider what is likely to be appropriate instruction for their future students.*

Joyanne also admitted similar influences:

> *The practicum has influenced my teaching because as stated in the course outlines the practicum is designed to "provide opportunities for prospective teachers to link their theoretical understandings of teaching with their practical experiences of teaching and learning in an authentic learning environment" and the students need to develop their skills through reflection, observation, and critical thinking, I say to them what better place to do that other than when you are sitting as a student in the university classroom. I ask them to pay attention and evaluate the strategies being used [in my content-area class] and record or share their feelings as they experience my teaching.*

Also reflected in practicum sequences are the nature and quality of supervised support and distribution of time between programmes. There is a teamwork approach to supervision at SUNY Potsdam that is also apparent at UTT. The teamwork approach affords consistency in planning and implementation of programme goals for the practicum experiences, while meeting mandated requirements from the state and professional associations. A central office structure coordinates clinical faculty support, students' input, clear roles for cooperating teachers, and student requirements and roles during the practicum. This structure also promotes transparency and accountability, especially from the standpoint of ensuring that students meet academic and dispositional requirements throughout their field experiences. Deborah reflects on how this team approach has influenced her teaching:

> *The well-known proverb "Many hands make light work" comes to mind when I think about the experiences I have had working as a team. I feel a sense of consistency, orderliness and commitment. The key here is ongoing communication and while it may result in scheduling additional times for meetings, more is accomplished when everyone assumes a role and work toward the overall goals. I also find unique ways to translate these goals into my teaching especially those that are important to student success in the field. They in turn develop confidence, as there is*

> *familiarity in the issues they converse about among their peers as to what is expected in the field. I also use the team approach in my teaching allowing students to take turns planning for class sessions, giving in-put to assignments and providing feedback to peer demonstrations. I have seen how the principles of courtesy, improved communication and consideration within a team approach facilitate a spirit of cooperation among my students. After all, it is what they will have to demonstrate as they move out into the field to work with their cooperating teachers.*

At UTT, while there was no central office structure to coordinate the operations of the programme, the Practicum coordinator and the various teams of Practicum Advisors met at least twice per semester to monitor the progress of the programme and the students. Additionally, course assignments were structured to measure student achievement in the field.

There is also a marked difference in the time frame in which students begin and continue their practicum experiences between programmes. At SUNY Potsdam, students are required to take a solid core of liberal arts courses before starting their practicum experiences, which means that methods courses are generally completed during their last two years of college. It is also the first time that students are interacting with their methods instructors in coursework related to field experiences, becoming acquainted with the conceptual framework, state and professional association standards, and gaining competence and confidence with content methods for instruction. Because of the demands of the methods and practicum requirements, there is a "fixed schedule of classes" planned so that students can meet the college and certification requirements to graduate on time. There is also a focus on meeting programme gates. Students are not allowed to move forward until they are deemed academically proficient (based on grade performance averages or GPAs), and professional dispositions evaluated through performance-based measures. When students do not "meet" these requirements, they are dropped from the programme and can reapply and continue from the point they were dropped when grades are improved. At UTT, students begin their practicum programme from the first semester. This may be a legacy of the past Teacher's Diploma system, where prospective teachers began field-teaching during their first year, and the requirement to have new prospective teachers reflect on their own educational experiences during their first semester of practicum (see Tables 1 and 2).

We both note and struggle with what appears to be the "inflexible nature" of the structure of the practicum programmes, which has an

effect on teaching time. As Deborah noted:

> *My methods course is taught in year four when students are completing their second practicum experience. They spend half of the time in the college classroom and the other half at their practicum sites. It seems that there is never enough time to teach all that is needed so that students are adequately prepared for their practicum experience. I have often felt frustrated in my attempts to meet this need and over time have made significant changes to my course content in collaboration with my colleagues teaching the other sections of the same course. I teach with the knowledge that my 'seniors' must be 'ready' to teach the content in their practicum experiences and later in their student teaching experiences.*

We also noted that the "cohort approach" to exposing curriculum to set groups of students provided our students with numerous opportunities to collaborate, critically examine, and provide feedback to their peers about instructional practices. Deborah explained:

> *I enjoyed the sense of community that appears to be readily encouraged by the cohort approach within the Block structure. I have the opportunity to work with other instructors. We are able to develop close relationships with our students. Over time we come to know their strengths and provide a context for them to build on these strengths while recognizing the areas they need to work on. The students on the other hand develop confidence within this cohort approach as they are affirmed by each other during peer demonstrations. They are also more responsive to critical discourse about teaching and their observations in classrooms*.

Joyanne also shared:

> *The cohort approach in the structure ensures that the same group is exposed to the curriculum and practicum at the same time. A sense of community is experienced by the students where they readily accept roles that they transfer into their teaching. They are comfortable with each other. They have opportunities to feel at ease with others and take risks more readily*.

The opportunity to examine the underlying principles and structures of our practicum programmes reminded us that teacher education is a complex process with many variables influencing the outcomes. In our case, the variables of engaging in reflective practice, time in the field,

peer demonstration and evaluation, and a cohort approach to practicum experiences were noteworthy points of difference between the two programmes.

Lessons Learned

Kinsella (2001, as cited in Procee, 2006) aptly describes our experiences as a result of engaging in self-study through reflection. She notes:

> Reflective practitioners think about their experiences in practice and view them as opportunities to learn.… Reflective practitioners are concerned about the contexts of their practices and the implications for action. They reflect on themselves, including their assumptions and their theories of practice, and take action grounded in self-awareness. Finally, reflective practitioners recognise and seek to act from a place of praxis, a balanced coming together of action and reflection. (p. 237)

As researchers, we can both attest to the value of examining, comparing, and reflecting on the two practicum structures. We learned that the process of comparison is an important activity to engage in, and it provided us with a broader view of how teacher education programmes, and more specifically practicum experiences, are interpreted in different contexts. Each context has its unique historical and institutional knowledge, which must be considered when planning for programme renewal or programme changes. Our comparisons were not weighed in terms of positives or negatives, but rather where each programme was in terms of the evolution or progression of teacher education programmes. We were also mindful of what is needed in our present programmes to prepare our students to be effective, thoughtful teachers in an era where the landscape of teacher education and practicum programmes is constantly changing.

In exploring our experiences within our practicum programmes, we gained several insights into what can emerge from such comparisons. We came to see the practicum as part of a larger piece of a jigsaw puzzle called teacher education. However, it is in itself its own jigsaw puzzle. The larger pieces of the practicum jigsaw were the mission, goals, principles, and structure of the programme. The smaller, more oddly shaped pieces were questions such as: How much academic and practical preparation is needed to become a teacher? Who is employed to assess prospective teachers? How much training should be provided for faculty members? Who is responsible for the cost of that training? When should the field experience take place? How much time is needed in the field?

How do we determine readiness of the candidates for the field experiences? Do practicum course requirements limit students' engagement in the field experience? These "pieces of conversations" became important in completing a "whole picture" of our practicum programmes.

Field experiences should be planned to begin early in the programme. However, early experiences should be more exploratory in nature, involving more observations, questioning, reflections, and interviews with experienced teachers. In this way prospective teachers can gain knowledge about the education system in which they intend to work. In short, this model may provide the students with insights about their readiness and desire to become teachers and confirm that they want to teach. At the same time, teacher education should include more stringent programme assessment gates, which would ensure that students meet the academic and dispositional requirements before they begin the final field teaching experience. This increases the likelihood that students have demonstrated sustained confidence with pedagogical knowledge and pedagogical content, along with the values, commitments, and professional ethics of teaching.

Institutional structures to support practicum programmes should include: resource personnel with the sole responsibility of maintaining field placements; holding seminars for students to allow them to discuss their experiences; developing protocols for field requirements; allocation of physical spaces for record keeping and personnel to support practicum experiences. There should also be ongoing revision of these structures. Specific roles and responsibilities of personnel, along with a clear chain of command, should be communicated to all key stakeholders. We conclude that a cautious response to resolving these issues is needed because there is no rule of thumb as to what will work best. We need to be mindful of the resistance and different viewpoints on some of these issues. However, we believe that these aspects should be strongly considered to maintain a healthy balance.

Policy guidelines are important in outlining the mission and goals of any practicum programme. There should be a clear mission statement that is infused into all aspects of teacher preparation and communicated to key stakeholders, which underscores whether programmes are creating expert teachers or good beginning teachers. Programmes must ensure currency—what is currently being proposed in teacher education—and quality—measurement of standards of evaluation. Programmes should not hesitate to cap the number of students entering the practicum if the quality of the delivery is being compromised by resource deficits, both in terms of personnel and physical allocations.

Each programme should include measures of accountability to professional standards. For example, SUNY Potsdam ensures that its practicum programme structure holds itself accountable to professional standards as outlined by relevant agencies and constituents, such as the National Council for Accreditation of Teacher Education, now merged with the Teacher Education Accreditation Council to form the Council for the Accreditation of Educator Preparation (CAEP). Professional standards should be outlined to ensure currency and professional growth, which also provides confirmation of the worth and quality of a programme's mission and goals. Additionally, accountability to professional standards propels stakeholders involved to move toward experiences that maintain and sustain their professional growth.

Those involved in teacher education programmes need to acknowledge the evidence that the nature of professional education itself is changing (Wimmer, 2008). Teacher educators need to consider how changes within and across time set the stage for open public conversations, as well as scholarly dialogue about what it means for teacher educators to prepare students for a changing world, a changing school population, and responsibilities. For example, the Caribbean programme was changed from one that was a terminal post-secondary certificate for in-service primary teachers to a job entry-level requirement of a degree. Although the degree has more rigorous academic and pedagogical preparation, those participating are pre-service students and therefore do not come in or leave the programme with the experience of being able to teach, as the graduates of the former diploma programme. This creates a tension in the cultural context as stakeholders puzzle over the question: How can a person who has a teaching degree be less able to teach?

It is also necessary to consider the impact of national recommendations on existing teacher education programmes, as in the case of SUNY Potsdam. Presently, in the US, there is a proposal and a new vision that demand an entirely new approach to teacher education. This approach will require that partnerships be built in which teacher education becomes a shared responsibility for all schools from K–12th grade and higher education—colleges and the Schools of Education. A key element in this transformation of teacher education programmes is putting clinical practice at the centre of teacher preparation (see Blue Ribbon Panel on Clinical Preparation …, 2010). We note here the need for further dialogue on how international recommendations will impact emerging programmes like those at UTT.

As an outcome of the reflective process that we engaged in for this paper, we recognized the importance of mentoring in preparing and

sustaining faculty involved in both emerging programmes like that of UTT and established programmes as in the case of SUNY Potsdam. We recognized personal experiences and academic preparation in several contexts as setting the stage for leadership responsibilities. We also attributed self-initiated professional development at UTT and mentoring by senior faculty at SUNY Potsdam as influencing our positive experiences and growth in our roles. Furthermore, we felt that there was a critical need for collaborations between faculty in other Caribbean institutions that provide pre-service programmes, as well as those outside of the Caribbean region that may have longer established programmes, in exploring these issues.

There is the recognition that new teacher education programmes, like the one at UTT in this study, are expected to have growing pains as they come on stream. However, established teacher education programmes also experience transitional growing pains, because there is always a need for upgrade and change. Teacher education programmes cannot be static because they are consistently responding to economic and political issues, as well as economic and professional decisions and trends in teacher education. Therefore, as teacher educators, we need to keep abreast of developments in teacher education, have a historical understanding of the factors that bring about changes, and anticipate or predict future developments, while keeping the momentum of our practicum programmes in the present.

Conclusion

As teacher educators seek to assess and improve their programmes, make deeper sense of what they are doing, improve their practice and their students' learning, they are encouraged to review their programmes and compare them with others. In so doing, they will be able to explore similarities, differences, gaps, and best practices that exist in terms of developments in teacher education. This paper is a way of giving Caribbean and international teacher educators some insight into the benefits of such comparisons.

While teacher educators generally regard field experiences as the "core feature of a teacher education program" (Wilson, 1999, as cited in Wimmer, 2008), a consensus remains that teacher education programmes, including field experiences, should not be understood through a single lens of orientation (Zeichner, 1993). We sought to heed this advice as we completed this self-study. Through our conversations we were able to explore each programme from our unique perspectives. We believe that this exploration has provided us with details that may

also influence our decisions, or that of other teacher educators, as we seek to shape or modify teacher education programmes to facilitate global competencies and expectations.

We are mindful of the differences in contexts and resources of the two campuses and we recognize how notions of the descriptors of "emerging and established" may be applied. These differences were often raised in conversation with colleagues at both universities during our data collection. We noted the need to audiotape future conversations and increase the opportunity to capture more detailed discussions, which, we conclude, should be ongoing, and which are of themselves self-study data.

Yet, despite this limitation, reflection and self-study have given us the opportunity to pause and ask ourselves if what we have observed in each of our individual practicum programmes makes sense. We were also able to see the progress that we have made in both programmes and to acknowledge that factors continue to affect emerging and well-established teacher education programmes. We have come to recognize that there is a need for continuous improvement of both established and new teacher education programmes. We hope that our findings and conclusions can also serve to inform the direction and development of practicum programmes in our own, as well as other teacher education institutions, in t light of the increasing globalization in teacher education.

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Caribbean Curriculum
Vol. 20, 2013, 77–100.

IS ANYBODY LISTENING?
Teachers' Views of Their In-Service Teacher Professional Development Programme

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This paper reports on a segment of a research project that conducted an overall evaluation of the Diploma in Education (Dip.Ed.) programme provided by the School of Education of The University of the West Indies (UWI), St. Augustine for the period 2004–2009. The Dip.Ed. programme provides initial training for teachers employed in the secondary school system in Trinidad and Tobago. The overall study utilized the following models as theoretical and conceptual lenses: Guskey's (2002a) model of evaluating the impact of continuing professional development (CPD) on teachers' practice; and Guba and Lincoln's (1989) fourth generation evaluation model. This paper, which reports on the teachers' perspectives, presents findings on the extent to which the Dip.Ed. programme met their expectations, the benefits and limitations of the programme, and the impact of the programme on their practice. Data from teachers were gathered using an open-ended questionnaire, and were analysed with the NVIVO qualitative data analysis software. The paper considers the implications of these findings for the overall improvement of the Dip.Ed. programme and teacher professional development.

Background and Introduction

The School of Education (SOE) at the St. Augustine Campus of The University of the West Indies (UWI) includes as part of its mission the provision of professional development programmes for educators. Its primary clientele is Trinidad and Tobago's (T&T) Ministry of Education (MOE) and, by extension, practising and prospective teachers at the early childhood, primary, and secondary levels who seek qualifications at graduate and postgraduate levels in the field of education.

The Postgraduate Diploma in Education (Dip.Ed.) is an in-service programme that runs from July to May of the following year. It was developed in response to a request from the MOE to equip secondary school teachers with professional training. The in-service Dip.Ed.

programme provides initial teacher training for teachers who are already teaching at secondary schools. Certification in the field of education is not mandatory for entry into teaching in secondary schools in T&T, therefore most teachers enter the classroom with content knowledge acquired from a B.A. or B.Sc. degree programme but with little or no professional training. The goals of the programme, as stated in the SOE's *Regulations and Syllabuses* (The University of the West Indies [UWI], 2004, p. 63), are:

- To encourage teachers to give the greatest attention to past and present practices and future possibilities in the teaching of their subjects
- To encourage teachers to read and think about various problems related to the history and practice of education generally and their own subjects in particular
- To encourage teachers to think about education as a process involving delicate relationships among teachers and students
- To lead teachers to consider the professional implications of the nature of their occupation and to strive for continued professional growth.

An evaluation of the Dip.Ed. programme for the period 2004–2009 was undertaken by a team of lecturers who deliver the current programme, some of whom taught on the programme during the period under review. It aimed at eliciting stakeholders' views on the SOE's effectiveness in providing professional development experiences which facilitated the delivery of quality instruction that was relevant to teachers' context and that promoted advocacy.

Employing a qualitative approach to evaluation, the overall research project investigated stakeholders' expectations of the in-service Dip.Ed. programme; the extent to which their expectations were met; and the impact of the programme on teachers' practice. It sought to elicit multiple perspectives through the lenses of various stakeholders in education. The participants comprised officials from the MOE—the Chief Education Officer, the Director of Curriculum, and Curriculum Officers; principals; heads of departments (HODs); deans; all teachers who had graduated from the programme during the period 2004–2009: the National Parent Teacher Association (NPTA); The Trinidad and Tobago Unified Teachers' Association (TTUTA); and lecturers who deliver the Dip.Ed. programme.

Data were collected through interviews and open-ended questionnaires. One-on-one interviews were conducted with officials of

the MOE, while principals, HODs, and deans participated in focus group interviews. All graduates of the 2004–2009 Dip.Ed. programme were asked to complete questionnaires which solicited their views.

The SOE's Dip.Ed. programme presents a peculiar circumstance in terms of teacher professional preparation, in that while most teacher preparation programmes are pre-service, the SOE's Dip.Ed. is in-service. As such, according to conventional definitions within the field of teacher professional development (TPD) it would be described as continuous professional development (CPD). Nevertheless, as mentioned previously, the programme provides the initial teacher professional preparation for secondary school teachers in T&T. As a result of the peculiar positioning of the SOE's Dip.Ed. programme, for purposes of this paper the conceptual lenses used in the study relate to theoretical perspectives on CPD as well as TPD. The research is located within the field of TPD and evaluation of professional development. It draws from the literature on models of evaluating teacher development and CPD programmes. Overall, the study used the following models as theoretical and conceptual lenses: Guskey's (2002a) model of evaluating the impact of CPD on teachers' practice; Ottoson's (2000) model of evaluating continuous development programmes; and Guba and Lincoln's (1989) Fourth Generation evaluation model.

These conceptual and theoretical frameworks guided decisions about what types of data to collect and from which stakeholders. The fourth generation evaluation model emphasizes the importance of garnering stakeholder input when conducting evaluations to determine the quality of programmes. Under the fourth generation evaluation model, the definition of stakeholders includes all members of the learning community who might have a stake in the outcomes of the programme, thus not limiting the definition to programme funders and managers as previous generations of evaluation models had done. Stakeholders are critical to the evaluation process because their claims, concerns, and issues provide data and facilitate the negotiations among the various stakeholder groups to arrive at a consensus.

Drawing on the fourth generation evaluation model's approach to evaluations and Guskey's model of evaluating the impact of CPD on teachers' practice, this paper reports on the experiences of one group of stakeholders—teachers. It investigates the extent to which teachers' expectations of the Dip.Ed. have been met, and seeks to determine how their practice might have changed as a result of participating in the Dip.Ed. programme. Data were gathered through open-ended

questionnaires that solicited teachers' initial expectations of the programme and the impact it had on their pedagogy and practice.

The participants for this aspect of the research comprised teachers who were enrolled in the programme during the period 2004–2009. Although the questionnaires were distributed to all teachers who completed the programme during the period, approximately 15% of them completed the questionnaire. The responses were organized according to the year of enrolment and curriculum groups. The demographic data for the questionnaire did not include teachers' names or their schools, thus ensuring anonymity. This ensured that ethical considerations were adhered to during the research process. The qualitative data analysis software, NVIVO, was used to analyse the data and identify emerging themes from the teachers' experiences, expectations, and impact of the programme.

This study provides the SOE with views from teachers on its effectiveness in providing a professional development programme for secondary school teachers. The results of the study are expected to inform future adjustments to the Dip.Ed. programme. It also adds a Caribbean perspective on the field of CPD through the evaluation of an in-service programme.

Review of the Literature

This review is divided into two subsections. The first section critically examines the context-literature on TPD in terms of matching TPD to the needs of individuals and organizations. As such, issues of the nature and purpose of TPD and its effectiveness are discussed. The second section critically examines the literature on evaluating TPD. As a result, the review explores the literature on models of evaluation and CPD. In particular, the overall study used the following models as theoretical and conceptual lenses: Guskey's (2002b) model of evaluating the impact of CPD on teachers' practice; Ottoson's (2000) model of evaluating CPD programmes; and Guba and Lincoln's (1989) Fourth Generation evaluation model. Nevertheless, this paper, which reports on teachers' perspectives, essentially utilized the fourth generation evaluation model's approach and Guskey's (2002b) model.

What Do We Know About Teacher Professional Development?

It is useful to start this discourse by qualifying the term *professional development*. This paper adopts the definition proffered by Day (1999), which states:

> Professional development consists of all natural learning experiences and those conscious and planned activities which are intended to be of direct or indirect benefit to the individual, group or school and which contribute, through these, to the quality of education in the classroom. It is the process by which, alone and with others, teachers review, renew and extend their commitment as change agents to the moral purposes of teaching; and by which they acquire and develop critically the knowledge, skills and emotional intelligence essential to good professional thinking, planning and practice with children, young people and colleagues through each phase of their teaching lives. (p. 4)

TPD is about teachers engaging in programmes and reflective activities whereby they learn or relearn, with a view to altering their beliefs, attitudes, values, understandings, and professional practice for the benefit of improving their students' learning (Darling-Hammond, Newton, & Wei, 2010; Day, 1999; Griffin, 1983; Guskey, 2002a; Hopkins & Harris, 2001; Steadman, Eraut, Fielding, & Horton, 1995). The nature of TPD involves two main elements that are mutually dependent: knowledge acquisition and skills development (Field, 2011). TPD can take two main forms—pre-service, in which case the training occurs prior to teachers actually working in the classrooms; and in-service, which relates to training that takes place after persons are already teaching. In-service programmes usually involve an extended programme of accredited or non-accredited learning (Day 1999).

Whether in-service or pre-service, TPD is important and its main purpose is to facilitate the enhancement of teacher quality through engagement in a systematic programme geared to bring about change in three main areas (Guskey, 2002a; Knight, 2002):

- Change in teachers' beliefs, attitudes, values, and understandings
- Change in teachers' educational practices
- Change in student outcomes

Guskey (2002a) admits that there is no guarantee that engagement in TPD programmes will bring about the projected changes in teachers, their practice, and student outcomes. The process is not linear, and researchers into TPD consistently make the point that many TPD programmes are ineffective and will continue in this vein unless the programmes are realigned to the needs of teachers (Guskey, 2000; Hunzicker, 2010). The Centre for Education Research and Innovation (1998) cautions that distinctions must be made between wants and real

needs, and submits that the responsibility for need identification lies not only with the teachers, but also with policymakers and other stakeholders within the system. Nevertheless, there is agreement among writers (Darling-Hammond, Wei, Andree, Richardson, & Orphanos, 2009; Field, 2011; Fullan, 1995; Lieberman & Pointer-Mace, 2008; Quick, Holtzman, & Chaney, 2009) that effective TPD programmes have the following characteristics:

- Instructionally focused – on the study and application of content and pedagogy with a view to improving student outcomes
- Personalized – to suit the teachers' needs
- Frequent – the time span in TDP is not too long so that new skills and knowledge are quickly disseminated
- Job-embedded/relevant – in that they connect to teachers' daily duties and they are seamlessly incorporated into each school day
- Collaborative – involving teachers in active and interactive learning where they have to work with others to solve problems, make decisions, and create innovations
- Supportive – in so far as the needs, interests, and concerns of the teachers as well as the school and district are considered
- Reflective – such that teachers can evaluate their own practice and outcomes, and find ways to improve both
- Ongoing – in that multiple opportunities are available for interaction and learning
- Evidence-based – contains some capacity for inquiry and is formulated based on inquiry

Field (2011) suggests that unless the TPD programme involves a systematic process of reflection, its impact on professional learning is compromised, and this in turn compromises the sustainability of any change on the teachers' part. Field (2002) states that:

> The emulation of ideas and the use of materials developed without reflection do not empower the teacher, but can make them over-reliant on the use of the products of others' learning. Reflection helps teachers to address planning and to assess the outcomes of teaching for themselves. (p. 2)

According to Guskey (2002a, p. 382), the majority of TPD programmes are ineffective "because they do not take into account two crucial factors: (1) what motivates teachers to engage in professional development and (2) the process by which change in teachers typically

occurs." It is worthwhile to explore these two factors and examine the reasons why teachers participate in TPD programmes. In other words, it is important to review TPD: What's in it for teachers? Teachers are attracted to professional development for various reasons, which can be put into two categories: professional enhancement, and personal and pragmatic. There may be some overlap in these categories (see Table 1).

Table 1. Reasons for Participating in TPD

Professional Enhancement	Personal and Pragmatic
Enhancement of skills and pedagogical knowledge	Personal development
Improvement in their effectiveness with students	Accreditation/certification for promotion
Improvement in student outcomes	Gaining better student subject pass rates
	To gain practical designs and actions that that they can relate directly to their day-to-day procedures in the classroom

Guskey (2002a) suggests that there are flaws in the assumptions made by earlier teacher change theorists, such as Lewin (1935), in their models regarding the process by which experienced teachers engage in TPD change. The flaws lie in the sequencing of the three major outcomes of TPD. Earlier models assumed that change in teachers' beliefs and attitudes came as a direct follow-on from engagement in the TPD activities and therefore proposed a model sequenced as follows:

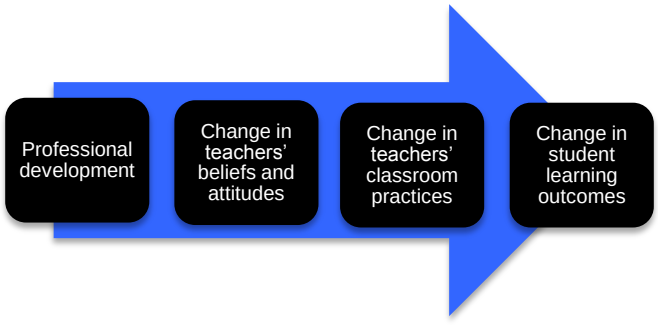

Figure 1. A model of teacher change (based on Lewin, 1935).

Guskey (2002a) proposes an alternative model, which sequences the outcomes of TPD differently and places change in attitudes and beliefs as the final outcome, as follows:

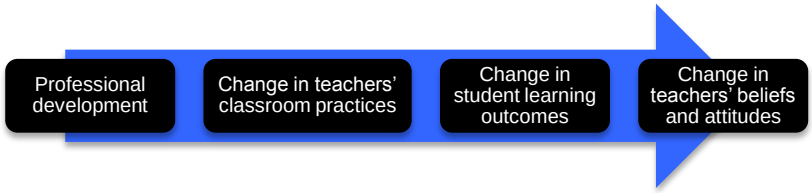

Figure 2. An alternative model of teacher change (Guskey, 2000a).

The key point made by this alternative model is that what brings about the change in teachers' attitudes and beliefs is not the professional development per se, "but the experience of successful implementation" of change in teachers' classroom practices and student learning outcomes (Guskey, 2002a, p. 383).

Having interrogated the issues of the nature and purpose of TPD, its impacts, and why it is important for teaching and learning in the previous sections, it is critical to pay some attention to how TPD operates, in terms of delivery. This particular paper is focused on in-service TPD programmes and, according to the Centre for Educational Research and Innovation (1998), in-service TPD programmes can take a "top-down," "bottom-up," or "bottom-across" approach. The top-down approach involves education authorities providing courses in areas where they believe teacher competencies require development. The bottom-up approach begins by identifying the needs of teachers or schools and custom-fits courses and developmental activities to suit. The bottom-across approach adopts a systemic approach and involves collaboration among networks of teachers across schools, thereby facilitating the spread of good practice. No individual model can necessarily meet all the training and development needs of a school or system. The top-down approach is useful if the objective is information dissemination. However, if the objective is to engender attitudinal change then a bottom-up approach is more useful, since it allows for taking ownership.

In terms of who provides the TPD, the Centre for Educational Research and Innovation (1998) suggests that the provision can be made by the education authorities, such as the MOE in T&T, or by what it calls "third-party external provision" by universities and other tertiary education institutions. In the T&T context, both types of provisions are in use. More specifically, in terms of the SOE's Dip.Ed. programme, a combination of both types exists, in that the MOE commissions the SOE

to provide and deliver the programme on its behalf. The approach taken in the delivery of the programme is eclectic, as it contains elements of both top-down and bottom-up approaches. While some measure of collaboration may be incorporated into the delivery of the programme, there are no formalized networks.

How Do We Evaluate Teacher Professional Development?

The overall study from which this paper emanates drew on the four models mentioned earlier as it evaluated the Dip.Ed. programme from the perspectives of many stakeholders. This paper reports on findings from the teachers' data, which sought to examine the effect of the TPD programme as teachers experience it, the extent to which their expectations of the programme have been met, as well as the scope of change resulting from their engagement in the programme, particularly in terms of their practice. As such, this paper essentially draws on Guskey's (2002b) Five Critical Levels of Professional Development Evaluation model as it seeks to determine the value of the programme to teachers. Guskey (2002b, p. 48) proposes five levels upon which effective professional development should be evaluated, as follows:

1. Participants' reactions
2. Participants' learning
3. Organization support and change
4. Participants' use of new knowledge and skills
5. Student learning outcomes

In garnering data from the teachers on their perspectives of the Dip.Ed. programme, the study drew on the five levels.

As suggested by Guskey (2002b), in conducting the evaluation the researchers accepted that they were seeking to find evidence rather than proof. Additionally, the researchers operated on the premise that the evaluation could provide valuable information for improving the Dip.Ed. programme. In this regard, in terms of making recommendations for improvement, the researchers also took into consideration Guskey's (2002b) proposition that in order to plan TPD to improve student learning the order of the levels should be reversed. In other words one must "plan backwards," beginning where one wants to end and working backwards.

Presentation and Discussion of Findings

The research sought answers to the following questions from an evaluation of the SOE's Dip.Ed. programme, which was undertaken to provide insights on teachers' experiences of the professional development programme and the scope of change resulting from such professional development:

- *What are teachers' experiences of the Dip.Ed. programme?*
- *To what extent have teachers' expectations of the Dip.Ed. been met?*
- *How have teachers' practice changed as a result of engaging in the Dip.Ed. programme?*

The following sections provide a discussion of the findings in terms of the research objectives and the literature reviewed for the study. A summary of the findings is presented in three different ways. Firstly, the findings that specifically relate to the research questions posed are discussed. Secondly, the findings that emerged as a result of cross-cutting themes from the research are explored. Finally, in order to effectively analyse and draw recommendations from the findings, the data were synthesized by constructing a list of "issue statements" and these are presented with recommendations.

Summary of Findings in Relation to the Research Questions

Research Question 1

What are teachers' experiences of the Dip.Ed. programme?

When asked about their experiences in the programme, teachers revealed that they were exposed to professional, personal, and interpersonal experiences that generally impacted on them in a positive way. The professional responses are dealt with separately, while the personal and interpersonal experiences are discussed together.

Professional experiences

Teachers felt that they gained pedagogical knowledge and skills. Some of the specific gains were teaching strategies and methods, and lesson planning. The teaching practice sessions allowed them to reflect on the strengths and weaknesses of their own practice. Also, they acquired an understanding of different school cultures through their school visits. Teachers characterized their experience as:

> *"Very good; it was intellectually stimulating and informative. Sharing similar experiences was very heartening."*
>
> *"Intensive, enlightening, inspiring; I learned new methods/philosophies about teaching/learning. A great opportunity to reflect on my practice as well as get feedback…"*
>
> *"Stimulating, vibrant …sessions were enlightening and provided clarification as to your own philosophy of education and your desire to see positive changes in the system."*

Although most of the respondents indicated that their experiences on the programme were worthwhile, a few had different views. Some teachers felt that, overall, the programme did not address the specific needs of their schools:

> *"However, the Dip.Ed. experience did not cater to my needs as a teacher of [School X] – the remedial, academically challenged students who can barely read/write or who are surely underexposed and impoverished or are violent/prone to severe indiscipline…"*

Participants indicated that although the programme was rewarding, challenging, intellectually stimulating, and informative, it tended to be overwhelming at times. Their responses indicated that the challenges were with the amount of content covered as well as the time frame in which the work had to be covered. In addition, they experienced challenges with time management and balancing their full-time teaching responsibilities with the demands of the programme. They commented:

> *"At this stage of my teaching career I felt that the Dip.Ed. Experience was perfectly timed. The work content was enlightening, however, too intensive."*
>
> *"[It was] intensive and grueling trying to balance demands of the course with school workload."*
>
> *"A lot of work was done but it could have been stretched over a longer period."*

Personal and interpersonal experiences

Teachers also had positive personal and interpersonal experiences that they seemed to value as much as the professional experiences. They characterized their cognitive experiences as intellectually stimulating. They had positive affective experiences as well. Almost all of the

teachers highlighted the positive social experiences they gained. They felt that the programme encouraged professional and social networking with their peers, which kindled a sense of collegiality and collaboration that continued after the programme ended:

> *"Participants were friendly and willing to offer help/advice. We developed strong bonds and even keep in touch up till now."*

> *"It was an intimate group…there was an air of camaraderie, which allowed us to learn from each other and help each other."*

In terms of programme delivery, generally the teachers' experiences were pleasant. They commented that lecturers were accessible and competent, and, as mentors, they facilitated group sharing and created environments that were conducive to work:

> *"My experience was a positive one. My group had excellent, professional tutors who clearly enjoyed teaching/lecturing to teachers. They were always prepared and were willing to answer questions and give constructive, sound criticism."*

> *"Tutors were also quite efficient and approachable."*

However, some teachers indicated that there were some shortcomings with the delivery of the programme. They found that there were different standards with respect to course content, supervision of practical teaching sessions, and grading of assignments. Additionally, they pointed out differences in the teaching styles or modes of delivery adopted by some lecturers, which appeared to be inconsistent with what they expected from teachers in the classroom:

> *"Most presenters/tutors encouraged independent thought but not all. In my opinion this is critical."*

> *"It was challenging not in terms of content but in terms of the many inadequacies of the administration. What was being taught was not exemplified by some tutors. There was too much inconsistency in marking by some tutors."*

> *"Individual curriculum groups did not seem to have common content which was standardized.... It was also more difficult to work ahead and organize readings where course content outlines were not provided by lecturers."*

Research Question 2

To what extent have teachers' expectations of the Dip.Ed. been met?

In general, most of the teachers' expectations for this professional development programme were met. They expected to gain or improve their pedagogy in the following areas:

- teaching methods and strategies
- understanding students' learning styles
- lesson planning
- improved curriculum delivery
- assessment techniques
- using the research literature

They expected the programme to provide insights into effective classroom management practices in order to enhance classroom discipline.

On a more personal level, the teachers wanted to learn techniques and strategies to become better teachers and to become reflective practitioners to gain a better understanding of their students and for their own self-evaluation. For example, teachers said they expected the programme:

> *"To make me be a better teacher; to understand the client a little better; to critique what I was currently doing – make amends…"*
>
> *"To acquire a repertoire of teaching strategies; to improve curriculum delivery…"*
>
> *"To gain practical insight and strategies to be able to deliver the academic curriculum in an efficient, fun, educational, time managed, student friendly manner. Be better prepared to plan, organize and deliver stated goals…"*

Overall, the teachers valued their exposure and participation in practical teaching and clinical supervision. They commended the programme's focus on an holistic approach to education, more specifically pedagogy and the exploration of the theoretical background of education. They felt that these areas facilitated their professional development and helped to improve their efficacy and confidence. Teachers commented:

> *"I found that the entire programme was well organized and relevant to improving my professional needs."*

> *"All aspects were met including new avenues that I never even knew existed – the psychology of children. This was important since without this teaching and delivery of lessons will be almost impossible."*

> *"Foundation courses assisted me in going in depth insight* [sic] *into my students. The portfolio assisted me and allowed me to trace my growth and development."*

Although they did not specifically indicate expectations for personal and interpersonal development, teachers' responses demonstrated that the programme facilitated growth in these areas:

> *"I know that I have grown emotionally and socially because of it. My perspectives on teaching, learning student ability* [sic] *and my relationships with my students have been widened and challenged for the better."*

Despite the fulfilment of many of their expectations, some teachers felt that the Dip.Ed. programme did not meet all of their goals. Some teachers felt that the programme did not have an adequate focus on teacher professionalism, the professional identity of the teacher, and changing teacher attitudes. For example, teachers stated:

> *"There was not enough focus on changing attitudes and ensuring that teachers developed a professional identity – areas like time management, stress management…"*

> *"Even though all aspects of the programme was satisfying for me, I felt that more can be done in training a teacher to be more 'professional' especially when it came to dress and behaviour…"*

Others noted an inadequate link between theory and practice. They believed that some of the teaching methods which were introduced did not meet the needs of diverse learners in the secondary classroom, particularly those below average or those with learning disabilities. In addition, they pointed out that some of the teaching strategies they were exposed to were not designed for large classes. Teachers commented:

> *"The programme seemed entrenched in theory and did not give adequate guidance to young/new teachers as to working in local schools and coping with local issues and problems of the physical school structure, student issues and social issues. It appeared to be based in theory applicable to western society."*

> *"The teaching methods that I learnt were for above average students and I have below average and learning disabled students so I was only able to use some aspects of the methods."*
>
> *"The implementation of the strategies learnt – they are not designed for large classrooms; students at various intellectual levels in one class…"*

Further, some teachers indicated that there was an inadequate focus on innovative methods of teaching that would cater to students with different learning abilities:

> *"There was not enough focus on catering for different learning abilities/styles."*

Other criticisms of the programme were aimed at its structure. Usually, teachers are trained in a specific curriculum area or in educational administration, and due to the intensity of the programme there is little or no opportunity for students to be exposed to both areas. As a result, teachers in the curriculum-specific groups expressed their disappointment at not being exposed to educational administration, and those who did educational administration did not receive training in their content areas. In addition, some teachers felt that there was a need for a follow-up programme, especially for teachers with middle management responsibilities, such as HODs and deans, since the Dip.Ed. programme does not provide specific teacher preparation for these areas of responsibility.

Research Question 3

How have teachers' practice changed as a result of engaging in the Dip.Ed. programme?

Teachers reported that the Dip.Ed. programme impacted on teachers' pedagogical, personal, and interpersonal growth. They believed that they became more competent in lesson planning and curriculum delivery as they were able to implement new teaching methods and strategies in the classroom. This improvement resulted in part from an increased knowledge of students' learning styles and their ability to adjust the pedagogy to meet the students' needs. Moreover, they indicated that the programme promoted the use of research literature to expand their knowledge, and this added to the pedagogical impact.

Teachers expressed the belief that participating in the programme helped to increase their efficacy as they felt that they were more effective in the classroom and were able to implement their new knowledge:

> *"I became more student-centered and my Dip.Ed. experience made me more 'human' towards my students."*

> *"I have become more flexible in planning and teaching lessons. I have become more reflective and willing to seek out new teaching strategies and learning resources."*

They felt that their students benefitted from their improved delivery. One teacher noted:

> *"Students seem more interested and feel included. Students respond positively, becoming more involved…"*

Moreover, for many, the programme fuelled an interest in professional development and encouraged them to either consider or actively enrol and participate in workshops, courses, and graduate programmes:

> *"Being exposed to the best lecturers at the university has also motivated me to be more aware of research and innovations in the field of education."*

> *"Another benefit is appreciating the business of education as evolving – being open to various changing methods of teaching to reach students. Exposure to the vast amount of research being done in the field of education was another definite benefit. I am now encouraged to research and look at new ways of developing my work and myself."*

Teachers revealed that as a result of the impact of the programme on their professional development they encouraged other teachers to enrol in the programme. Some were engaged in collaboration at the level of their individual schools, by sharing the information they had gained at informal and more formal professional development sessions, as well as mentoring teachers who had not yet been exposed to professional development programmes. For example, teachers reported that they were engaged:

> *"By sharing at the departmental level at meetings; by encouraging continuous reflection by staff."*

> *"Sharing with other teachers, especially newer ones; informal 'workshops'."*

Many of the teachers in the study pointed to the peer collaboration and networking that began during the Dip.Ed. programme and continued to the present. They noted that their interaction with teachers from other

schools helped them to reflect on their own school context and on the ways in which differences in contexts impact on what happens in the classroom:

> *"Continued networking/communicating with others from the programme… a sharing of problems, finding or sharing possible solutions; development of a camaraderie with others in the profession."*

Although a few of the teachers felt that there was not much of an impact due to the dynamics of schools, at the end of the Dip.Ed. programme most teachers felt more empowered because of the new and improved pedagogical understandings.

Summary

The data revealed that teachers were exposed to professional, personal, and interpersonal experiences during the programme. Generally, teachers' expectations of the Dip.Ed. programme were met. The expectations were categorized as pedagogical knowledge, classroom management skills, assessment skills, teacher efficacy, and reflective practice. However, some teachers felt that there was an inadequate focus on training and development, professionalism and the professional identity, strategies for meeting the needs of diverse learners, innovation, and a connection between theory and practice.

Most of the participants indicated that the programme positively impacted on their pedagogy and overall professional growth. They pointed out that they collaborated with their peers during and after the programme, building a network of teachers who supported each other. The level of collaboration and collegiality was extended to their school context through the sharing of ideas and teaching strategies, either in formal workshops or through informal discussions. Moreover, the Dip.Ed. programme encouraged many teachers to continue to use research literature to inform their teaching and to continue their professional development, either through research or enrolment in professional development programmes.

Key Findings as Part of Cross-Cutting Themes

Teachers' values

Teachers ascribe the most value to activities that involve experimenting with classroom practices, innovations that they can implement in their classrooms, peer collaboration/networking within the programme, and

the reflective process that facilitates self-evaluation. They view the main purpose of TPD as improving their pedagogical skills to have a positive impact on their teaching and student achievement. These findings are consistent with the literature (Day 1999; Field, 2011; Hunzicker, 2010) on what teachers value most in a TPD programme. Enhancement of their individual personal and professional competence is what they value most from a TPD programme, and they don't seem to align what they're doing in the TPD programme with wider strategic benefits such as whole school improvement.

Structure of TPD

Teachers see the structure of the programme as being restrictive, burdensome, and overwhelming. The current in-service Dip.Ed. programme is structured so that teachers have a five-week internship during their July/August vacation and then they attend classes on Fridays during the school term. They are burdened because some have their normal teaching load cramped into four days (Monday to Thursday) instead of five to allow them to attend TPD classes on Fridays. This is experienced by some teachers at the school level perhaps because of inadequate guidelines from the MOE with respect to teachers in training.

The programme offers participants two pathways to certification. They can enrol to pursue teacher preparation based on their curriculum content specialty or educational administration, the latter being for persons interested in senior and middle management. Some participants felt that they should have had exposure to both their curriculum area and educational administration, especially those who were HODs and deans. This gave rise to the expression of a need for follow-up programmes after completion of the Dip.Ed. for middle management positions (HOD and dean).

A key theme running through the findings is the assertion that the programme did not sufficiently facilitate innovation in teaching strategies and methods. There is also the implication that the programme itself can be more innovative; the form this innovation should take was not articulated.

The findings on teachers' values and the structure of the programme are consistent with the literature that speaks to the characteristics of an effective TPD programme—providing opportunities for teachers to work collaboratively to solve problems, make decisions, and create innovations; job embedded and connected to teachers' daily roles and responsibilities in a seamless way; and personalized to suit the teachers'

needs (Darling-Hammond et al., 2009; Field, 2011; Fullan, 1995; Lieberman & Pointer-Mace, 2008; Quick et al., 2009).

Importance of school context

There is the perception among teachers that the benefits of TPD are highly linked to individual school contexts. Many believe that there is a disconnect between the strategies and methods provided in the TDP via the Dip.Ed. and their school context. The emergent perception is that teaching strategies and methods learnt on the programme apply to schools that are: well-organized, adequately resourced and staffed, supported by parents and the community, and have students who are independent learners who take responsibility for their learning and have little or no psychosocial problems.

Quality of the TPD

The Dip.Ed. programme tends to reflect a number of the characteristics of an effective TPD programme, particularly in terms of: content and pedagogy; reflection and self-evaluation; collaboration/networking with colleagues; and delivery and evidenced-based, in that it provides opportunities for some form of inquiry. However, the teachers' use of new strategies seem not to be sustained or embedded, and the TPD provided by the Dip.Ed. programme seems to be focused on personal development rather than the broader impact on school improvement. There is some variance within the different curriculum groups in terms of instructional delivery and content focus.

Barriers to TPD engagement

Barriers to TPD engagement include time and competing professional responsibilities and tasks. Many participants indicated that the programme is too intense and overwhelming, as they have to maintain their normal teaching workload and school responsibilities while engaging in their teacher preparation programme. Also, there is no follow-up after completion of the programme to build capacity; and teaching strategies and methods, some of which do not seem contextually relevant to individual schools, are seen as barriers.

Accreditation/promotional opportunities

The Dip.Ed. professional certificate is a requirement for promotion in secondary schools. Some teachers engage in the Dip.Ed. TPD programme in order to get promoted to higher positions in their schools.

Additionally, others use it as a stepping-stone for entry into master's level programmes. However, if certification is the singular purpose of engaging in the programme, the chances of the programme changing teachers' attitudes, beliefs, and values, which would have a positive impact on student outcomes, is significantly diminished (Guskey, 2002a).

Continuous professional development

Engagement in the Dip.Ed. programme acts as a catalyst for some participants to progress to doing higher-level degrees and further study such as master's programmes.

Summary

The Dip.Ed. programme is certainly having a positive impact on in-service teacher preparation, particularly in pedagogy and content. Nevertheless, it doesn't seem to be meeting the individual needs of some of the teachers in their singular contexts. Hunzicker (2010) asserts that TPD programmes which are not aligned to the needs of teachers are ineffective. However, in making judgements about the Dip.Ed. programme's effectiveness, it is useful to consider The Centre for Education Research and Innovation's (1998) point about making distinctions between wants and real needs, and that the responsibility for need identification lies not only with the teachers, but also with policymakers and other stakeholders within the system. Hence, the fourth generation evaluation approach used to conduct the overall evaluation of the Dip.Ed. programme could help in arriving at a consensus about how the programme should and can improve.

Conclusion

Constructed Issue Statements With Recommendations

Issue 1: *There is a need to strengthen TPD via the Dip.Ed. programme in terms of levels of school-contextualized practice—collaboration with colleagues within schools to achieve wider school improvement.*

Recommendations

Teachers should be exposed to theories of differentiated learning and to practical strategies for differentiated instruction so that they can develop the requisite skills to adapt pedagogical strategies to their particular context. The SOE can place more focus on school improvement in the

foundation area. Additionally, teachers need to understand the role of TPD and their particular role in achieving school improvement

Issue 2: *TPD via the Dip.Ed. programme is effective in terms of pedagogy, content, and delivery.*

Recommendations

Although teachers believe that the programme is effective, the SOE can continue to evaluate the programme to ensure that it meets expectations in pedagogy, content, and delivery.

Issue 3: *The Dip.Ed. programme infrequently provides for the broad range of professional development needs of upper and middle management that exist at the schools.*

Recommendations

The Dip.Ed. specialty in Educational Administration focuses on the roles and functions of upper management of schools, that is, Principal and Vice-Principal, and does not cater to any significant degree for the specific needs of HoDs and deans. Therefore, the SOE can develop CPD programmes that focus on the role and function of these middle managers. Further, the Dip.Ed. programme can be restructured so that all persons entering the programme would undergo training in a specific curriculum area as opposed to some doing educational administration as an option while others do a curriculum area. The SOE can develop CPD programmes in educational administration that teachers in middle and senior management positions could access after completing the initial teacher training offered through the Dip.Ed. This can be done in consultation with the MOE. All stakeholders need to engage in discourse and come to agreed understandings on what the real needs of teachers are in their varied contextual and cultural environments. Once this is done, then the SOE can plan strategically to meet these needs.

Issue 4: *Both school conditions and teacher perceptions serve as barriers to changes in teachers' practice.*

Recommendations

There needs to be more collaboration among stakeholders, particularly the provider (SOE); the client (MOE); and schools to structure the TPD programme in ways that are less restrictive on teachers' time and that are more closely aligned with the schools' contexts. The SOE needs to

ensure that both its client and teachers entering the Dip.Ed. programme are clear about the scope of the programme so that they can be aware of and understand the programme goals. Involvement of other stakeholders, such as the MOE and TTUTA, may be necessary to establish policies regarding teaching conditions/responsibilities during the in-service TPD, since the MOE provides scholarships for the programme. The SOE cannot monitor teachers after completion of the programme so it has to be done by the senior and middle management of schools. However, the SOE can develop TPD programmes to equip school leaders with the tools to monitor teachers' practice. Although teachers' values, beliefs, and attitudes about the Dip.Ed. are personal, the SOE can do more to stress the values of this initial preparation programme beyond certification for promotion, so that teachers can be encouraged to consider the wider goal of school improvement.

Issue 5: *There is a need for effective mechanisms for collaboration among key stakeholders to derive school and system-wide benefits from the Dip.Ed. programme.*

Recommendations

There should be consultation among stakeholders to determine the TPD needs of teachers in the range of schools in T&T in order to realize school and system-wide improvement in education. Based on these identified needs, stakeholders should determine the best way to organize and structure TPD programmes to meet these needs. The results of the consultations among stakeholders might reveal that the initial teacher preparation programmes may be more effective if done pre-service rather than in-service. Through collaboration among all stakeholders, teachers can be required to disseminate and collaborate with peers in professional development sessions in their school context. There should be stronger collaboration among stakeholders to identify the TPD needs in the education system so that some of these needs can be addressed through CPD programmes. This should be more proactive than reactive.

Issue 6: *The need to standardize aspects of the Dip.Ed. programme in terms of content, focus, and instructional delivery.*

Recommendations

Quality assurance measures need to be continually monitored and reviewed to ensure consistently high standards of instructional delivery, and that the content specific to the various disciplinary fields offered in

the programme is relevant, current, and standardized, wherever deemed appropriate.

Summary

Unravelling the identified issues related to TPD via the Dip.Ed. programme is key to designing effective TPD for in-service teachers. Notwithstanding the salience of the recommendations made, one should not ignore the fact that some of the issues teachers raised about the Dip.Ed. programme could be addressed through initial teacher preparation at the pre-service level. Notably, teachers participating in the in-service Dip.Ed. programme would have formed perceptions and developed cultures based on their experiences teaching in their individual schools and, by and large, it is difficult for the programme itself to change these perceptions. However, when teachers' initial professional preparation is pre-service, the programme can have a greater impact on influencing teachers' attitudes, values, and beliefs about teaching and learning.

Postscript

The SOE is listening and some of the changes thus far are as follows:

1. Inclusion of sessions devoted to "Learning Disabilities," "Anger Management," and "Conflict Resolution," to which all students are exposed.
2. An increased number of (i) sessions on technology integration in curriculum, and (ii) lecturers who incorporate the use of wikis and blogs for teaching/learning.

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Caribbean Curriculum
Vol. 20, 2013, 101–113.

WHAT DO STUDENTS WANT IN THEIR SCIENCE TEACHERS AND THEIR SCIENCE LESSONS?

Rawatee Maharaj-Sharma

Likert-type questionnaires were completed by 392, 15-year-old students from 13 schools across Trinidad and Tobago. Data gained from the questionnaires were used to report on those characteristics students deemed desirable in their science teachers. Students' views were sought on four key elements of good practice in science teaching: teachers' subject matter competence, teachers' pedagogical content knowledge, teachers' affectivity towards students, and the nature of science lessons taught by teachers. The data were analysed in the quantitative paradigm to yield response category sample percentages, which were used to make comparisons among the four target areas. The findings show that, for students, teachers' affectivity was the most important characteristic of a good science teacher. The second most favoured characteristic for students was teachers' pedagogical content knowledge, which was followed by teachers' subject matter knowledge.

Introduction

There is an implicit assumption that the ability to engage and motivate students is a characteristic of good practice in the teaching profession. Undoubtedly, students' engagement and interest in science has been a concern for researchers in the field of science education, and many seem to agree that there is a critical link between the role of the science teacher and students' levels of engagement and interest in science (Barmby, Kind, & Jones, 2008; Freeman, Anderman, & Jensen, 2007; Osborne and Dillon, 2008). While much is known about students' attitudes to science (Maharaj-Sharma, 2007; Nasr & Soltani, 2011), only very little is known about students' expectations of their science teachers and their science lessons. In this regard, therefore, much of the works cited in this paper draw on findings and experiences outside the Caribbean context, and it is important to note that these may not necessarily align with the views of Caribbean students. Furthermore, up to 2010, there was no mandatory pre-service teacher preparation programme for secondary school teachers in Trinidad and Tobago, so that most secondary school science teachers entered the profession with sound subject content background, training, and knowledge, but with minimal teacher preparation training.

In Trinidad and Tobago, secondary school students can be very critical about their teachers if they are unhappy with their classroom experiences, but they are far less vocal about positive classroom experiences. Because of this, it is unclear what Trinidad and Tobago students appreciate as desirable characteristics in those teachers who make their classrooms positive and enthusiastic learning environments. Also, in Trinidad and Tobago, there is a heavy emphasis on academic achievement and certification, to the extent that students do not necessarily take time to consider what characteristics they would attribute to good science teachers and good science teaching. Many high-performing students pass through the education system with the primary aim of scoring high on the final examination, regardless of how their teachers are able to get them to do so. Other students who are not motivated solely by this final outcome, and who might be a bit more concerned about how their science learning occurs, would often comment on the kinds of teaching experiences they have in the classroom, and to an equal extent comment on the traits of the science teachers who facilitate their science teaching and learning. These comments are however made in very private settings so that students' views about their "good" science teachers and, by extension, their good science teaching experiences are not well known in the local context.

Against this background, therefore, and in recognition of the fact that no study of this nature has been done in Trinidad and Tobago, the aim of this small-scale study was to solicit students' views and, more explicitly, to use their responses to identify elements of best practice in science education, as perceived by the students. This work seeks to reveal, firstly, what makes a good science teacher in the eyes of students and, secondly, to analyse, through their responses, their perceptions of the characteristics of good science lessons. In addition, this work will attempt to contrast the characteristics of science teachers and science lessons that reflect good practice and those that do not. It is hoped that this work will contribute to a deeper and more explicit explanation of what constitutes good practice from the students' perspective. In attempting to achieve this aim, the following two research questions will be addressed in this work:

1. *What, in students' views, are the characteristics of a good science teacher?*
2. *What, in students' views, are the characteristics of good science lessons?*

Literature Review

Wilson and Mant (2011), based on students' responses, have described exemplary teachers as those teachers who are clear explainers and whose lessons are characterized by high levels of thinking, problem solving, and discussion. Less teacher-led demonstrations and more practical work, as well as the delivery of contextualized science, are other qualities students agreed exemplary science teachers should possess (Thompson, Warren, Foy, & Dickerson, 2008). In other work by Tobin and Fraser (1990), Australian science students indicated that, in their view, exemplary science teachers are those who manage and facilitate student engagement, those who increase students' understanding of science, those who encourage students to participate in learning activities, and those who maintain a favourable learning environment in their classrooms. Subsequent to Tobin and Fraser (1990), Alsop, Bencze, and Pedretti (2005) explored exemplary science teaching through the eyes of science students, and found that students appreciate and respond positively to teachers who are truly knowledgeable about the science they are teaching and who use creative delivery methods to teach science content. In addition to making the subject matter appealing and the learning environment a positive one, students have also said that a good science teacher ought to make students feel important and valued, and through meaningful interactions good teachers should be caring, compassionate, understanding, and loving (Barmby et al., 2008; Parkinson, 2004).

In all these works, there is the implicit suggestion that the construct of the good science teacher, as perceived by students or otherwise, cannot be delinked from the aspect of good science teaching; again, perceived or otherwise. In fact, the literature continues to show that an essential element in any discussion about good science teaching and good science lessons is the good science teacher (Jenkins, 2006; Wilson & Mant, 2011). Detailed consideration and interpretation of the works of Parkinson (2004) and Barmby et al. (2008) is in congruence with reports from Kind (2009) and Gentry, Steenbergen, and Choi (2011), which seem to suggest that there are four broad traits that shape students' perceptions of what they attribute to the good science teacher: sound subject knowledge; strong pedagogical content knowledge and skills; high degree of nurturing; and relevant and contemporary lesson delivery skills and abilities.

Sparsely available anecdotal evidence, in the local context, seems to be somewhat aligned to these four broad traits, to the extent that on those occasions when students are vocal about their science teaching/learning

experiences, those that respond with positive comments often use words and phrases like "*fun lesson*," "*caring and kind*," "*miss knows a lot*," and "*fun activities*" to describe those teachers and those teaching/learning experiences with which they were highly pleased (Maharaj-Sharma, 2012b). The notion of *miss knows a lot* suggests sound subject matter knowledge, while phrases like *fun lessons* and *fun activities* suggest strong pedagogical content knowledge and the effective use of contemporary lesson delivery skills. The use of words like *caring* and *kind* by students to describe those teachers whom they are highly positive about is an indication of teachers' affectivity to students in these instances.

Methodology

Phase I – Interesting, Fun, and Enjoyable Science Classes

In the initial phase of this work, 22 schools were invited to participate (though only 13 were eventually selected for the substantive data collection in Phase II). All 22 schools agreed to participate, and a true/false response instrument was administered to a total of 504 Form 3 students from these schools. The aim was to determine, from among these 22 different classes, which classes students described as fun, interesting, and enjoyable. In this phase, students responded either *true* or *false* to the following three statements:

- My teacher makes my science class fun
- My teacher makes my science class interesting
- My teacher makes my science class enjoyable

The answers to these questions were analysed to identify those classes where students were highly positive and enthusiastic about their science learning experiences. From among the 22 classes, the highly positive and enthusiastic classes were determined based on more than 80% of the students in the class responding *true* to all three statements. Based on this criterion, 13 of the 22 classes were identified as positively engaging science classes. These 13 classes were selected for further data collection in Phase II of the work. The other nine classes were eliminated from the study beyond Phase I.

This phase was a validation measure for the data to be collected. Since the substantive data (Phase II) were to be used to extract qualities students identified as necessary in good science teachers and good science lessons, it was important to begin on the premise that students

believed, in the first instance, that the teachers (and lessons) about whom they were about to make comments were in fact exemplary in their view. This work did not seek to categorize the teachers and/or the lessons as good or not, but rather to gauge students' views about what are the qualities that made their science teachers and their science lessons good. In other words, the assumption was that, in students' views, the teachers and the lessons were good and the task was to find out from students what, in their views, made the teachers and the lessons good.

Phase II – What Made the Classes Positively Engaging?

Students from the 13 classes—a total of 392 students—were asked to complete a second questionnaire which consisted of 24 statements that addressed four target areas, with six questions in each target area. The target areas were as follows:

- Teachers' subject competence
- Teachers' pedagogical content competence
- Teachers' affectivity
- Nature of science lessons

The students responded to the questions in each of the target areas on a 5-point Likert scale to indicate that they either *strongly agreed*, *agreed*, were *neutral*, *disagreed* or *strongly disagreed* with each of the questions asked. The questionnaire was initially piloted with 44 Form 3 students, and the responses obtained from this pilot were studied for reliability and validity. Some questions on the original questionnaire had to be reworded to address issues of ambiguity that were obvious from the responses obtained in the pilot. The model used in the design of the questionnaire was similar to that used by Murphy and Beggs (2003), which was subsequently used in later work by Maharaj-Sharma (2012a). The completed questionnaires obtained from the 392 participants were analysed qualitatively to reveal students' views on the characteristics they felt were most important to them in their science teachers and their science lessons. All the questions on the questionnaire were skewed to positive responses, so that a response of *agree* or *strongly agree* for questions in any of the four target areas meant that students valued highly, as desirable characteristics in their science teachers, any one or more than one of the following: subject competence, pedagogical competence, affectivity, and highly positive and engaging lessons.

Phase III – Students' Views

To substantiate in a qualitative way, and to understand and delve deeper into exactly why students responded in the way that they did on the Likert questionnaire, one student from each of the 13 classes was selected and invited for a short interview. The selection was done by the class teacher and the only condition used to guide the selection was that the student had good oral and communication skills. The interview focused on two aspects of the students' responses from Phase II. Firstly, it sought to get students to explain in some detail the particular responses they gave on the Likert questionnaire and to elicit from them **why** they gave those responses. Secondly, students were asked to cite at least one example in each target area to support actions taken or displayed by their teachers that, in their view, constituted characteristics of a good science teacher and/or of good science teaching.

Results

Identification of the "Good" Science Teachers

Responses from all 392 students were suitable for analysis so that all the data collected in Phase II were used in the data analysis. The collated responses to questions in the first three target areas—subject matter competence, pedagogical content competence, and teachers' affectivity—were analysed to extract explicitly the extent to which these, in students' views, were desired characteristics of a good science teacher. What was noteworthy from the data collected from these questionnaires was that none of the students responded that they *disagreed* or *strongly disagreed* with any of the statements in these three target areas. In other words, their responses suggested that all the students were of the view that good science teachers ought to have sound subject competence, strong pedagogical content competence, and should exhibit high levels of affectivity in the science teaching/learning engagement. The interesting discrepancy, however, was in their detailed responses within each of the target areas and across the three target areas.

Target Area 1 – Subject matter competency

In respect of teachers' subject competence, 98% of the students *agreed* or *strongly agreed* that a good teacher should have sound subject matter competency, but the split among those who *agreed* and those who *strongly agreed* was 33% to 65% respectively. It meant, therefore, that while 65% of the students surveyed *agreed strongly* that subject matter competency was a highly desired characteristic of a good science

teacher, for 33% of the students this characteristic did not seem to be the most important. Interestingly, during the interview phase, 8 of the 13 students indicated that they had selected *strongly agree* in respect of this characteristic of a good science teacher, and when asked to explain further why they had responded in this way, they said that teachers' subject matter knowledge is "*very important*" to them, because they are interested in getting "*all*" the "*correct information*" to be able to "*do well*" on their examination. One student said that a good science teacher "*must know the science*" he or she is teaching and "*be able to explain it good for the students to understand it*." The other five students admitted that they expected that their teachers should "*know the science well*," but three of them suggested during the interview that in science it may not be possible to always know everything, and that even if there is some subject matter that the teacher does not know, he or she should be "*willing to research and find out about it to share it with students*." Two students mentioned the phrase "*lifelong learning*" and said that they felt that "*teachers should always be reading up about new things in science,*" and that teachers should "*share the new things with the students*." When probed further, though, they both agreed that only "*few*" science teachers "*seem*" to be "*lifelong learners*."

Target Area 2 – Pedagogical content knowledge

Analysis of responses to questions in the pedagogical content knowledge target area revealed that 94% of the students *strongly agreed* that this was a necessary characteristic of a good science teacher, while 6% of the students *agreed* that it was. None of the students responded *undecided* to questions in this target area. This suggests clearly that students value highly the process of learning—how their teachers facilitate the learning process in the classroom—as an important characteristic of the good science teacher. In the interview phase, students described their most memorable learning experiences—their good science lessons—as those in which they were engaged in "*exciting hands-on activities and in doing experiments*." They also spoke of taking part in "*role play and drama to learn about electricity flow and about energy*" and said that the "*good science lessons*" were the ones in which their teachers allowed them "*to act out the science*." The students indicated that when whole group discussions were used in the classroom, if their teachers provided opportunities for "*everyone to participate and to let everyone say something,*" and if their teachers made everyone feel that their "*ideas are important,*" that those lessons were "*good science lessons*." When compared to the responses students gave about Target Area 1 – subject matter competency, the data indicate that students are saying that *how*

their teachers facilitate learning is more important to them than *what* their teachers teach to them. In other words, students are saying that the good science teacher ought to be better at teaching the topic than knowing about the topic. From among those students interviewed, there was complete agreement that when learning is "*exciting and interesting*" and when, as students, they are "*engaged*" and "*allowed to speak*" in science lessons that they "*understand the science*" and they "*remember what was taught*." Two of the students indicated in the interview that when their science learning experience is fun, interesting, and exciting, that they always "*want to learn more science*." Responses like these are suggestive of two main things:

1. Teachers' effective use of contemporary (non-traditional) teaching/learning strategies to make science learning appealing and engaging for students
2. Students' appreciation of their teachers' efforts to make their science learning experiences pleasant and memorable

Both of these speak to a high degree of pedagogical content knowledge on the part of the teacher and, through their responses, students have indicated that this is a highly desirable characteristic of the good science teacher.

Target Area 3 – Teachers' affectivity

In Target Area 3 – teachers' affectivity, the combined responses to questions in this section of the Likert questionnaires show that an overwhelming 98% of the students responded *strongly agreed* when asked to comment on teachers' demonstration of caring, compassion, and affection to them. Their responses indicated quite convincingly that, in their view, teachers' affectivity was a necessary characteristic of any good science teacher. The high statistic in this target area suggests that even though students regard sound subject matter knowledge and sound pedagogical content knowledge as essential features of the good science teacher, that a critically important and highly valued characteristic for them is the human aspect involved in teaching. This was made abundantly clear during the interview phase in which all the students interviewed said that a "*good science teacher*" should "*show understanding towards the students*," and that they "*should care when students have problems*" and be "*willing to listen to the students and to help them if they can*." Students also said that they felt that a good science teacher should also be willing to "*give advice to any student who needs it*." One student spoke about a good science teacher being "*warm*"

and "*easy to approach*," and that "*miss should be helpful and kind ……willing to listen*…." Another student spoke about the good teacher being "*like a good parent……always giving and forgiving…..without wanting back*….." Expectations of nurturing captured in responses such as these given by the students during the interviews were widespread and were articulated many times with reverence and passion by the students. It came across as something that the students viewed as sacred to the construct of a good teacher. Even though it was obvious from their Likert responses that students valued most highly teachers' affectivity as the most important characteristic of a good teacher, it was their interview responses that provided a real sense of how important this nurturing characteristic was to them, and how much more important to them it was when matched against their teachers' subject and pedagogical competencies.

Good Science Teacher and Good Science Teaching

Target Areas 1, 2, and 3

Students have clearly identified subject knowledge competence and pedagogical content competence as essential and highly desirable characteristics of the good science teacher, but far more important than both of these for almost all the students in this work was their teachers' affectivity towards them. They have hinted further that a good science teacher will enact good science teaching by demonstrating these desired qualities in their everyday practice and they have, through their responses, assigned an implicit rating to the desired qualities of a good science teacher. Their responses show that good science lessons delivered by good science teachers—those that students look forward to—are characterized by:

- high levels of teacher's affectivity (98% of the students *strongly agreed*);
- sound pedagogical content knowledge of the teacher (94% of the students *strongly agreed*); and
- solid subject matter knowledge of the teacher (65% of the students *strongly agreed*).

Target Area 4 – Characteristics of good science lessons

In analysing students' Likert responses in Target Area 4, it was found that, as with good science teachers and good science teaching, students highlighted specific characteristics about the science lessons that, in their views, were "*good science lessons*." Almost unanimously, students said that those lessons in which they were allowed to "*do experiments*" were

the "*best*" science lessons. In exploring this view further, the students who were interviewed were asked to explain about this dominant view among their colleagues. The responses given by all the students were very similar and could be captured in the following response from one student: "*when I do the experiments….I understand the science better*" because "*I can see exactly what happens*." During the interviews, students also spoke about learning through collaboration and information sharing, as many of those interviewed said that they "*enjoyed learning from their friends*" when they did practical activities "*in groups*."

The use of drama in science teaching was another thing that the students said they appreciated highly. Ten of the 13 students interviewed indicated that when "*drama*" was used to develop concepts they "*understand the topic*" better. Two examples that were cited by the students was the dramatization of how "*germination occurs*" and how the "*amoeba moves*." When asked to explain further how the drama helped them to understand the ideas, the interviewed students said that the dramatization allowed them to "*visualize*" and hence "*remember*" the processes.

In additional responses to questions in Target Area 4, students also indicated that they appreciated the use of models, role play, and calypso when these are used to teach science. Data gathered from the interviews in respect of these approaches indicated that students were resentful of science lessons that involved large quantities of "*textbook reading and note taking*," and that they preferred science learning that involved them having "*fun*," and which provided them with opportunity to "*do things*" and "*to create things*" and "*to present work*" to their peers. They also had very positive views about those lessons that involved the use of media and other forms of information and communication technologies (ICTs). The interviewed students spoke specifically about the usefulness of "*video clips*" and "*computer simulations*" in helping them to "*visualize processes, designs and events*." A noteworthy comment that two students made during the interview phase was that the use of ICTs "*left lasting impressions*" in their "*minds,*" which they further explained "*helped*" them "*to remember the topics….even for the examination*." In summarizing, therefore, the students were clear that good science lessons are characterized by the effective use and infusion of the following approaches and strategies during science teaching and learning:

- Experiments/practical work
- Drama
- Models, role play, and song
- ICT integration

Discussion

Teachers' implicit role as nurturers, caregivers, and helpers has historically been assumed and expected, particularly from the students' perspective. This work shows that even today, students expect their teachers, and in this specific case their science teachers, to be more than just information providers and learning facilitators. Marzano (2007) speaks of students' rejection of science teachers whose subject matter knowledge and whose pedagogical content knowledge are sound and contemporary, but whose interactions with students are cold, distant, and rigid. The data reported in this article show that students in Trinidad and Tobago are not much different in terms of what they expect of a good science teacher. It was shown that even though 65% of the students in this small-scale study are of the view that subject knowledge is an important characteristic of a good science teacher, an overwhelming 98% of them indicated unambiguously that teachers' affectivity is a more desirable characteristic for them. But even with this strong emphasis on the quality of exemplary science teachers to make them feel cared for, appreciated, and comfortable, it is clear that the students do not undervalue the quality of sound pedagogical content competency of their science teachers—94% of the students indicated that sound pedagogical content knowledge and competency was a very important characteristic of the good science teacher they described. While the general findings of this work are new for the Trinidad and Tobago context, the specific ranking of the qualities students deem desirable in a good science teacher is new for research in this area. This is so because even though Freeman et al. (2007), as well as Wilson and Mant (2011), have reported that teachers' ability to motivate, engage, and interest students in science learning are characteristics of exemplary science teachers, their works and other works in this area have not *ranked* in any specific way these desirable characteristics.

The ranking of teachers' affectivity as the characteristic most desired by students in a good science teacher was particularly surprising, especially since some other works have reported that subject matter knowledge and pedagogical content knowledge are the hallmarks of good teachers (Barmby et al., 2008). In that context, therefore, there seems to be the implicit suggestion that from the perspective of the students in Trinidad and Tobago, high levels of teacher affectivity distinguish a good science teacher from one that is not—assuming that teachers' subject matter knowledge and pedagogical content knowledge are both sound.

In respect of what students considered to be a good science lesson, through their responses, students in this work echoed views similar to those in works by Parkinson (2004) and Alsop et al. (2005), which were that that the effective use of practical activities, experimentation, and other contemporary teaching/learning strategies such as drama and role play to deliver science instruction makes good science lessons. Given the influence that media and technology now have on students globally, it was not surprising that students in Trinidad and Tobago indicated convincingly that they too appreciated the meaningful use of ICTs in their lessons, and cited specifically the visual and graphical impact that ICT integration adds to science conceptualization and to the making of good science lessons.

It is clear from this work that, from the students' perspective, the construct of a good science teacher is intricately linked to good science teaching and good science lessons. Science teachers, no doubt, have great influence and control over students' enjoyment, interest, engagement, participation, and levels of comfort in science learning. The implicit message emanating from this work seems to be that the good science teacher, through good science teaching, can transform any science class into a good science class. More explicitly, however, students have responded to indicate that they value most the warmth of student-teacher interactions in their classroom encounters and the comfort of knowing that their science teachers care about them. In that context, therefore, it would be especially important for science teachers to remember that while their students look up to them as subject matter experts who are expected to make their science learning experiences fun, enjoyable, and interesting, their students expect also, almost unanimously, that their teachers would make their science learning a human enterprise filled with warmth, care, and love.

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Caribbean Curriculum
Vol. 20, 2013, 115–159.

EDUCATORS' EVALUATION OF THE QUALITY OF THE LITERATE ENVIRONMENT IN CARIBBEAN CLASSROOMS

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This study examines ratings of the quality of the classroom literacy environment by 47 graduate-level literacy teaching candidates (primarily classroom teachers enrolled in a master's programme) to determine the extent to which the teachers viewed the classrooms as literacy rich, and whether a link existed between the financial resources available to a country, as well as its human well-being rating, and such evaluations. Using the Classroom Literacy Environment Profile (Wolfersberger, Reutzel, Sudweeks, & Fawson, 2004), candidates provided quantitative evaluations of an observed environment. Means tests involving two One-Way ANOVAs were used to determine the extent to which candidates differed in their ratings based on the Economic Status (ES) of the country in which they worked, and based on the Human Development Index (HDI) of the said countries. Regression analysis was used to determine the influence of several variables combined: classroom level, school type, school locale, HDI, and ES, on teacher ratings. Qualitative comments by candidates were used to clarify findings from their quantitative ratings. The results are explored in light of how teachers can be assisted in navigating the difference between what the literature says works and the specific classroom situations they face.

Introduction

A critical variable in student literacy learning and overall academic success is undoubtedly the quality of the literate environment in schools and classrooms (Hoffman, Sailors, Duffy, & Beretvas, 2004; Morrow, 2010; Mullis, Martin, Foy, & Drucker, 2012; Neuman, & Roskos, 1992; Nielson & Monson, 1996; Reutzel & Jones, 2010; Reutzel & Wolfersberger, 1996). In fact, a hallmark of effective schools is the extent to which a "culture of literacy" permeates a school context and the degree to which literacy is perceived as the foundation of the curriculum and the basis of all learning (McAnuff-Gumbs & Verbeck, 2012). Several studies cite the critical role of classroom set-up and the

instructional events surrounding that set-up in fostering student literacy success (Krolak, 2005; Neuman & Roskos, 1992; Reutzel & Wolfersberger, 1996). However, for many Caribbean teachers, severe challenges exist in matching what the research demands with what their situation provides (World Bank, 2009). The current study presents the results of teacher ratings of the quality of the literate environment in the schools in which they served, after they had been exposed to the literature on exemplary classroom environments. It seeks to determine the extent to which the candidates rated the classrooms observed as literacy rich, and whether such ratings varied according to the economic status and human development index (HDI) of the specific countries in which the teachers worked. Possible intervening variables such as school type (public or private); school locale (urban or rural); and classroom level (emergent or later literacy) are also explored. Additionally, comments the candidates had made in a previous course regarding environmental quality are used to clarify findings from quantitative exploration of their responses; the aim being to determine, on a qualitative level, whether teachers' comments, made during discussion in their best practice course, matched with and supported their ratings, or whether training they had undergone as well as other encounters in the interim might have resulted in changes to their perspectives.

Background and Significance

There have been some concerns with regard to the level of satisfaction teachers in the region have expressed regarding the quality of the classroom environment in which they must teach children to be literate (McAnuff-Gumbs, 2011). It is important to explore this concern, especially since research has established a link between teacher attrition and work conditions (Mullis, Martin, Foy, et al., 2012, p. 149). Concerns have been expressed in both high-income developed and middle-income developing countries across the Anglophone Caribbean (McAnuff-Gumbs, 2011; Schiefelbein & Schiefelbein, 2013). While some studies have focused on the comfort level of the indoor space (Pin & Sande, 2012), the majority have focused on the social and interactional climate (Blackman, 2010; Schiefelbein & Schiefelbein, 2013; Thompson, 2009). A few studies (Warrican, Down, & Spencer-Ernandez, 2008, for example) have raised concerns regarding the link among teaching orientation, organization of space, and the structuring of learning. The implications of a poorly provisioned classroom and, on another level, poorly utilized resources when available, are well known, especially where literacy achievement is concerned (Neuman & Roskos, 1992;

Mullis, Martin, Foy, et al., 2012; Reutzel & Wolfersberger, 1996). Despite expressed concerns by Caribbean literacy educators regarding the quality of learning provisions in typical Caribbean classrooms, Francis and Iyare (2006) maintain that "public attempts" at furthering human development in Caribbean economies "have been decisively in favor of subsidizing education" and that policy makers have continually made education "a public spending priority" (p. 1). This claim regarding public investment is affirmed by the Human Development Department of the World Bank (World Bank, 2009) which maintains that "most countries [in the Anglophone Caribbean] have made significant public investment in education over the last decades, averaging 4–5% of GDP" (p. viii). Francis and Iyare, in a study of the link between education and human development, maintain that the "vast majority of the Caribbean countries have benefited from investments in education" and that such investments have had substantial payoffs in their HDI ranking (p. 1).

Human development index (HDI) is an alternative measure of national development that looks beyond the economic status of a country to focus on education and general well-being (UNDP, 2011). The Honourable Dr. Kenneth Baugh, Deputy Prime Minister and Minister of Foreign Affairs and Foreign Trade in Jamaica, refers to HDI as "a comparative measure of life expectancy, literacy, education and standards of living for countries worldwide" and as a "standard means of measuring well-being, especially child welfare" ("Caribbean Ranks High," 2011). According to Baugh, the measure distinguishes "whether a country is developed, developing or underdeveloped, and also measures the impact of economic policies on quality of life," with the focus being on quality of life ("Caribbean Ranks High," 2011).

Francis and Iyare (2006) cite various benefits that have accrued as a result of government investment in education. Payoffs cited by the researchers include higher public school enrolments and improved literacy rates (p. 2)—factors considered crucial in calculating the HDI. Francis and Iyare, in their study of the link between development status and expenditure on education in the Caribbean, found a bi-directional link between the two in Jamaica in the short term (suggesting that educational expenditure in this country is highly influential on HDI status, and vice versa). However, the researchers found no apparent causal link in any direction between development and educational investment in either Trinidad and Tobago or Barbados, countries that enjoy a more favourable economic status. Is it that the link between investment in education and development is more apparent in countries with lower levels of income? The International Association for the Evaluation of Educational Achievement (IEA) (Mullis, Martin, Foy, et

al., 2012, citing Lee & Zuze, 2011) gives us cause to wonder, maintaining that links between economic and human development are often "more [apparent] in developing countries than in economically developed countries, where adequate school structures and material resources can be taken for granted" (p. 147).

Given what seems to be a mismatch between concerns regarding the quality of the literate environment and claims in the literature regarding outcomes of consistent investment in education, a study that compares ratings of the quality of the classroom literate environment across countries of different economic status (as reflected in World Bank and the Development Assessment Committee (DAC) classifications) and HDI (based on 2011 rankings by the United Nations Development Programme (UNDP)) can expose much in terms of whether investments are demonstrating payoffs in environmental quality as teachers see it.

Another aspect of the study that adds to its significance rests with the fact that a matching of teacher qualitative evaluations to their later objective quantitative ratings, albeit after they were exposed to training in materials and resource design, can provide even a loose indication of whether any satisfaction or dissatisfaction expressed has been moderated by subsequent training.

An exploration such as the one undertaken in this study can also yield valuable insight into the specific focus of any possible dissatisfaction by teachers, and may point the way towards suitable remedies, including adjustments in teacher education, should such claimed dissatisfaction be deemed warranted. Findings can assist policy makers in understanding aspects of environmental support in need of remediation—whether through provisioning of materials and resources, through optimizing utilization of available resources, or both—and what role the government can further play in supporting the creation of a quality literacy environment in which teachers can conduct their practice with confidence, and in which students can access the necessary stimulation and support to progress in their literacy development.

Research Questions and Hypotheses

The research seeks to answer the following questions:

1. *To what extent do participants rate the observed classroom literacy environment as literacy rich? How do they rate the quality of* ***literacy provisions****? How do they rate the quality of* ***use of provisions****?*
2. *Do the candidates' ratings differ based on the* ***economic status*** *(ES) and* ***human development index*** *(HDI) of their country?*

3. *To what extent do the qualitative comments of participants from countries of different ES and HDI rankings mirror their quantitative ratings?*
4. *What extent of influence do economic status and human development index, when considered along with* ***classroom level****,* ***school locale,*** *and* ***school type,*** *have on the ratings of candidates?*

With respect to research questions 2 and 4, which will be addressed using inferential statistics, the researchers present the following null hypotheses:

1. Ratings do not differ based on economic status of the candidates' country.
2. Ratings do not differ based on the human development index of the candidates' country.
3. Economic status and human development index, when considered along with **classroom level**, **school locale** and **school type,** do not significantly impact the ratings of candidates.

Review of the Literature

The quality of the literate environment in schools is related as much to the expertise of educators in designing, provisioning, and utilizing the space as it is to the socio-historical, socio-political, and economic climate outside classroom walls. In their model of literacy leadership, McAnuff-Gumbs and Verbeck (2012) refer to both the external and the internal environment of a school as being highly influential on the quality of literacy provisions and outcomes. In this section, we examine the role of a variety of factors (teacher expertise, economic status and human well-being rating of a country, school locale, school type, and classroom level) in predicting teacher ratings of the literacy richness of classrooms in general, and of Caribbean classrooms in particular. Since our focus is on environmental quality in literacy classrooms, we begin with a discussion of research-based dimensions of a literacy-rich environment. We then gradually transition into a discussion of variables that impact the extent to which research-based criteria for each dimension can be met within the Caribbean context.

Context, Interaction, and Instruction

Definitions of literacy processes often make reference to the interaction among reader, text, and context in meaning creation processes. Unfortunately, instructional provisions often privilege reader and text,

with little attention being dedicated to the context in which instruction occurs. This is a serious omission. Sommer (1977) refers to the non-verbal messages sent by arrangement of classroom spaces, by the types of interaction that are encouraged in those spaces, and by the differing instructional provisions afforded different groups of students in literacy classrooms. Sommer, bemoaning what the writer sees as a lack of design education in teacher training, maintains that although teachers often discount the relevance of the setting of instruction, the "physical and social context of classroom is related to relationship between students and teachers" (p. 175). Sommer indicates, for example, that use of chairs bolted down in a row promotes a 'sit-and-git' type of teaching where two-way interaction between teacher and students is restricted, and where interaction among students is almost non-existent. See Warrican et al. (2008) on the widespread use of this organizational pattern in the Caribbean. Sommer indicates that cluster tables with movable chairs communicate messages that group tasks and interaction will happen at some time, while two-person tables, often used with struggling readers, suggest a one-teach-one interaction. While there is no ideal arrangement, researchers recommend teachers experiment with different arrangements to see what works for their setting (Sommer, 1977). Teachers can mix arrangements in a single event or blend across events. This does not have to create confusion in the classroom since research indicates that rearrangement in most situations takes less than 60 seconds. What is important is that the arrangement is attractive, pleasant, and functional.

It was Jean-Jacques Rousseau (circa 1700) who initially referred to the environment as the third teacher, proposing that educators should provide a stimulating and inviting environment in which students' literacy development can naturally unfold as they explore their curiosity and interest in an enabling environment. That idea was the foundation of work on the value of the classroom literacy environment by later researchers and philosophers (See McKenna, Walpole, & Conradi, 2010; Morrow, Tracey, & Del Nero, 2011; Smith, 2005.). Rousseau's idea regarding the need for a stimulating environment to prompt and foster learning was later integral to the progressive movement (1890s to 1920s), to the constructivist philosophy, and to theories related to that school of thought, particularly inquiry learning (Dewey, 1929) and engagement theory (Guthrie & Wigfield, 2000). But what is it about the literacy environment that truly allows children to flourish in their literacy development?

Dimensions of the Literate Environment

Reutzel and Wolfersberger (1996, citing Durkin, 1966, and Teale, 1978, 1980) maintain that "children's literacy learning is affected by the presence or absence of literacy tools" (p. 267). The Reutzel and Wolfersberger conceptual model for designing classroom literacy environment goes beyond the mere presence of tools and focuses on four key dimensions built on the notion that children's literacy learning is affected, not only "by the arrangement of space and the placement of literacy tools within the arranged space," but also by the quality of "social interaction [the teacher fosters] using literacy tools" (p. 269).

The first dimension of their model—provisioning—involves creating a physical setting featuring a variety of tools and resources that foreground authenticity in literacy learning—a setting in which both tools and tasks have real-world application, and are concrete and personalized, yet still work to support the curriculum and learning. The second dimension—arranging—covers organizing the tools into clearly demarcated areas (preferably small spaces) in ways that make the resources attractive and accessible, and so their use is clear to learners. This dimension also addresses regularly refreshing tools to maintain the level to which they are inviting and sparking curiosity and interest, and so they match progression of the curriculum. A third dimension—gaining—surrounds prompting student use of and interaction with the space and tools. This might involve using props that are appropriate, authentic, and connected to the curriculum (aquariums, plants, classroom pets, and so on); and which prompt students to interact with and use them in learning. The fourth dimension—sustaining—addresses fostering ownership and continued involvement with the space and tools, as well as creation of a sense of community surrounding use of the tools and space. Students see their products on display and featured with even greater prominence than commercially published or teacher-created resources, and are prompted to work with peers and the teacher to create even more exemplary pieces for display. The teacher is sensitive to the role of the props, resources, and displays, and is able to use them in teaching demonstrations and to foster engagement. The word *tools* in the Reutzel and Wolfersberger (1996) model refers to textual materials, general and technological resources, as well as other provisions such as blocks, play dough, and other manipulatives that support literacy learning.

The Classroom Literacy Environmental Profile (Wolfersberger, Reutzel, Sudweeks, & Fawson, 2004) was developed based on the four dimensions discussed above. In the final iteration of the CLEP tool,

Subscale 1 addresses provisioning the classroom with appropriate tools, while Subscale 2 addresses arrangement of tools and spaces, as well as gaining students' interest in literacy events and sustaining their level of engagement with the tools (p. 271). See Table 1 for a breakdown of these dimensions into the 33 items on the scale, and for a description of what is actually addressed by the 19 items on Subscale 1 and the 15 items on Subscale 2. All items correspond to recommendations made in the research regarding ways to optimize the environment in the literacy classroom.

Research Consensus on Dimensions of the Literate Environment

Other researchers have presented the dimensions of the environment in ways that connect with those identified and explored by Reutzel and Wolfersberger (1996). Smith, Dickinson, and Sangeorge (2008), who were instrumental in devising the Early Language and Literacy Classroom Observational (ELLCO) tool—one that reports a high level of reliability—present dimensions of literacy that include the functional and interactional, as well as language, literacy, and broad support resources. That tool was not used in this study since its focus is only on emergent literacy environments. The TEX-IN3 is also based on an understanding that the physical environment and tools within it, the practices surrounding the use of space and tools, as well as the understanding and valuing of tools, are crucial. All three instruments indicate that consideration of the physical environment naturally flows into consideration of how such arrangement and provisions affect interaction, interest, and engagement and, ultimately, literacy achievement.

The International Reading Association (IRA) (2010) has added classroom climate as one of its core standards for the training of literacy professionals in exemplary practices. IRA and the National Council for the Accreditation of Teacher Education (IRA, 2010) refer to the environment in which literacy instruction and learning occurs (the literate environment) as comprising three core components: (1) *the physical*, which comprises use of space and classroom layout, texts of both a print and non-print nature, and technological resources as well as other materials and supplies; (2) *the socio-emotional*, which comprises interaction and communication; and (3) *the intellectual*, which refers to instructional provisions—scaffolding, differentiation, and grouping—designed to increase achievement and motivation to engage in literacy processes.

Being able to describe the requirements is excellent. However, being able to meet those requirements in the classroom is far from simple. We

now discuss research exploration of forces within a teacher's context, including the teacher, which can impact the extent to which a classroom rates as literacy rich on the different dimensions. Factors explored include economic differences across context; differences in attention to human well-being; as well as classroom level, school locale, and school ownership.

Factors Impacting the Richness of Provisions in Caribbean Classrooms

The PIRLS 2006 study (Mullis, Martin, Kennedy, & Foy, 2007) provides a research-based rationale for exploring the role of several variables in determining the quality of educational provisions. Although the focus has not always been on literacy, several studies have explored the role of level of schooling, geographic locale, and school type in determining school condition in general, with a strong influence being cited for these variables. (See Lambert et al., 2001; Mullis, Martin, Foy, et al., 2012; Mullis, Martin, Kennedy, et al., 2007; UNESCO, 2008.)

In their review of literacy provisions and outcomes in Trinidad and Tobago (the only Anglophone Caribbean country that took part in the study at the time), Mullis, Martin, Kennedy, et al. (2007) noted that socio-economic factors were critical in explaining why some students from that country performed at the higher end of the spectrum in the 2006 PIRLS assessment while other students were situated at the lower end, thus resulting in mixed outcomes. The report maintains that the learning environment which a school provides "is a crucial factor in supporting reading achievement and [in] establishing a positive orientation toward reading," noting unequivocally that, internationally, "literacy resources are dependent to a large extent on economic considerations" (p. 122). The study affirms the role of urbanity, security, and discipline, as well as level of affluence, in conditioning the quality of resources and, ultimately, student literacy achievement. Noteworthy is the fact that the 2011 PIRLS study (Mullis, Martin, Foy, et al., 2012) later affirmed the interactive role of economics and geographical locale on quality of school conditions and school outcomes internationally as well as in the Caribbean. According to the 2011 Progress in International Reading Literacy Study (PIRLS) (Mullis, Martin, Foy, et al., 2012),"the most successful schools are likely to have more socioeconomically advantaged students and better resources," maintaining also that depending on the country, the location of the school (urbanity) can provide ready access to important additional resources (e.g., libraries, media centres, or museums); or, conversely, can mean that the school is

relatively isolated (Mullis, Martin, Foy, et al., 2012, p. 136).Thus, in our exploration of the literate environment, we acknowledge the role of the material conditions and the school locale in which instruction occurs, and factor the role of economic status and HDI in influencing teacher rating of environmental quality.

Economic differences, human well-being, and the physical environment in Caribbean classrooms. Among the challenges in the Caribbean are the vast variations and extremes in availability of resources—the gap between rich and poor countries and between wealthy and less privileged schools. Typically, the wealthy schools are privately owned while the less affluent ones are owned by the government. Scheerens (2001) argues that in some developing countries, the availability or lack of resources is significant more than 70% of the times. Fuller and Clark (1994) contend, additionally, that the availability of resources is a significant factor in determining student success in developing nations. While instructional strategies and the sociocultural environment external to schools (community values and resources, for instance) were also flagged as important factors in that study, material conditions were found to be significant. The same conclusion was arrived at by Glewwe, Grosh, Jacoby, and Lockheed (1995), whose research focused on material conditions in Jamaican schools.

Are teachers' ratings sensitive to such differences in material resources? The World Bank's Development Assistance Committee (DAC) and the UNDP provide indices that can help us understand the influence of economic and material conditions on teacher ratings. The World Bank/DAC (2013) notes that in categorizing countries into the "analytical economic categories" or income groups, its main consideration is Gross National Income (GNI) per capita. Nations Online (2011) defines *GNI* as the average income of an economy generated by its production and its ownership of factors of production, minus the incomes paid for the use of factors of production owned by the rest of the world, then converted into international dollars using purchasing power parity (PPP) rates, divided by midyear population. Income categories include *low-income* (GNI of $1,025 or less), into which no country in this study falls; *lower middle income* (GNI of between $1,026 and $4,035), again into which no country fell at the time of the study; *upper middle income* (GNI of $4,035 to $12, 4745), a wide band into which six of the countries fell; and *high income* (GNI of $12,476 and above), into which three countries fell. Other variables in determining economic status include educational expenditure or expenditure per student for public education, debt level, expenditure on the environment and social

improvement, poverty level, literacy rate, ratio of trained teachers to students, as well as external resources available to support education. Still, GNI is the main consideration, and the focus is on macroeconomics (overall aspects and workings of a country's national economy).

Initially conceived by Mahbub ul Haq in the 1970s, the HDI attends less to country national income and more to access to knowledge, good health, and decent material conditions—variables deemed essential to a fulfilling life. The index, as initially conceptualized, includes the "ability to participate in decisions affecting one's life, to have control over one's living environment, to enjoy freedom from violence, to have societal respect, and to relax and have fun" (Measure of America, 2013). It pays attention to "institutions and conditions of society"; to whether people have "the tools needed to make their visions a reality," to chart their own course and to seize opportunities (Measure of America, 2013). Variables considered in calculating HDI include educational attainment and school enrolment, both used to measure *access to knowledge*; median earning, used to measure *standard of living*, and life expectancy at birth, used to measure *long life and good health*. Other lenses used to examine human development include geography, gender, and race/ethnicity. It seems then that HDI would consider some of the intervening variables examined in this study, including school locale. HDI is really about improving life chances, and Williams (2009) links provision of an enabling classroom environment to improvements in the life chances of Caribbean children (p. 16).

Unlike economic status (ES), HDI appears to take a microeconomic perspective (represented by a focus on factors that affect the decisions made by organizations and individuals). It looks at standard of living and quality of life afforded the people within a specific country. One should note that it is possible for a country with relatively low economic status to have a relatively higher HDI index, as is the case with St. Lucia. It is also possible for a country with a high economic status to have a comparatively lower HDI. This might be true if a country, as in the case of India, does not attend to material conditions afforded people within the country. It seems also that HDI would be more sensitive to the quality of environments in classrooms in a country. This is because HDI is a quality of life and opportunity measure that places primary emphasis on human well-being, including knowledge and education (education up to the tertiary level, and gross enrolment rate, with the former carrying twice the weight of the latter); standard of living (including care of the environment and protection of civil rights); and longevity (life expectancy at birth). Sant'Anna, de Araujo Ribeiro, and Dutt-Ross (2011) maintain that the main purpose of deriving HDI is to call attention

to dimensions "that may not be correctly appraised in the ranking of countries by traditional Production and Income indices" (p. 524). The alternative concept of *human development*, according to Measure of America (2013), refers to "the process of enlarging people's freedom and opportunities and improving their well-being." The term carries an underlying message that development really involves more than economic growth, and that economic growth is not necessarily the best yardstick for measuring people's quality of life (Klugman, Rodriguez, & Choi, 2011). ul Haq (as cited in Klugman et al., 2011), in rejecting economic status as a measure of quality of life, maintains that any "measure that values a gun several hundred times more than a bottle of milk is bound to raise questions about its relevance for human progress" (p. 1). The writers affirm HDI as the more potent measure for evaluating the quality of provisions that affect people's living conditions. Thus, we pay close attention to this measure as having a possibly stronger link with classroom provisions.

Socio-historical forces, teacher expertise, and the richness of events and interactions in Caribbean classrooms. How, though, do teachers rate the social environment in literacy classrooms in their context and what factors are linked to such ratings? Slack (2008) indicates that teachers must develop the understanding that the "physical setting has an active and persuasive influence on their activities and attitudes, as well as on those of the children in the classroom," and that they must follow through with "appropriate and purposeful physical arrangement of furniture, careful selection of materials as well as appropriate attention to the aesthetic qualities of their classroom to provide a setting conductive to teaching and learning" (p. 9). Inan (2009) hones in on social interaction, stating that educators must be "cognizant of the importance of environment and relationships and their impacts on children's gaining literacy skills" (p. 2510).

Several Caribbean writers have highlighted problems teachers face in creating enabling interactional classroom climates in which students can thrive in their literacy development. Thompson (2009), focusing on Barbados, highlights problems with a variety of disruptive classroom behaviours, particularly by students who struggle with learning tasks, as well as the tendency of teachers to assume deficit perspectives in assessing the sources of these issues. In fact, teachers worldwide often fail to examine their own practice and environment for the extent to which they truly prompt positive behaviours and affect, that is, educators often fail to consider what impact proactive positive behaviour support and an enabling environment can have in staving off disruptive

behaviours, and instead blame poor parenting in their initial assessment of the source of undesirable classroom behaviours by students. This tendency toward blaming external sources is true for other countries of the Caribbean, not just Barbados (see McAnuff-Gumbs, 2006). Blackman (2010) highlights the problem of disruptive behaviours by students with language and literacy processing issues, and focuses on the role of thoughtful instructional grouping in combating such issues. Guardino and Fullerton (2010), in their intervention study, also demonstrate how changes to the physical environment, including configuring furnishings to facilitate specific kinds of interaction, can reduce disruptive behaviours and increase on-task time.

It is clear, however, that factors run much deeper than what obtains in classrooms. Warrican et al. (2008) also acknowledge the relationship between socio-historical influences, arrangement of the physical space, and the quality of the social environment in classrooms. Acknowledging challenges posed by a predominant and enduring whole-class instructional paradigm, the writers maintain that by far the most formidable obstacles "in Caribbean classrooms is the history of classroom organization" (p. 6). They note that "classrooms often exist as rigid structures [with] straight rows of desks and chairs… that impede the use of features such as flexible grouping and learning centers" (p. 6). The researchers also mention "rigidity of time," that is, inflexible scheduling and the conception of teacher as sage, all of which make it difficult to "introduce a relaxed, print rich setting in which children are able to develop their literacy skills" (p. 6).

The physical set-up of a classroom space does affect students' emotional reactions during learning, and excellent teachers recognize this fact. Warrican et al. (2008) maintain that excellent teachers "are [not only] able to create an environment that promotes reading and writing," but are also adept at fostering "positive feelings of self-worth by valuing students' efforts, and by displaying these throughout the classroom and in appropriate places" (p. 3). The researchers thus link the literacy richness of classrooms to teacher expertise. Exemplary teachers, the writers maintain, also pay "attention to the students' preferences in reading material and classroom activities," and respond to such preferences by "transforming their classrooms into print-rich environments, encouraging them [students] to take full advantage of these provisions" (p. 3). The attention in this study moves away from reactive responses to student behaviour and looks toward proactive ways of breaking away from tradition to fostering an engaging and affirming classroom environment that can stave off behaviour issues in the first place.

Gambrell and Marinak (2009), in introducing the concept of *proximal rewards*, maintain that tangible rewards not related to literacy tend to undermine intrinsic motivation to engage in literacy activities. Proximal rewards are incentives given in acknowledgement of literacy accomplishments or success, but which prompt students to engage in further literacy-rich activities. Marinak and Gambrell (2008), in research exploring their reward proximity hypothesis, found that students who were given proximal rewards were more motivated to engage in subsequent reading than were students who received a token. In a literacy classroom, students might, for example, be given books or electronic reading resources as rewards for accomplishing or for succeeding at literacy-related learning tasks. Another proximal reward might simply involve displaying a students' work as an exemplary piece. Think of the payoff in pride of having this as a part of classroom display! Gambrell and Marinak (2009) also encourage integrating motivation into materials selection (through selection of high-interest, high-quality reading materials) and into tasks (by attending to choice, authenticity, and connection with the real world). Hence, there is much that teachers can do with the environment that has payoffs in the quality of the socio-emotional dimension of the classroom environment.

In discussing the issue of inflexibility of classroom arrangement and its impact on interaction, Warrican et al. (2008) report on a project targeting 68 teachers in the English-speaking Caribbean (Belize, Guyana, Jamaica, St. Lucia, and St. Vincent and the Grenadines) who were being encouraged to, among other things, "transform their classrooms into literacy-rich environments by establishing libraries and using whatever other resources were available to them in their particular contexts" (p. 8). As part of a reflection exercise, the teachers had to record and share information on their school context, "describing the physical conditions, school culture, interpersonal relationships, and social issues" that they believed impacted their students (p. 13). Through participants' sharing, the researchers were able to capture the quality of care exhibited by teachers who were able to 'make something out of nothing,' and in so doing establish enabling climates that featured routines and rituals for classroom participation and interaction, mentoring of students in being responsible, opportunities for students to develop a sense of ownership of the classroom by helping teachers design the space, as well as guidance to students in use of resources such as the classroom library. Teachers also built on the rich oral tradition of the Caribbean and infused this into resources in the space. In short, the researchers, while exposing candidates to the nature of a truly enabling classroom environment, demonstrated what is possible even with limited material resources.

There is an extended focus on fostering enabling climates that offset deviant behaviours and less of a focus on material acquisitions and perceived parenting limitations.

It is clear then that teacher expertise as well as other variables (both contemporary and historical) will likely have an impact on the quality of both the physical and social environment in classrooms, and that response to the physical environment by students is often mirrored in the social climate of a classroom.

Is the CLEP Appropriate for Use in Caribbean Classrooms?

Given concerns regarding material resources available for classroom improvement in some countries in the Caribbean, and with frustrations being expressed regarding the enduring presence of traditional whole-class paradigms in literacy classrooms in the region, one wonders whether a tool developed and validated in the North American context holds validity for measuring classroom environments in the region. Admittedly, resource and instructional teaching style differences do exist in many cases between the North American context (in which the Classroom Literacy Environment Profile (CLEP) was developed) and the various countries of the Anglophone Caribbean. Lambert et al. (2008) raise questions as to whether, despite "convergence of views by professionals across international contexts regarding what conditions support literacy development," instruments for measuring the quality of the literacy environment developed and validated in North America hold validity for assessing environmental quality in the Caribbean. The researchers raised questions regarding the psychometric soundness and consequential validity of such assessment, especially in situations where results are used to make high-stakes decisions regarding the quality of programmes and settings. In their assessment of one such instrument, the Early Childhood Environment Rating Scale—Revised (ECERS-R, Harms, Clifford, & Cryer, 2005), in a study that applied the tool in 334 early childhood classrooms in Jamaica and Grenada as part of the HighScope initiative, the researchers uncovered two underlying factors accounting for the majority of the variance in ratings—factors that connect well with research-based dimensions of the CLEP.

Using factor analysis, the writers found a two-factor loading that accounted for a large percentage of the variance in outcomes. They labelled the two factors as follows: (1) language and reasoning *activities*, on which such items as conversation, sharing, and communication activities loaded at between .30 to .50; and (2) language and reasoning *materials*, on which items such as book selection, book organization,

book rotation and book appropriacy, and material accessibility loaded at between .34 and .48, with most loadings being above .4. The mirroring of the CLEP, with its "provisioning" [of tools] and "arranging" [of tools], gaining and sustaining [engagement]" subscales, seems uncanny.

Still, even as researchers use the CLEP tool, they must recognize that what generally constitutes the literate environment may differ from one region to the next and from one historical moment to the next. Cheng and Mok (2008) observe that educational reforms, including those focused on literacy, go through different paradigm shifts, especially with regard to the nature of environments deemed most conducive to promoting student learning. Scheerens (2001) notes such shifts, indicating that for a significant amount of time, school effectiveness was measured in terms of organizational and leadership styles, from which researchers deduced aspects of instructional effectiveness and classroom control. Still, our conception of what constitutes an enabling climate has moved far beyond that conception, enjoys a high level of consensus across regions, and has stood the test of time, and the CLEP tool, at this point, is perhaps one of those most suited to capture current conceptions of quality literacy learning environments at both the emergent literacy and primary levels.

There are merits in using the CLEP tool beyond its ability to capture current research dimensions of the literate environment. As with many regions in the world, the Caribbean monitors school effectiveness in terms of the extent to which literacy in the region compares with other parts of the world. Such a tendency to compare Caribbean outcomes with results from the rest of the world is exemplified in the participation of Trinidad and Tobago in the PIRLS since 2006, and with Belize getting on board in later years. Not only does the region assess itself against the rest of the world, but the World Bank and other international agencies also monitor trends among countries, and sometimes make recommendations for improvement based on such comparisons. Even so, within the agendas of the World Bank and other development agencies, the effectiveness of an educational system is often determined by results as compared or contrasted with resources available in a country.

So what can the CLEP tool tell us about how educators view the quality of the physical and interactional environment in classrooms in the schools in which they serve?

Methods

This primarily quantitative study uses a census sampling procedure in seeking to explore teachers' ratings of the quality of the classroom environment in a typical classroom in their school. Ratings from

different participants are statistically compared in terms of whether they differed based on the economic status of the participant's country (as determined by the World Bank and DAC), and based on the country's HDI (a UNDP measure that considers education, child welfare and income). Some exploration of the mediating role of school type, classroom type, and geographic locale is also done. Additionally, the candidates' qualitative comments are used to illuminate findings from the quantitative analysis. In this section we describe the design underlying the study.

Sample

All 47 Caribbean literacy professionals enrolled in a literacy leadership course at the Open Campus of The University of the West Indies (UWIOC) were asked to evaluate the quality of the literacy environment in their own classrooms and schools using the Classroom Literacy Environment Profile (Wolfersberger et al., 2004). The candidates, representing reading specialists, English language arts teachers, and grade-level classroom teachers, were enrolled in the Master of Education (M.Ed.) in Literacy programme and represented nine countries of the Caribbean: Antigua and Barbuda (1); the Bahamas (3); the Cayman Islands (1); Dominica (4); Grenada (2); Jamaica (10); St. Lucia (9); St. Vincent and the Grenadines (2); Trinidad and Tobago (15). Of the nine countries represented in the study, three were considered to be of High Income status (H) by the World Bank (2009), while the remaining six were considered to be of Upper Middle Income (UM) status. In terms of HDI rankings, three were deemed High (not the same three as in economic status), while six ranked as Low. Thirty-eight percent (38%) of candidates (18) lived and worked in a High Income country while 62% (29) lived and worked in an Upper Middle Income country. For HDI, 55% of candidates (26) represented countries with an index of 80 or above; while 45% (21) came from countries with an index below 80. For all in the Low group, the HDI index was 60 or below.

Instrumentation, Data Collection, and Data Analysis

For the CLEP survey, candidates assessed the quality of a select "typical" classroom in their school. The scale contains two subscales previously described. Each of the 34 items on the scale (19 on Subscale 1 and 15 on Subscale 2) allowed students to rate an aspect of the environment—the physical (its extent of provisioning with tools) and interactional (the quality of organization of space and tools, as well as the environment's potential for gaining and sustaining interest and

engagement)—on a 7-point scale from *impoverished* to *enriched*. On both the physical and interactional/social dimensions, outcome categories were the same: impoverished (1.0–2.4); minimal (2.5–3.9); satisfactory (4.0–5.4); and enriched (5.5–7.0), although the descriptions of what the category and score meant for the two subscales were different. (See Wolfersberger et al., 2004, pp. 271–272.) These categories were instrumental in understanding what the findings from the survey meant. The focus of each item on the CLEP is presented in Tables 2 and 4 later in the paper when we discuss the results.

Qualitative comments (made by the candidates in a regular forum discussion as part of a literacy best practice course) were also available for scrutiny. At the time the comments were made, the discussion was in no way linked to a study, and the students, the three facilitators who worked directly with them, and the coordinator who oversaw the course (and who functioned as one of the researchers in this study) did not foresee that the current study would be conducted. It seemed fit, given the availability of the data, to explore whether candidates' perspectives at that time would be mirrored in the rating they were undertaking after the six-month lapse in time during which they had taken a materials design course.

Strauss and Corbin (1990) maintain that while quantitative research tends to seek causal determination, prediction, and statistical generalizability, qualitative research seeks illumination, understanding, and extrapolation (analytical generalizability). The aim of "reaping" and matching qualitative comments to the statistical data was to expose candidates' thinking and to further illuminate possible reasons the candidates responded the way they did in the numerical ratings. To get exemplars from the quotations, the researchers conducted an electronic search of the Word document into which the entire conversation in each of the three different forums (one for each facilitator's group) had been downloaded. The researchers undertook the search using keywords from each scale item (including their derivatives and synonyms used in the literature review, e.g., "library," "classroom library," and "libraries" from Item 23; "areas" or "spaces" for items 20–22). Identifiers (students' names, URLs, and ID numbers) had been removed from the Word document so it would not be apparent who had said what. The quotations highlighted by the "Find" function were extracted, then sorted based on whether they adopted a negative or positive tone regarding conditions in their context. Generally, comments connected less with the negative-positive dichotomy and reflected more a weighing of both sides, that is, the quotations tended to cite the negatives of the environment then featured either a positive or negative reaction to that challenge. A

comment that saw the environment as limited and envisioned little chances for changing this situation would be categorized as negative-negative, while one that proposed a solution would be categorized as negative-positive. The categories used in the analysis thus became negative-negative, negative-positive, and positive-positive to capture the link between evaluation and reaction. Where more than one quotation was found, selection for inclusion took place after a process of deliberation between the two researchers.

Strauss and Corbin (1990) recommend such a process of comparison, matching, and labelling during what is really an open-coding process, since their research indicates that raw data are not sufficient for illumination. As the researchers indicate, it is only by "comparing incidents and naming like phenomena with the same term" that we can achieve solid analytical generalizability. In short, to use a specific quotation as typical of a group's point of view, a researcher must sort the comments and label them based on the perspective of the speaker.

We now present the results from analysis of the quantitative ratings and use candidates' qualitative comments to clarify possible thinking behind these ratings. We present the result of the exploration according to our research questions and according to the dimensions and subscales of the instrument.

Results

The data from the CLEP tool were analysed using the SPSS 21 (IBM, 2012) statistical package. Reliability analysis conducted on the data using Cronbach's Alpha revealed a reliability level of α = .969 for the 34-item scale, indicating high reliability. The provisioning subscale (physical environment) comprising 19 items demonstrated a high level of reliability (α = .940), as did the arranging, gaining, and sustaining (interactional/social environment) subscales which comprised 15 items (α = .934). The subscales also proved to have a significant, positive correlation with each other (r = .88, p =.000), suggesting some level of unidimensionality to the scale. Factor analysis with Varimax rotation confirmed the unidimensionality of the instrument since two subscales both loaded at .947 onto one component.

In terms of tests of assumptions of the ANOVA, the Kolmogorov-Smirnov normality test, run on the data for the two subscales and for the overall ratings, demonstrated that the distributions did not deviate significantly from the normal distribution for Subscale 1 (p = .20), Subscale 2 (p = .20), or for overall ratings (p = .20) (see results in Table 1).

Additionally, the Levine Test for homogeneity of variance indicated that the variances on the subscales and overall ratings were equal, and thus inferences could be made from the data for HDI (p = .290; .245;.410, respectively) and for economic status (p = .292; .289; .376).

Table 1. Results of Normality Tests

	Kolmogorov-Smirnov[a]			*Shapiro-Wilk*		
	Statistic	df	Sig.	Statistic	df	Sig.
Subscale 2: Sustaining	.110	47	.200	.957	47	.081
Total Average Rating	.099	47	.200	.976	47	.452
Subscale 1: Provisioning	.105	47	.200	.964	47	.159

Based on positive findings from tests of the assumptions, a means test consisting of two One-Way ANOVA tests was run on the two subscales, the overall scale, and on the various items to determine the extent to which participants' ratings of the quality of the literate environment in their schools varied by their country's World Bank/DAC economic status and by the country's 2011 HDI as provided by the UNDP. The results of the tests are presented in Table 2. For confidentiality and to reserve the anonymity of individuals and countries participating in the study, no country or individual participant names are linked to the results.

Research Question 1

To what extent do participants rate the observed classroom literacy environment as literacy rich? How do they rate the quality of ***literacy provisions****? How do they rate the quality of* ***use of provisions****?*

Overall, participants rated the general environment (both the physical and interactional/social) as moderate or minimally rich (N = 47, M = 3.56, SD = 1.02). The physical environment (provisioning) was rated as minimal (N = 47, M = 3.64, SD = 1.0), as was the social environment (gaining and sustaining engagement), though the latter rated slightly lower in the minimal range (N = 47, M = 3.44, SD = 1.16). The rating of minimal on the physical dimension, based on scale descriptors, meant that candidates thought the environment had several "different types of literacy tools…in moderate amounts" and that there were "enough literacy tools to support the number of students in the classroom" (Wolfersberger et al., 2004, p. 271). Their minimal rating for the

interactional setting suggested that the environment was not such that it would capture students' interest or "communicate that literacy was a valued goal," and that while tools were present they were really not featured (Wolfersberger et al., 2004, p. 272).

Research Question 2

Do the candidates' ratings differ based on the ***economic status*** *(ES) and* ***human development index*** *(HDI) of their country?*

Overall, in terms of the connection between economic status and participants' ratings of the **overall environment**, results revealed, surprisingly, that participants from the High Income group tended to rate the overall classroom environment at a much lower level on the minimal range *(*N = 18, M = 3.15, SD = 1.162) than did the Upper Middle Income group *(*N = 29, M = 3.81, SD = .846); and that the difference was significant, F (1, 4.792) = 5.012, p = .030. Mean score difference in this instance indicate that candidates from the UM group rated their environment at a higher level. Thus, the researchers rejected the null hypothesis that overall ratings do not differ based on economic status of the candidates' country. The surprising finding was that those from countries with lower income rated their environment more favourably.

In contrast to the ratings for the overall environment, it was clear from the results that even though the participants from Upper Middle Income countries tended to score the observed **physical environment**—its resource contents and arrangement—at a slightly higher level on Subscale 1 than did the High group, their ratings (N = 29, M = 3.768, SD = .889) did not differ significantly from that of the High Income Group (N = 18, M = 3.424, SD = 1.67), F (1, 12.481) = 13.540, p = .260.

It was on the **social environment** (arranging, gaining, and sustaining student interest and engagement) that the difference reflected in the overall rating lay. The gap between the ratings of Upper Middle Income Group (M = 3.862, SD = 1.243) and the High Income Group (M = 2.757, SD = .897) was much more apparent on Subscale 2, resulting in a significant difference in the ratings of the two groups, F (1, 1.302) = 1.312, p = .001). The ratings were in fact quite near the opposite ends of the minimal scale. The Upper Middle Income group was, as in overall ratings, far more positive than were their more economically prosperous counterparts, and it is the result of this subscale that tipped the total rating so that there was a significant difference overall.

See Table 2 for mean ratings for the High Income and Upper Middle Income groups. The level of significance of differences in mean ratings is presented for the two subscales and for the instrument as a whole, as

well as for each item, so that further exploration of possible focus of differences in ratings can be explored. Significant outcomes are highlighted in green. The ANOVA results are presented in Table 3. As can be seen, while there is no significant difference in ratings on the first subscale, there are significant differences in ratings on both the second subscale and on the scale as a whole. As such, while the null hypothesis could be rejected for the overall ratings and for rating on Subscale 2, it had to be retained for the subscale addressing the physical environment (Subscale 1).

Table 2 demonstrates that, in terms of ratings on individual items, while participants from the two economic brackets did not differ significantly in ratings on all but one item on Subscale 1 (*written communications* [$p = .03$] which does have an interactional implication), they did differ on all but two items on Subscale 2—types of literacy classroom areas, and the authenticity of the classroom settings—both of which seem linked to physical setup. Both groups seem in agreement that these were minimal at best. Noteworthy is the fact that the UM group felt that some interactional elements in their context went beyond minimal and were, in fact, satisfactory. Ones that were statistically significant from the ratings of their more prosperous peers included classroom library, grouping of literacy tools, accessibility of literacy tools, and teacher encouragement of participation in literacy events. In short, the UM group thought the classroom library was satisfactory and that teachers were doing well enough in organizing and utilizing what they had. Ratings for the H group seemed to be leaning toward impoverished.

For the second analysis, which focused on HDI and participants' ratings, we present the results of statistical analysis for the overall scale, for each subscale, and for each item. The results of the second ANOVA are presented in Table 4. In terms of **overall ratings**, participants from the Low HDI group *(*$N = 21$, $M = 3.24$, $SD = 1.162$) did tend to rate the overall environment slightly lower than did participants from the High HDI group ($N = 26$, $M = 3.81$, $SD = .871$), though the difference was not significant, $F\ (1, 3.681) = 3.75$, $p = .059$. Note, however, that in terms of writing utensils, furnishings, and technological resources, the group with lower HDI did rate their environment slightly higher than did the high group, though not significantly so. Thus, the null hypothesis that candidates' rating did not differ based on the HDI of their country was retained for the overall scale.

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Table 2. Differences in Ratings on Individual Items by World Bank/DAC Economic Status

Subscale 1 – Item # and Descriptor		Mean		P-Value	Subscale 2 – Item # and Descriptor		Mean		P-Value
		High Income (18)	UM Income (29)				High Income (18)	UM Income (29)	
1	Quantity of Tools	3.9	4.3	.268	**20**	Boundaries of Areas	3.1	3.7	**.015**
2	Utility of Literacy Tools	3.8	4.2	.322	**21**	Size of Areas	2.8	4.0	**.051**
3	Appropriacy of Tools	4.2	4.6	.432	**22**	Types of Areas	3.1	3.7	.235
4	Quantity of Texts	2.9	3.0	.678	**23**	Classroom Library	3.2	4.3	**.005**
5	Text Genres	3.8	4.1	.560	**24**	Grouping of Tools	2.9	4.1	**.016**
6	Levels of Texts	4.0	4.17	.307	**25**	Accessibility of Tools	3.2	4.4	**.023**
7	Format and Content of Texts	3.1	4.0	.067	**26**	Participation in Events is Encouraged	3.0	4.0	**.005**
8	Print for Organization	3.6	4.3	.168	**27**	Participation in Events is Inviting	2.7	3.7	**.004**
9	Literacy Displays	3.7	4.2	.283	**28**	Authentic Settings	2.6	3.2	.098
10	Reference Materials	3.0	3.4	.362	**29**	Authentic Events	2.3	3.8	**.000**
11	Written Communications	3.6	4.3	**.03**	**30**	Interactions with Tools	2.3	3.2	**.032**
12	Writing Utensils	3.6	3.4	.761	**31**	Record-Keeping of Interactions	2.3	3.5	**.027**
13	Writing Surfaces	3.8	3.9	.833	**32**	Variety of Products	2.4	4.1	**.001**

Subscale 1 – Item # and Descriptor		**Mean**		**P-Value**	**Subscale 2 – Item # and Descriptor**		**Mean**		**P-Value**
		High Income (18)	UM Income (29)				High Income (18)	UM Income (29)	
14	Publishing Materials	2.7	3.0	.456	**33**	Sharing Products	2.7	3.7	**.027**
15	Technological Resources	2.4	2.4	.953					
16	Furnishings to Support Events	3.4	3.3	.810					
17	Storage and Display Provisions	3.7	4.1	.324					
18	Accessories to Support Events	2.8	2.8	.989					
19	Location of Classroom Areas	3.3	3.9	.322					
Results for Subscale 1: Provisioning		**3.4**	**3.8**	**.260**	**Results for Subscale 2: Sustaining**		**2.8**	**3.9**	**.001**
Results for Total Scale: .030									

Table 3. Rating of Classroom Physical and Social Environment by Economic Status

			SS	*df*	*MS*	*F*	*Sig.*
Subscale 1: Provisioning	Between Groups	(Combined)	1.312	1	1.312	1.303	.260
Arranging * World Bank	Within Groups		45.324	45	1.007		
DAC Status	Total		46.636	46			

			SS	*df*	*MS*	*F*	*Sig.*
Subscale 2: Gaining	Between Groups	(Combined)	13.540	1	13.540	12.481	.001
Sustaining * World	Within Groups		48.817	45	1.085		
Bank DAC Status	Total		62.357	46			
Total Average Rating *	Between Groups	(Combined)	4.792	1	4.792	5.012	.030
World Bank DAC	Within Groups		43.019	45	.956		
Status	Total		47.810	46			

Table 4. Rating of Classroom Physical and Social Environment by Human Development Index

			SS	*df*	*MS*	*F*	*Sig.*
Subscale 1:	Between Groups	(Combined)	1.001	1	1.001	.987	.326
ProvisioningArranging	Within Groups		45.635	45	1.014		
* HumanDev IndexR	Total		46.636	46			
Subscale 2:	Between Groups	(Combined)	10.433	1	10.433	9.042	.004
GainingSustaining *	Within Groups		51.924	45	1.154		
HumanDev IndexR	Total		62.357	46			
Total Average Rating *	Between Groups	(Combined)	3.681	1	3.681	3.753	.059
HumanDev IndexR	Within Groups		44.130	45	.981		
	Total		47.810	46			

Table 5. Differences in Ratings on Individual Items by Human Development Index

Subscale 1 – Physical Environment		Mean		P-Value	Subscale 2 – Social Environment		Mean		P-Value
		Low (21)	High (26)				Low (21)	High (26)	
1	Quantity of Tools	4.0	4.2	.493	**20**	Boundaries of Areas	3.5	4.2	.173
2	Utility of Tools	3.5	4.1	.680	**21**	Size of Areas	3.0	3.9	.128
3	Appropriacy of Tools	4.2	4.9	.510	**22**	Types of Areas	3.2	3.6	.433
4	Quantity of Texts	2.9	3.0	.870	**23**	Classroom Library	3.1	4.4	**.002**
5	Text Genres	3.6	4.2	.267	**24**	Grouping of Tools	3.4	4.0	.076
6	Levels of Texts	3.9	4.6	.162	**25**	Accessibility of Tools	3.4	4.3	.119
7	Text Format and Content	3.23	4.2	.117	**26**	Participation in Events is Encouraged	3.2	3.9	**.042**
8	Print for Organization	3.7	4.2	.316	**27**	Participation in Events is Inviting	2.9	3.6	**.039**
9	Literacy Displays	3.8	4.0	.562	**28**	Authentic Settings	2.6	3.1	.188
10	Reference Materials	3.1	3.3	.760	**29**	Authentic Events	2.4	3.8	**.000**
11	Written Communications	3.7	4.2	.180	**30**	Interactions with Tools	2.3	3.3	**.020**
12	Writing Utensils	3.8	3.2	.158	**31**	Record-Keeping of Interactions	2.3	3.4	**.031**
13	Writing Surfaces	4.0	3.7	.478	**32**	Variety of Products	2.7	3.6	**.020**
14	Publishing Materials	2.8	2.9	.767	**33**	Sharing of Products	2.8	3.8	**.006**
15	Technological Resources	2.4	2.4	.960					
16	Furnishings for Events	3.4	3.2	.548					

Subscale 1 – Physical Environment		**Mean**		**P-Value**	**Subscale 2 – Social Environment**	**Mean**		**P-Value**
		Low (21)	**High (26)**			**Low (21)**	**High (26)**	
17	Storage and Display	3.7	4.0	.553				
18	Accessories to Support Events	2.8	2.760	.996				
19	Location of Classroom Areas	3.5	3.680	.766				
Results for Subscale 1: Provisioning		**3.5**	**3.7**	**.326**	**Results for Subscale 2: Sustaining**	**2.9**	**3.8**	**.004**
Results for Total Scale: .059								

In terms of Subscale 1 addressing the **physical environment**, the Low HDI group (N = 21, M = 3.47, SD = 1.12) and the High HDI group (N = 26, M = 3.77, SD = .91) also did not differ significantly in their ratings, F (1, 1.001) = .987, p = .326. It is in regard to rating of the **social environment** (gaining and sustaining authentic student engagement) that the difference between the Low HDI group (N= 21, M = 2.92, SD = 1.22) and the High HDI group (N = 26, M = 3.86, SD = .941) proved significant, F (1, 10.433) = 9.042, p = .004. The difference in ratings was significant, but not so much so that it tipped the overall rating as with ES. (See ANOVA result in Table 4.) The table includes data on the level of significance for the two subscales and for the instrument as a whole. Ultimately, the null hypothesis for HDI was retained for the overall scale and the physical environment, but had to be rejected for the subscale addressing the social environment. Candidates from countries with different HDI did differ in their rating of the social environment. After all, HDI is not so much about the resources one has, as it is about the quality of life the resources afford. Still, ES seems more influential on overall rating and on rating of the social environment.

A look at results for individual items shows that while participants from the two HDI brackets did not differ significantly in ratings on the items on Subscale 1 measuring the physical environment or on the overall scale, they did differ on items where interaction was explicitly mentioned and on ratings of library resources. These items are indicated in green, and it can be seen that all significant differences in item ratings are on Subscale 2. Participants were in agreement that the size and types of spaces, boundaries between spaces, and the accessibility of and grouping of tools, as well as the level of authenticity of the setup, were mediocre. What the High HDI group seemed more impressed with was the variety in tools (perhaps linked to what was in the library) and with the quality of interaction that surrounded those tools.

Table 5 outlines the results for individual items, and demonstrates that items on which the groups differed centred on the quality of teacher facilitation of interaction in the setting and the extent to which provisions were made for choice and authenticity in tasks (participation in literacy events is encouraged, p = .042; participation in literacy events is inviting, p = .039; authenticity of literacy events, p = .000; interactions with literacy tools, p = .020; record-keeping of literacy interactions, p = .031; variety of literacy products, p = .020; sharing literacy products, p = .006). Items on which they did not differ actually seemed more tied to the arrangement of the physical environment despite their potential impact

on motivation, engagement, and relationships in the classroom. Participants in High HDI countries seemed particularly impressed with the quality of classroom libraries since this is the only score for HDI that was significant and fell within the "satisfactory" range for quality.

Research Question 3

To what extent do the qualitative comments of participants from countries of different ES and HDI rankings mirror their quantitative ratings?

Comments by participants from countries with less economic resources tended to fall in the negative-positive category, suggesting that these candidates understood that resource limitations were a reality of their practice ("*My classroom is contained within a building that holds four classes… divided by blackboards*."), but that they also recognized that they must 'make do' *("…there is still quite a bit of room*."). They were resolved to be creative in meeting the challenges ("*When the noise becomes overbearing I usually take my class outside where we do our lessons. Having individual student chairs makes it a lot easier to move to different locations*."). Peers noticed and commended this positive disposition amidst the obstacles and, in addition, made suggestions as to how to make the best of a difficult situation:

> *Despite the noise levels, you seem to be able to do a lot with your classroom. I noticed that you mentioned not having enough space to hang charts. One suggestion for alleviating that problem is to make your charts into a series of cards, about the size of a legal paper - a bit wider though. These can be placed in decorated boxes on tables, seeing that you have the space. What do you think?*

In another posting, a participant made specific mention of resource limitations, again with an affirmative tone:

> *Language Arts does not have its own room which we share with other subject areas. [We do] not have the appropriate/necessary infrastructure to secure the material/equipment used, the physical layout aspect is not at this time feasible. Of course we do try at this point to ensure that the classroom is print rich by using charts, posters, etc., and we do rearrange the classroom to facilitate different reading or writing instruction. In terms of the instructional procedures, I have already begun to incorporate many of the procedures and the benefits have also begun to be evident.*

In the Caribbean, as in other places across the world, the implication is often that there is a link between abundance or quality of provisions and teacher satisfaction with the setting in which they work. This is a reasonable assumption. However, one of the participants remarked, "*At my school I always say to my teachers we can be very creative and make effective use of the limited resources that we have.*" Such perception of the power of creativity might account for findings regarding higher ratings by students form middle-income countries. Faced with the challenge of providing an engaging learning experience in unequal economic conditions, participants foregrounded their adeptness at maximizing learning through creativity ("*Teachers are creative and that is why we are able to endure...*").

Training initiatives, such as the Caribbean Centres of Excellence for Teacher Training (C-CETT) and HighScope, conducted in many of these middle-income countries (usually at government expense or through international funding) may have helped frame both affect and creativity in teachers:

> *Your centre can be as big as a classroom or as tiny as a ziplock bag. It doesn't matter. If space is an issue, that should not be a deterrent. Use what you have. Use shoe boxes, plastic bags, or storage containers and create your centres*.

Even before they had undergone training in materials design, the candidates were expressing such resilience and affirmative stance.

Some teachers in countries with lower ES had even gone beyond merely making do with what is available to, on their own, soliciting funding to make desired improvements in their classroom:

> *My room is the only room in the school with computers for now. We are in the process of setting up a computer lab for the school. I did the remodeling of my classroom as my project for B Ed. It was quite costly. I got some donations but I also had to raise funds to undertake the project*.

In contrast to the affirmative reaction of candidates from UM countries, comments from those from the High Income countries tended to fall within the negative-negative category. There seemed to be a high level of complaint, but there were also voices expressing dissatisfaction with what teachers were doing to enrich their classrooms. A specific candidate living and working in a high-income country of which the candidate is a native expressed a perception that teachers in the country were in fact taking what they had for granted. The candidate chided

teachers for their apparent lack of initiative even amidst administrative support:

> *…at my present school there are individual classrooms and it is very spacious… I only wish that all teachers can take the initiate and create centres in their classrooms. The administrator has been constantly appealing to teachers to create class libraries in the classrooms; however, there have been several excuses about overcrowded classrooms. Teachers must realize that they are supposed to be at the forefront in creating a positive learning environment.*

While this candidate saw possibilities, the indication was that, generally, teachers were not doing their part in creating a welcoming and stimulating space. The candidate echoes the words of the UNDP regarding provisions being taken for granted in such contexts.

One would expect that participants from countries with a greater emphasis on investing in education, higher adult literacy rates, and greater tertiary educational level attainment, as well as a greater focus on child/human welfare (factors considered in calculating HDI), would be more satisfied with the social climate created in the classrooms. A greater emphasis on social policies at a micro level might well translate into more enabling classroom environments. Greater consideration of forces considered by the HDI might result in greater teacher satisfaction with the climate of classrooms. This might account for findings described by Francis and Iyare (2006) regarding the relationship between development and education in Jamaica, a country that maintains a high expenditure on public education despite economic challenges and a low economic status, and thus has attained a relatively high HDI. The same might hold true in St. Lucia and Dominica. As one student from a country of lower economic status but higher HDI indicated:

> *At my school we have begun the process: Our classrooms are print rich; centres have been created for listening, writing and reading. I am still working on the effective use of these centers by children and teachers. Our constitution has rules governing the rights of the child in terms of the socio-emotional. During our service training sessions we always sensitize our teachers on respecting these rights. Training sessions have been on going in order to teach the teachers how to scaffold instruction in writing and reading*.

The candidate comments on at least two dimensions of the environment that echo components figured in HDI calculations, and it is amazing that

the student would have mentioned these although HDI was not even mentioned in either course. First, the student mentions the intellectual environment, including levels of scaffolding and differentiation of instruction—aspects of the socio-emotional and intellectual environment featured in the IRA's dimensions of the classroom environment. Secondly, the student mentions the rights of the child and links this to the classroom socio-emotional environment, thus spotlighting child welfare.

Candidates in Low HDI countries tended to be a bit harsher in their comments on the disparity between what the research suggests and what their teaching situation presents, blaming "unhealthy" environments on perceived low government expenditure and attention to schools:

> *Wow! The Ministry Officials need to read these research studies so that they can build schools and provide furniture to cater to the environment that promotes healthy learning. After knowing this, how do I return to my classroom where every move I make I get bruises on benches and the children are hostile to each other if there is any form of contact with each other. It's appalling.*

The high level of dissatisfaction with the physical environment and the tendency to blame poor relationships on the physical environment are apparent. Teachers in such settings readily compared the resources they had against other settings, such as pre-schools where the government had started making changes to meet international standards, and felt that the government or someone else was paying more attention to other settings than to theirs.

Research Question 4

*What extent of influence do economic status and human development index, when considered along with **classroom level**, **school locale,** and **school type,** have on the ratings of candidates?*

Regression analysis was used to test the extent to which the factors together significantly influenced participants' ratings of the **overall classroom environment.** The results of the regression indicated that the predictors together accounted for only 18% of the variance on overall rating (R^2 = .18, $F(5, 1.816) = 8.67$, p = .13), and that, as such, their influence was not significant in this study. Additionally, the factors together were not found to significantly predict rating of the **physical environment** for Subscale 1 (R^2 = .13, $F(5, 1.229) = 6.080$, p =. 31). Limited sample size might have been a factor in these results. Only school type (private versus public ownership) approached significance for overall rating (p =.053), and proved significant for the physical

environment (p = .036); the variables together did not. Thus, the type of school (which might be seen as a proxy for affluence in the Caribbean context) did impact how teachers rated the quality of the physical environment in their classroom, so that teachers from private schools rated their schools more favourably. In terms of the impact of the factors together on ratings of the **social environment**, the variables together *did* prove significant for Subscale 2, accounting for 28% of the variance in ratings (R^2 =.278, F(5,3.166) = 17.371, p =.017) (see Table 6). Thus, the null hypothesis that the five factors do not significantly impact the ratings of candidates was retained for the overall scale and for the subscale addressing the physical environment, but was rejected for the subscale examining the social environment.

Table 6. Role of the Various Factors on Ratings of the Classroom Social Environment

	Model	*Sum of Squares*	*df*	*Mean Square*	*F*	*Sig.*
1	Regression	17.371	5	3.474	3.166	.017[b]
	Residual	44.986	41	1.097		
	Total	62.357	46			

We discuss the implications of our findings below.

Conclusions, Discussion, and Recommendations

Overall, our results revealed that participants from countries with different economic ratings and human well-being rankings were generally in agreement that the overall environment of the classroom observed was minimally rich on both the physical and social dimensions. Overall, participants thought the classroom environment observed had the right amount of provisions for the students housed and that it provided "some support to literacy acquisition." However, they thought that, generally, the social climate had "a neutral feeling," did "not capture the observer's interest," and that the space, though it had "a narrow range of literacy tools and products," these were "present but not featured" (Wolfersberger et al., 2004, p. 272). This is essentially the definition of a minimally rich environment according to the Wolfersberger et al. guidelines.

While participants from countries falling in the two economic groups did not differ in their rating of the physical environment, they did differ in their rating of the social environment as well as in their rating of the overall classroom environment. In general, those from the Upper Middle Income group rated their social environment much higher within the minimal range. Participants from the Upper Middle Income group seemed more satisfied with what teachers were doing with the space and resources than were their more affluent counterparts, and were more satisfied with the classroom libraries they had. They also rated accessibility and grouping of tools as well as the quality of student interaction using tools more highly than did their affluent peers.

The qualitative comments illuminated the possibility that participants in UM-income countries were more resolved to work with what they had and to be creative, while those from High-income countries tended to compare what they had with others and to look to the government to take care of the physical space, hoping that such fixes would address issues with social interaction.

In our exploration of HDI and candidate ratings, we found that participants from countries with Low HDI seemed less satisfied with the library resources they had and with the general state of the social climate. As such, they tended to rate their social environment much closer to the lower end of the minimal range. In contrast, the ratings of those from High HDI countries moved beyond minimal in some areas, particularly with regard to classroom libraries and accessibility of tools. In fact, their rating on some items on the social scale edged into the satisfactory range (4.0 and above). It is interesting that none of the countries of High income actually made it into the High HDI group. Hence, the participants in the High HDI group who rated their social environment as satisfactory actually came from the Upper Middle Income group, and one can see in the qualitative comments a leaning toward attending to students' socio-emotional well-being and to the rights of the child, and how these were catered for in the environment. This is interesting since students had made these comments at least six months before taking the survey and neither they nor the researchers had any idea that this study would be conducted.

Why is it that candidates from countries of lower economic status would be more, not less, satisfied with their social environment? It might be that the candidates from low-income countries understood why resources were limited (the country could not afford more), but that those from high-income countries felt that their country was in a position to provide a more enabling environment than what was provided. This conclusion mirrors the IEA's (Mullis, Martin, Foy, et al., 2012) claim

that provisions in high-income countries can be taken for granted. The organization also maintains that a higher national income does not always translate into better material conditions on a micro level, so it is also possible that there might be a mismatch between the wealth of a country and the extent to which that wealth translates into greater human well-being. Hence, teachers in high-income countries are probably not less grateful; the reality might be that social policies are not keeping up with improvements in economic growth. So, are teachers in high-income countries less grateful or are policy makers paying less attention to non-pecuniary variables, including educational provisions, than to economic improvement?

Results of further correlation analysis on our data indicate a .88 correlation between ES and HDI (p = .000) for our sample. The relationship is certainly positive, significant, and high, but not perfect. Choi, Heger, Pineda, and Rodríguez (2011) give us an additional explanation for our findings as linked to that correlation. They maintain that "at high levels of income, the capacity of further income increases to deliver improvements in human development is limited" (p. 9). This suggests that there might be something akin to a law of diminishing returns in operation where, after a specific level of GNI has been attained, the return in human well-being tends to taper off. Note the case of a country such as Qatar, which while it is 2nd in the world in income level, is nowhere to be found in the top 10 countries in general HDI and in non-income HDI. Cuba, on the other hand, ranked 17th in the world in 2011 in HDI, and 1st in non-income HDI in 2010. This is impressive given Cuba's well-known economic hardships (Choi et al., 2011). Cuba's high ranking in HDI is no doubt influenced by its high education standards and solid investment in the education of its people.

Anomalies such as that represented by Cuba are in no way unique. In fact ul Haq (1995, as cited in Klugman et al., 2011) indicates that, in 1995, only four countries had HDI equal to their economic rankings. The majority had a 20-point difference in rankings. See Choi et al. (2011) and Klugman et al. (2011) for further details. Klugman et al. maintain that "patterns [of difference between ES and HDI] still hold true today" for countries around the world as well as for those within Latin America and the Caribbean. Barbados is perhaps the only Anglophone Caribbean country that boasts both a very high HDI (47th in the world in 2011) and a comparatively high ES, although ES was three ranks higher (44th).

One must recognize the role of funding agencies such as USAID, which allocate money based on economic status to countries that qualify, and that these provisions have led to educational improvement in countries of lower income levels in the Caribbean. Such funding has

tended to focus on resource and practice improvements in schools with disadvantaged populations, and might have served to offset disparities in resource as well as restrictions in responding to innovations, which poorer countries or even less privileged areas within a country might face, especially since rural areas are often targeted in such projects. Thus international funding might have an equalizing effect so that candidates would not differ on ratings of the physical environment.

Additionally, environmental improvement initiatives such as HighScope, instituted in many Caribbean nations (Antigua and Barbuda, St. Kitts and Nevis, Grenada, Dominica, and Jamaica, for example), and built on an already embedded cultural and teacher-training tradition of using "found materials" to improve classroom environments, might have no doubt influenced teachers' response to and rating of the physical environment in their context (Schweinhart & Weikart, 2010).

There is the possibility also that teacher training and funding related to such training might have put teachers in Upper Middle Income countries at an advantage, by bolstering their expertise and resolve so that they tend to be more creative in overcoming challenges. Since 2000, several such countries in the Caribbean have benefited from training through Centres of Excellence for Teacher Training (C-CETT) established in those countries. While high-income countries were slow to join this wide impacting initiative, and while governments in High Income countries have had to "foot the bill" internally for participating in the initiative, countries in the Upper Middle Income range enjoyed external funding and were early in joining the initiative. Hence, training of reading specialists in best practice and environmental transformation in countries such as Jamaica might have put such countries at an advantage. The training model used in C-CETT (train-the-trainers) facilitated a high level of diffusion of practice and ideas, and we can see teachers in C-CETT countries, through their comments, mentally negotiate a stance on whether their environments can reasonably work, with creativity on their part, in support of effective practice and successful student learning. The disparity between country types with regard to access to timely and innovative training seemed to have further disadvantaged some countries, and it seems training to build teacher expertise and agency is needed in high-income countries so that teachers understand they have a role to play in environmental transformation.

We can see indications from the results that while governments can provide resources, it is what teachers do in harnessing these resources and in orchestrating interactions and engagement around what is available that truly counts.

One can reasonably conclude from our data that the forces which shape teacher ratings in this study are complex and warrant deeper exploration. We do know that teachers consider provision minimal in general, but are split primarily in their ratings of the social environment and the quality of interactions in the classroom space. We also found that school type (private or public), which is directly related to level of affluence, impacts teachers' general ratings, and we can see that ES was so highly impactful on teacher ratings of the social environment that it influenced difference in overall rating. Such a finding is affirmed by the research of Schiefelbein and Schiefelbein (2013). The researchers propose that resource inequities are at the root of teacher disgruntlement in high-income countries, especially as evident between public and private. They propose also that differences in professional expertise afforded students in public schools and density of classroom spaces due to class overpopulation are some of the issues at the heart of teacher displeasure in these contexts. Other variables cited by Schiefelbein and Schiefelbein include limited time for learning due to reliance on frontal or whole-class teaching method as a response to high student-teacher ratios; poor staff allocation since the best teachers tend to move to private schools where salaries may be five times higher than in the public system; time wasted with discipline issues and annual strikes in public schools; and waste of time due to school double shifting.

Our findings did reveal that teachers were in fact comparing their settings with others and that they felt that the government was not doing enough to reduce gaps in resources. In their discussion of ways in which schools can meet human development expectations, and in their recommendations that governments target greater levels of resources to schools serving disadvantaged population, Schiefelbein and Schiefelbein (2013) maintain that the economic status of a school (whether it is publicly or privately owned) and the socio-economic status of students who attend it predicted by far the quality of education students receive. Citing findings from the 2006 PIRLS for Latin America and the Caribbean (as represented by Belize, Trinidad and Tobago, and Venezuela), Schiefelbein and Schiefelbein maintain that there are serious equity problems in terms of allocation of resources, which precipitate considerable attrition of teachers from public schools, as well as lower achievement scores for students in marginal urban and rural public primary schools—scores that are equivalent to only half the scores of wealthy students.

The complexities involved in untangling the real issues behind teacher ratings especially as far as socio-economic considerations go, seem apparent, but findings do suggest future directions, especially for

teacher training in classroom design, and in agency and creativity in management of the learning environment. In fact, it seems that teachers from high-income countries can learn much in terms of agency and creativity from their less privileged peers.

Recommendations

It seems desirable that countries match their human development expenditure with their economic status (as far as laws of diminishing returns dictate). Where a country has high economic power but does not match this with suitable expenditure on human development, including educational improvement, there might be greater teacher dissatisfaction with the environment in which they work, greater hopelessness and attrition, and ultimately lower student outcomes (Ingersoll, 2003). Where disparities exist between the wealthy and those who must access public learning facilities, and where other factors such as income disparities, social conditions, work conditions, and geographical locale compound issues, it seems that teacher dissatisfaction might be high and become even higher when teachers believe, and can actually see in privileged areas of their country, that better is possible. While governments should do as much as possible to improve material conditions (within the limits of what is truly impactful)—and they can through their funding policies strive to facilitate enhanced teacher training in maximizing use of the physical resources in strengthening students' engagement in literacy processes—much can also be done by teacher training institutions in mentoring teachers toward adopting a more agentive and affirming role in seeking improvements to the social climate of their classroom. Teacher training institutions do need the backing of school leaders and policy makers to ensure that training appropriately translates into practice. What is the sense, for example, in training teachers in applying flexible instructional configurations and a gradual release of responsibility control of learning to groups and individual students when classroom furnishings support a more rigid, teacher-fronted instructional paradigm? We know that design of space can make a difference for social interaction, and that change is not so much a matter of getting a bigger classroom but of attending to appropriate principles in resource grouping and space design. Space design also involves planning for and engineering social interaction around tools and resources available in the space.

Participant qualitative data were quite illuminating and suggested some stability in their views despite intervening training. This is a bit troubling since candidates from high-income and low HDI countries

seemed to have passed through the materials design course still holding non-agentive views, especially in terms of their own role in conditioning the social environment of classrooms. It might be that design training offered to teachers is really not making the link between design of the physical space and the interactional and socio-emotional context of learning. Such links must be made in more explicit ways so that space planning and design are shown to impact interaction and learning behaviours.

Neuman and Roskos (1992) suggest principles for early learning, some of which have already been mentioned. Additionally, Guthrie and Alao (1997), instrumental in developing Concept-Oriented Reading Instruction (CORI), provide eight principles from that constructivist-oriented model for designing classroom social interactions and instruction so as to increase the level of engagement of later literacy learners. These include organizing instruction around broad interdisciplinary themes and using multiple genres to enhance learning relevance; engaging students in real-world interactions; allowing for student self-direction (choice of text and personal goal setting); providing interesting learning materials and texts; fostering social collaboration during learning; allowing for self-expression; providing students with cognitive strategy instruction with gradual release of responsibility to foster independence; and ensuring curricular coherence so that students can see the link among learning activities. Our findings suggest that these are the very elements that teachers were most dissatisfied with. (See results from Subscale 2 for both ANOVA analyses.) There are numerous Caribbean studies that recommend similar principles for designing space and social interaction so as to increase learning motivation and avert student aberrant behaviour in literacy classrooms. (See Blackman, 2010; Thompson, 2009; Warrican et al., 2008.) Blatchford, Kutnick, Baines, and Galton (2003) recommend attending to the design of instructional groupings, in addition. It is clear to see from the recommendations how design of space flows into interaction then into learning possibilities.

Training literacy professionals in consistently monitoring the quality of the classroom environment as requested by the Human Development Department of the World Bank, encouraging them to be reflective on both space and interaction, and creating a culture of grant writing to solicit funds from private entities are other ways to help teachers improve their classroom environment. While being creative in terms of resource procurement is a good idea, teachers need not only make do; they can also use knowledge from their training to solicit funds to fill gaps they recognize. Training them in grant writing and advocacy for the

poor and underserved would be an important step. One candidate, quoted earlier in the study, had already begun making fund solicitation attempts and was actively engaged in advocacy so as to outfit a poorly provisioned classroom with needed technological resources. The Caribbean has a funds solicitation tradition, so the possibility of garnering funds through grant writing is not far-fetched. With efforts from the top (policy makers), and with an agentive stance from teachers at the grassroots, much improvement can be realized.

Our findings do suggest that policy makers should examine the roots of teacher discontent in high-income countries, and that addressing non-pecuniary dimensions of development might have payoffs in teacher satisfaction with the literate environment in classrooms (Klugman et al., 2011). One such dimension is teacher education and training in classroom design. One can see that socio-historical influences leading to the continued presence of a whole class paradigm have not been totally eroded, but training seemed to have helped erode this force in UM and High HDI countries. It might prove successful in High Income, Low HDI countries as well.

The UNDP (2007) notes that the measure (HDI) "challenges the common view that poverty is purely a deprivation of income, and underscores that human beings [must recognize that they are] both agents and beneficiaries of development" (p. 34). Teachers, administrators, and policy makers have a role to play in environmental improvements (teachers through application of the knowledge they have accessed; policy makers by promoting enabling educational and social policies). When efforts work in tandem, positive change can be realized beyond what mere economics can bring.

Despite the reality of gaps in resource allocation to schools of different types in their context, disgruntled candidates can learn much from less privileged colleagues who strive to make something with nothing. Still, while teachers are willing to improvise and while it is great that they are being trained to improvise, there are limits to ingenuity. Both the Government and the private sector have a social responsibility to assist in levelling the playing field between the wealthy and those who must access public education, by improving the physical conditions of the environment, as our findings suggests a potent role for school type when all factors in the study were considered. Schools of Education in the region should aim to make design education more widespread so that a broader spectrum of candidates understand that the physical, social, and intellectual dimensions of the classroom environment are all linked, and that students who learn in classrooms where this link is acknowledged do better on average than do their peers in classrooms ruled by a traditional

paradigm (Guthrie et al., 1998). We suggest also that researchers try to establish links between these three classroom dimensions and learning outcomes.

Finally, we recommend that further exploration be done on the link between human development indicators and educational provisions in different countries in the region so that the basic message that development is more than monetary growth can impact educational and teacher training policies, and, ultimately, the functioning of literacy classrooms in countries in the region.

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Caribbean Curriculum
Vol. 20, 2013, 161–185.

TEACHERS' VIEWS OF QUALITY TEACHING/LEARNING AT THE INFANT LEVEL IN A NEW PRIMARY SCHOOL

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This study sought to gain an understanding of the quality of teaching and learning provided at a newly built primary school. This school was intended to provide a setting for high-quality education for young children, and was equipped with modern physical facilities. A qualitative approach was used to obtain teachers' views of the quality of teaching and learning provided at the Infant level of the school. Data were collected through semi-structured interviews. The questions that guided the study were: (a) What are teachers' views about factors that support quality teaching and learning in the Infant Department of a primary school? and (b) What are teachers' views about factors that inhibit quality teaching and learning in the Infant Department of a primary school? The findings indicated that the quality of teaching and learning provided in the Infant level classrooms was influenced by a number of factors related to the home/school connection, critical school support, teacher attributes, and student attributes. New findings about educational change issues that could facilitate quality teaching when moving to a new school setting also emerged.

Introduction

The thrust of the Government of Trinidad and Tobago to provide quality teaching and learning at the early childhood level can be situated within the context of its ratification of international and regional agreements. The importance of providing high-quality education for all from the early childhood level was recognized since the 1990 Jomtien *World Declaration on Education for All* (UNESCO, 1990). Later, *The Dakar Framework for Action* (UNESCO, 2000) identified goals for the early childhood and primary school levels, which focus on both quantitative and qualitative expansion of the sectors, to provide education for all.

At the regional level, the CARICOM Heads of Government adopted a "Caribbean Plan of Action for Early Childhood Education, Care and Development" (1997). This plan identified key issues of focus for providing quality early education. Charles and Williams (2006) identified progress towards achieving early childhood goals in the

Caribbean, but there is still much room for improvement in terms of quality provision.

It is against this backdrop of government initiatives to provide quality early childhood programming for children that this study was conducted. The study investigated teachers' views of quality teaching and learning at the Infant level of a primary school. It sought to determine the success of a major investment in school buildings and infrastructure in improving the quality of teaching and learning at one primary school in Trinidad. The investigation was limited to a study of the views of four teachers in the Infant department of the school. The findings provide an insight into issues to be considered when attempts are made to improve the quality of education. The study was conducted in the Infant department to understand factors that could affect the teaching of young children at a time when the foundation for future learning is being established.

To the best of our knowledge, no similar study has been conducted to determine teachers' views of their experience with change resulting from government expenditure to achieve educational improvement. Research in this area is important because the literature suggests that successful change in education is difficult to achieve. Further, as educational investments in new schools are increasing**,** research is needed to identify and address possible barriers to improving the quality of schools. Additionally, it is quite likely that the components that need to be carefully managed include providing the support teachers say they need. It seems quite likely that success will depend not only on improving the school buildings and materials, but also on ensuring that stakeholders, including teachers, are equipped for and committed to the change effort. It is for these reasons that this study of teachers' views was conducted.

The questions that guided the study were:

1. *What are teachers' views about factors that support quality teaching and learning in the Infant Department of a primary school?*
2. *What are teachers' views about factors that inhibit quality teaching and learning in the Infant Department of a primary school?*

Quality in Early Childhood Education

Increased attention is being given to the quality of education provided for young children. This is because a strong relationship has been suggested between aspects of classroom quality and improvements in social and academic outcomes for young children (Howes et al., 2008; Mashburn et al., 2008). Defining quality, however, continues to be challenging. Moss

and Dahlberg (2008) define quality as an attribute of services for young children which ensures that stated developmental outcomes or learning goals are efficiently achieved. They further explain that quality is determined by the existence of criteria established by experts.

Those criteria, stated as standards of practice for quality in education, are being developed in many countries. In the United Kingdom, the government established quality criteria by using the findings from a commissioned research review. Seven indicators of good quality preschools that have a positive effect on child development were identified:

- adult-child interaction that is responsive, affectionate, and readily available
- well-trained staff committed to working with children
- facilities that are safe and sanitary, and welcoming to parents
- ratios and group sizes that allow staff to interact appropriately with children
- supervision that maintains consistency
- staff development that ensures continuity, stability, and the improvement of quality
- a developmentally appropriate curriculum

In the United States of America, the Early Childhood Education Rating Scale – Revised (ECERS-R) has become a primary measure used to assess quality and inform policy decisions (Harms, Clifford, & Cryer, 2005). A study conducted to determine how researchers using the ECERS-R were defining the construct to be measured found wide variation in the definition or conceptualization of quality (La Paro, Thomason, Lower, Kintner-Duffy, & Cassidy, 2012). That review of 76 studies revealed that, for example, some researchers interpreted quality as "classroom quality" while others examined "environmental quality." The study concluded that although the ECERS-R can provide understandings of broad "global" measures of quality, different interpretations of quality could yield inaccurate understanding of the construct measured. The researchers further pointed out that the ECERS-R provided only limited information on areas such as support for teachers, outdoor play environments, or instructional strategies. The researchers recommended that alternative assessments of quality be also considered since findings are important for informing recommendations and interventions for programmes.

In the Caribbean, the importance of education for all beginning at the early childhood level was recognized after the 1990 *Jomtien Declaration* (UNESCO, 1990). *The Dakar Framework* (UNESCO, 2000) further endorsed the importance of learning from birth, as well as the idea that quality early childhood experiences benefit children's growth, learning, and development (Myers, 2004). The *Framework* also identified goals for achieving quality provision, which include good quality primary education by 2015 and the expansion and improvement of early education provision.

At the regional level, the *Caribbean Plan of Action for Early Childhood Education, Care and Development* (1997) identified key issues of focus for providing quality early education, which include equitable access to quality provision, particularly for disadvantaged children, and an increase in research to inform the development of the early childhood sector. The *EFA Global Monitoring Report 2007* (UNESCO, 2006) later provided a sense of progress towards achieving early childhood goals in the Caribbean. Though the report focuses on the preschool level (birth–5 years old), aspects of its findings are also applicable to the early primary school years, which serves young children 5–8 years old.

The report identified the existence of varying standards of care and quality, and highlighted the urgent need to raise the outputs of early childhood care and education (ECCE) service provision to a higher level. The report further endorsed international research on the importance of quality early learning environments for improved developmental outcomes. Those quality early learning environments include standards of practice for teachers, as well as resources and structures for adult/child, parent/institution, and child/child interactions. They also include resources and their use, and learning opportunities provided.

The findings of a research study conducted in Jamaica identified indicators of quality provision that impact on children's outcomes in early childhood (Williams & Charles, 2008). This first comprehensive longitudinal study of 5 to 6-year-olds profiled the status of children and their learning environments on entry to schools in Jamaica. It was conducted because of concern for, and lack of data on, grade repetition and primary school failure. The study also addressed the absence of information on the preschool child related to health issues, as well as upbringing and learning capacities. Of the 19 indicators identified by the study, five were found to be most significant for child outcomes: socio-economic status, parental education, parental stress, reading books, and early childhood experience. Additionally, since the differences between school types were more noticeable than between social status groups, the

findings implied that child outcomes could be improved by enhancing the quality of the environments in which children learn and develop.

This study and other national studies conducted in Jamaica, the Commonwealth of the Bahamas, the Commonwealth of Dominica, St. Lucia, and St. Vincent and the Grenadines, as well as studies on the whole education sector in Montserrat and Grenada, swayed beliefs in the region towards understanding that quality learning environments could improve children's outcomes in the early years. Additionally, they influenced policy decisions to invest in early childhood development services. Though the assessment of quality may have been limited to "global" measures (La Paro et. al., 2012), useful insights were provided. The findings revealed that throughout the region, the learning environments were not generally structured in a way that reflected how young children learn best. The findings and recommendations helped to foster initiatives such as advocating for early childhood methodologies to inform curriculum reform in preschools and early primary education (Williams & Charles, 2008).

Trinidad and Tobago made a commitment to providing good quality education for all children by 2015. That commitment relates to improving every aspect of the quality of education and ensuring excellence. To this end, the Ministry of Education's *Strategic Plan 2002–2006* includes objectives for the provision of quality education to citizens at all levels (Trinidad and Tobago. Ministry of Education [MOE], 2002). Standards of practice have therefore been developed which identify quality practices for educating young children. These understandings of quality practices should therefore guide educational change efforts.

Educational Change Issues

Change can be described as the adoption of an innovation where the main goal is to improve outcomes through an alteration of practices (Carlopio, 1998). Several factors influence the success or failure of an educational change effort. One influence is the culture of the school. School culture is a critical consideration in analysing educational change situations since it can facilitate or hinder change. School culture refers to basic beliefs and assumptions about operations, such as what should be taught, how children learn, and the role of the school in addressing broader social issues. The history of the school largely determines the culture that exists. The culture is reflected in the way the school conducts, for example, ceremonies, rituals, and its accomplishments (Altrichter & Elliot, 2000).

Another consideration in examining changes in educational settings is the idea that change occurs at different levels. Further, most changes occur at the superficial level. Sarason (1996) calls this *Type B change*. This occurs when, for example, the teacher changes the seating arrangement to accommodate group work. Slightly deeper change occurs when, for example, teaching methods change. Further, Altrichter and Elliot (2000) note that for real sustained change to occur, basic beliefs and assumptions that shape school culture must also change.

Finnan and Levin (2000) have identified five critical components of beliefs and assumptions to be changed: the school's expectations for students, students' expectations for their school experience, expectations for adults in the school community, beliefs about acceptable educational practices, and beliefs about the desirability of educational change. Additionally, when decisions are made at the state level, a sense of powerlessness may be created at the school site.

The Rand Study of education innovation (Berman & McLaughlin, 1978) presented a comprehensive review of 25 years of change efforts. The study found that teachers were critical to the success of an educational change effort. Also, there were four stages of change: mobilization, implementation, adoption, and institutionalization. The study further found that innovations were seldom fully adopted. A crucial influence on adoption in the form intended was the manner in which innovations were introduced, monitored for use, and supported. Further, even when adopted, educational innovations rarely actually became institutionalized. Factors that affected institutionalization were related to changes in personnel, lack of resources, and, most significantly, lack of support for teachers' use of the innovation.

Teachers should therefore be an important consideration in educational change efforts. Some researchers have found that teachers must be an integral part of the change process (Hiebert, Gallimore, & Stigler, 2002; Lieberman & Miller, 2001). Further, Cochran-Smith (2002) expressed the view that making teachers part of the change process must begin with their professional preparation. This idea is linked to the views of Carlopio (1998), who stated that change is not a "decision event" but rather a social process that occurs over a period of time. As a result, those involved in the change must engage in a learning process. This helps them to appreciate the aims and goals of the proposed change, and to make adjustments to accommodate the new practices. Therefore, planning for personal and professional growth of individuals before attempting to implement change is important.

The literature seems to suggest, therefore, that change in education should be carefully managed since there are several components that

must succeed for the change to occur as intended. Also, teachers should understand the proposed change and be carefully supported throughout the change process, as they are critical to the success of an educational innovation.

Methodology

A qualitative approach was used to gain an understanding of the factors that might be impacting the quality of teaching and learning provided at the Infant level of an urban primary school in Trinidad. In order to obtain an in-depth understanding of the phenomenon, four teachers were chosen for the study using a purposive sampling strategy. Purposive sampling facilitates the selection of cases that allow the researcher to discover, understand, and gain insights into the phenomenon under study (Creswell, 2012; Merriam, 2009). In order to maintain anonymity and confidentiality, fictitious names have been given to the participants and other persons mentioned in the study. The participants were all certified teachers with a range of teaching experience: Mary had taught for 19 years, 13 of which had been spent teaching Infants; Edith had taught for 18 years, 3 of which had been spent teaching Infants; Tricia had taught for 16 years, 11 of which had been spent teaching Infants; and Beryl had taught for two years, both of which had been spent teaching Infants. All the teachers had a teaching diploma, and Edith also had an undergraduate degree in Psychology.

Data were collected through audio-taped interviews. The interviews were semi-structured and sought to obtain the teachers' views on:

1. what helped, or did not help, teaching at the Infant level;
2. the ways in which supports for teachers had improved, or not improved, over the years;
3. the qualities of a good Infant teacher;
4. why some children in their class learn better than others;
5. what they could do to improve they teaching;
6. what could be done to help children improve their learning;
7. what served as a deterrent to their teaching and what change they would like to see;
8. what served as a deterrent to children's learning and what change they would like to see; and
9. how teaching and learning could be improved at their school.

Verbatim transcription was done of all the interviews. The data analysis process involved coding the data, comparing the codes, and grouping similar or related codes to form themes. It was an ongoing, iterative process in which the codes and themes generated were constantly reviewed and refined.

Two strategies—peer reviewing and member checking—were employed in this study to establish trustworthiness or credibility of the findings. Firstly, in the peer reviewing process, the transcripts were analysed independently by both researchers. The researchers then met to compare and discuss the codes assigned to the data as well as the emerging themes. The second strategy, member checking, involved taking the data (the interview transcripts) back to the participants, and asking them to clarify points and/or issues emerging from the analysis. The member checking process also sought to ensure that our interpretations of the data were in line with the participants' meanings.

Findings

Teachers' views of what facilitated or impeded quality teaching and learning in the Infant level of the school were linked to three main areas: critical school supports, home/school connection, and existing challenges.

Critical School Supports

Teacher attributes. Three teachers believed that an important part of teaching and learning was the need to be caring to the students, and to show a genuine interest in their long-term development. Caring and commitment were therefore important teacher attributes. Mary noted:

> *This is the foundation, and once you show these children genuine love…show them that you really care about their education and that you really want them to learn...and you will go all out to ensure that, that is what is necessary.*

The teacher's ability to make the learning experience exciting for students was also seen as an asset in providing quality teaching and learning. Mary stressed that one needed to be "*an exciting teacher, a creative teacher, a genuinely interested teacher and…genuinely love children.*" For Mary, genuine interest and love for students meant ensuring that they were well disciplined and that they covered the syllabus. She stressed that a good student "*pays attention…follows instruction… [and] is not disruptive*." She insisted that the students remain silent and focused on the task assigned to them at all times.

Like Mary, Edith expressed a commitment to making a difference in the students' lives and to their long-term development as individuals:

> *To me, this is what I envision as a good teacher, not just the curriculum because we have a national test or SEA [Secondary Entrance Assessment] or whatever, but the individuals themselves so that you can move them from one stage to the next. So at least they will be that much better having left you than when they first came*.

However, unlike Mary, Edith's idea of caring and commitment to students meant creating a more relaxed and interactive environment in the classroom. Beryl's view of a caring teacher was one who allowed students to be, "*Loud and boisterous and say anything that comes to their mind as soon as I ask a question*." She cared for her students by giving them the freedom to say or do whatever they felt like most of the time.

The fourth teacher, Tricia, did not express the need for teachers to be caring and committed. Instead, she focused on the importance of teaching experience to quality teaching. She said that teacher training college did not prepare her for teaching. Her view was that, "*They [the Ministry of Education] tend to drop you straight out of college and you are like 'What to do?'*" Tricia had experienced six transfers after completing her training. Her views appeared to represent understandings and techniques that she had developed for teaching students, based on her teaching experiences. She said, "*Once they have the behaviour, then you have no problem teaching and they listen then, and you don't have to discipline the child*." Tricia also stated that at the Infant level:

> *You have to change your language. You have to literally bring it all the way down. You even have to use slang with them. First you break it down then you raise it to Standard English. You cannot speak Standard English with them at first because some of them don't know what you mean.*

Tricia also felt that some students who did not get assistance with homework, and as a result could not answer questions in class, knew "*nothing at all*." This tabula rasa understanding seemed to justify her classification of children who did not do homework as less able to learn than others. It may more likely have been disadvantaged home situations that affected students' learning. Tricia also appeared to have been using intuitive ideas rather than sound pedagogical knowledge when she spoke of a class as a good or bad batch of students. She said, "*Well this batch good, they could read, the parents speak to me, I talk to them*." Her

views reflected whole class teaching rather than teaching that recognized the importance of facilitating parent partnerships and catering for individual differences.

Mary, however, was quite clear that the teacher needed to facilitate parental involvement; the teacher needs to accommodate regular visits by the parents to communicate about the educational progress and needs of the child. Mary said:

> *I always tell my parents please come and visit me on a regular basis; let me tell you about your child, don't let me see you only on orientation day and then I don't see you after that. I want you to come, tell me Miss when can I come? And I will let you know….that's why I have a parent-teacher correspondence book….every child has one.*

The teacher also needed knowledge of home issues that impact on learning in special situations. Edith felt that the teacher needed to know the child's home situation to provide quality teaching for individual differences. She said: "*You need to know who is your clientele, know who you're working with and know the background as well - the families from which they come*." She spoke of a boy who had not been performing. By the second term she realized that something was wrong and spoke to his mother when she eventually saw her. She learnt that there had been a divorce and the boy was having difficulty doing his schoolwork because he missed his father. In dealing with problems in the classroom, Edith seemed to draw on her years of experience in teaching and her knowledge of home issues that might impact on children's learning. She reflected on her experience in dealing with similar situations and commented:

> *When you know these things [source of students' problems], you will realize that the child is not always trying to be deliberately delinquent or disobedient, but they have things on their minds and you can't teach the A, B, C and the 1, 2, 3 without settling the issues they have on their minds*.

Resources. All four teachers expressed the view that the availability of resources was a critical school support needed for teaching at the Infant level. Mary said that at the Infant level children need to be involved in a lot of tactile activities to help concretize concepts. Tricia further added that resources were important, "*because we don't stress too much on writing. [During] the last term we stress on writing. At first it's more eye-hand coordination and things like that to get the motor skills going*."

Further**,** they felt that the lack of resources was a problem that existed prior to the move to the new school building and persisted after the move. Mary said: "*The Ministry does not provide many things*." Beryl added: "*They [the Ministry of Education] supply a couple, like the Jolly Phonics which I am heavy into …and the books to go along with it but that's just phonics*." With this understanding of the importance of resources to Infant teaching, the teachers attempted to meet the shortfall by using their own finances and creativity. Tricia further stated that teachers purchased most of the resources they needed. Mary endorsed this point when she said: "*Most of the time we have to get our own resources. We have to recycle a lot like old toilet paper rolls and bottle covers.*" Beryl expressed her disappointment with the lack of resources supplied. She felt that the availability of a well-stocked resource room for teachers' use would make teaching easier.

Using their own initiative at the new school site, the teachers attempted to establish a resource room. Tricia said:

> *At the beginning we had arranged for a resource room. We have the room, but it's empty. I'm hoping at least we can buy resources, put them in the room so teachers can use them and put them back. Like a library system.*

Beryl added that the new school included other rooms but not a resource room. She said: "*We have a Diagnostics Room…we have a special room…we don't really have a resource room per se…. I have my own resources*."

Conducive learning environment. The teachers said that the learning environment should meet certain criteria to be conducive to quality teaching and learning. They all acknowledged that the new school environment was more conducive to learning and supported quality teaching and learning. Mary reflected on the heat, noise, and other unfavourable physical conditions at the old school that had negatively impacted on learning. She said: "*We had to put up with heat and noise and lack of facilities and so on and whenever it's raining we would get wet….we didn't have the yard space and a lot of different problems we had*." She also added that the air conditioning at the new school site helped. She said:

> *When we were at the older building, after lunch, work could not take place because at that time you are sweaty, you are hot, you are tired. Everyone just want to sleep…..here full of energy; even at 1 o'clock, half one, quarter to two, 2 o'clock we want to go on to something else. We are not so easily tired.*

An appropriate school building benefited both the teachers and children. Mary said:

> *I am feeling it and experiencing it…as a teacher, I have the energy, I have more energy. I can do more, I have nothing to distract me; no outside noise…and we can work…you should hear the deafening silence inside here when we are working*.

She also added that the children were more willing to learn, more receptive, and:

> *they listen more, they can hear you better; I don't have to shout. Whereas before you had to be shouting; I'd go home, my voice sore, now they could hear you….I would say there is a drastic improvement and you know what? I believe in a few years to come we will see the results in SEA and so on*.

Mary further described the inhumane conditions at the former school. She said:

> *To me it was inhumane; we didn't have a sick bay, a staffroom, nothing like that. At one time we were sharing bathrooms with the male members of staff; we had to even fight for that….you come to school, you open your cupboard, a rat jumps out at you, and your books are sticky with urine. That's terrible, terrible! No place for the children to play. So thank God we are now in this environment.*

Mary expressed the view that an appropriate adult-child ratio was 14 or 15 to one teacher. All teachers had a similar view. They therefore felt that when the ratio was increased to 25 students to one teacher, quality teaching was compromised. Mary said that the increase in student numbers was a challenge. She said: "*Over at the old school site, you had a smaller number*." She also added that, as a result, teachers got accustomed to providing "*individual attention and correcting work faster and having a faster turnover*."

Also, the Infant programme was organized around a two-year cycle. As a consequence, the increase in students in the second year disrupted the established two-year teaching plan for Infants, and further compromised quality for the new students who were accepted without going to first year. Mary said:

> *Here actually at the beginning it was challenging with the 25 children…because the extra that I got…remember this is 2nd Year and we usually have them for 2 years, we do a rotation. When they come into 1st Year they stay with me until 2nd Year*

> *and then from 2nd Year they go to Standard 1. So I would've had them for a year and I would've known them and their strengths and weaknesses so when I came here and I got that extra 10, I had to start over with those 10…they were not accustom to me, they were not accustom to my style of teaching, so I had to like teach them discipline and so on.*

Special supports for Infant teaching. This theme was quite strong. Teachers repeatedly stated that teaching young children needs special supports and considerations for quality teaching that may not necessarily apply to the higher classes. Mary, for example, spoke about needing a teacher assistant because the hands-on workload in the Infant classes is greater. She stressed:

> *I strongly believe that we need assistants at the Infant level. Every class suppose to have one because the volume of work that we have to do…the amount of corrections….we have to go to each child, it's not like they're so independent…you have to go to each child to ensure that they have the correct number of blocks or whatever…we do things like that and it is very important for me to have a lot of help….so that would help.*

Mary added that when she got an assistant through the On-the-Job-Training (OJT) programme it really helped her. The assistant cut shapes and stuck worksheets while she was able to focus on the task of teaching. Further, Mary's view was that the school did not provide the teacher with remedial reading support to make the child ready to learn to read in her class.

Preparation for relocation. Teachers also expressed the view that moving to a new school building was a special event, which needed careful planning to ensure that the intended outcome of providing an improved quality teaching service was achieved. Additionally, the unique conditions and problems at the old school site should be understood to plan for the changes. This did not occur in the transition from the old to the new building. Teachers therefore reflected on the resulting problems they experienced throughout the transition period. The special factors that should have been considered in planning the transition were related to the prolonged period of adverse conditions that teachers and students had experienced at the old school. Mary said that teachers had experienced a lot of hardship specific to that school. She reflected:

> *We went through so much and to me it was a lot of psychological trauma we went through and then to just come here and expect us to make a sudden turn around; I find that was a bit harsh. I*

> *think we should have been given the opportunity to get counseling to prepare us, to prepare the children about this new environment and so on.*

Beryl added:

> *None of the teachers got to finish their 3rd term; we didn't even have promotion for the 2nd Years because of that major disruption because we were out of classes over a month and then they had their August vacation and came back to [the new] school.*

Teachers therefore believed that they needed a period of adjustment to their new surroundings before teaching began and both teachers and students needed counselling services to assist the transition. Mary stated:

> *Something was wrong with my hearing because of the noise…sometimes you couldn't hear yourself because it was all enclosed where we were. I found that we should have been given at least two weeks into the new term for us to settle and to have some counselling sessions and for us to talk about our feelings to just bring things out; whatever we were hiding inside and I found that we didn't have that forum…to heal, so we all went into our classrooms and we all had to do our own things.*

Mary also said: "*I think we needed that time to recuperate from the years…it was like almost five years we were displaced and then prior to that we had all the problems*." Additionally, since they had to move into an unfinished building that was still under construction, the health of teachers and students, who might have been affected by the construction dust at the new site, should have been a consideration.

Teachers believed that even though the move was complete they could still benefit from counselling. Mary supported her point by saying that:

> *Teaching is not only about delivering a syllabus, it's not all about that; we are preparing individuals to live in this world....this is about a holistic education, coming to school and I believe that we need people to come in, to speak to the children [about] just basic things about life and about how we should live as human beings, with one another and with our environment and so on….we should have that for children and for the teachers. And you know what? We should ask the teachers how they feel and don't just dictate to them and expect that as adults we will just fall into place.*

There was a view that teachers felt hurt because the school management was trying to dictate quality practices rather than listening to teachers' needs and ideas, and providing the supports they recommended. Mary expressed her dissatisfaction with the method used to demand improvement. She said methods to get teachers to improve their teaching included telling them, "*All eyes are on you*." She also added: "*You cannot be 'buffing' people and expect a miracle. They are accustom to a certain lifestyle*."

The findings are summarized in Table 1, which lists the five areas of Critical Supports needed at the school level for quality teaching and learning to occur, and provides details on each area. The most detailed explanations were provided for three areas, namely, teacher attributes, a conducive learning environment, and preparation for relocation. The teachers seemed to place most value on these areas of support.

Table 1. Critical School Supports Needed for Quality Teaching and Learning

Support Categories	Details
1. Teacher Attributes	• Caring and committed to students • Make learning exciting for students • Facilitate parental involvement • Have knowledge of home issues that impact on learning • Teaching experience
2. Resources	• Necessary for Infant teaching; limited writing at that level • A well-stocked resource room is needed
3. Conducive Learning Environment	• Cool and quiet classrooms • Yard space for children to play • Adult-child ratio of 14 or 15 children to one teacher • Teacher stays with children for two years
4. Special Supports for Infant Teaching	• A teacher assistant is needed because hands-on workload in the Infant classes is greater • Remedial reading support should be provided by the school

Support Categories	Details
5. Preparation for Relocation	• The unique conditions and problems at the old school site should be considered in planning for the change • Counselling is needed for teachers and students • A period of adjustment is needed before teaching at the new school begins • Teachers' views should be considered

Home/School Connection

Parental support for learning. Mary expressed the view that quality teaching involves the important element of parental support at home for the learning that takes place at school. She stated that:

> *the children who are very successful in my view are those who when they go home….education continues; they learn their work, they read…they're suppose to read every day at home in any case…..they do their homework, do their projects and so on.*

She continued that "*the parents [who] are genuinely helpful and interested in their children's education… are the children who are always successful*." Tricia shared a similar view. She said: "*Some of them, their parents don't mind putting out. They do things at home with their children. They buy all the books and resources for their children*." Mary also said that another deterrent to quality teaching occurred when "*you send for a copy book or two and they don't send it*." Her point was that when parents do not provide necessary school supplies, teaching at school is negatively affected. Mary further stated that in most cases the deterrent to quality teaching and learning at school was "*the lack of support at home*." Edith said:

> *I don't want to make it sound so bad like I'm not getting any [support] but there are those who [support]…the other 50%, they just totally fall short and it affects the students' work in the class so I'm getting the things done but it's just not the way I would like it. There is a lack of support when children arrive at school without discipline and the teacher has to discipline them before teaching.*

Tricia said: "*Behaviour-wise….if the children come to school without behaviour, then you have discipline problems in school and that affects what you can do in class*." Beryl noted:

> *The children I have trouble with are the ones that are not supported and some of them [parents] are very vocal… I have one particular child, I ask him to have his mother come in, well we usually write to our parents and they write back but I really needed to talk to her one-on-one and when she came she made it known to me that she is missing a day's work and she turns to her child after…like I am not finished talking to her, I'm not finished discussing everything with her, she calls him and says "this is $350 I am missing to be here" and that's how the conversation went. When I was saying to her that his letters are not formed properly or some of them back-to-front [reversed], she would say "well I think he doing real good" and I would say "yes he is but there's room for improvement." Doing good is different to being at the class level, and that's what we're working on.*

Parents' expectation for children. Beryl wanted to raise parents' expectation for their children's performance. She felt that all children should be performing at the average class level. However, some parents had a mindset that said once the child was learning something new it was good enough.

Parent/teacher communication. Mary believed that an open line of communication should be established between the teacher and the parent. This leads to improvements in the child's work. She reflected:

> *Parents will always communicate with me and we always have the line of communication open. It is very important to have that connection with your parents; that's the only way they know you as teacher. They know the children's ability and so on and we work together and I see a lot of improvements.*

An added benefit Mary noted was that parents who communicate regularly with the teacher, using the open lines of communication provided by the teacher, reward the teacher with help. She stated that: "*At the end of the term…the parents come out and help you with your class parties…all these little things*."

The findings relating to the Home/School Connection are summarized in Table 2, which lists the three areas to consider in establishing a home/school connection, and provides details to explain each area. Teachers provided most details for parental support for learning and mentioned the other two areas—parents' expectation for children and parent/teacher communication.

Table 2. Home/School Connection Needed for Quality Teaching and Learning

Home/School Connection	Details
1. Parental Support for Learning	• There should be daily continuity at home for learning that takes place at school • Parents should be genuinely helpful and interested • School supplies should be provided • Parents should discipline their children • Communicate with teachers in a non-aggressive manner
2. Parents' Expectation for Children	• Parents should have high expectations for their children
3. Parent/Teacher Communication	• An open line of communication should be established

Challenges

Inappropriate child behaviours. The findings indicate that there were some pre-existing problems at the school, which needed to be addressed as a matter of priority, in order for the new school to be established as a model of quality teaching and learning. A major problem seemed to be a lack of discipline at the school, which manifested itself in various ways: the bullying of the younger children, cursing in the corridors even in the presence of teachers, and littering of the school yard.

Beryl gave an insight into bullying at the Infant level, where the practice seemed to be quite serious:

> *We did say to the principal that the disruption was huge because it affected the children terribly…. They [the older pupils] would harass my children. They would do all sorts of things; they would mock them, they intimidate them, they make them very, very uneasy. Like if they were to go to the bathroom they would come and knock on the door and shake on the door.*

Beryl felt that the "*lack of orientation*" to the new school might have contributed in part to the lack of respect and the uncaring attitude that

students showed for the new environment. According to Beryl, she often had cause to exclaim: "*Oh my gosh look at this new place*!"

Problems in the students' home environment were seen by all the teachers as another issue that impacted the quality of teaching and learning at the school. Edith reflected on the issue and shared the approach she sometimes used to divert the students' minds away from their home problems:

> *Again the home issues…a lot of them will have that on their mind. They will come up first thing, they want to talk about what happen last night or what didn't happen last night….what I tend to do is try to pull them away from that environment, so I try to make it fun-filled in a certain way. You know in every lesson, if it is some piece of literature, or somebody could tell a story or for us to do a song or something before I even start the lesson or as part of the lesson, to try to really pull them away from that. But if I don't, that's where their mind tends to remain sometimes.*

It was generally agreed that teachers needed to use their initiative in dealing with students who had home problems, but they did not feel qualified or confident in doing so. Edith lamented the fact that:

> *We do have a social worker but she is swamped…so we have that facility to refer the child to the social worker but then in the interim while she is being located, we still have to face the child and find the initiative. Support may come also in terms of the principal. He does sometimes say…you may go ahead and use this initiative but that is still a bug; it's a bug because though I may know of certain techniques, what to use, what not to use, not being qualified you're not sure.*

Therefore, providing quality teaching and learning in the classrooms hinged a lot on the teachers' willingness and ability to make a difference in the students' lives.

The findings relating to existing Challenges are summarized in Table 3, which lists the two issues that seemed to undermine quality teaching and learning: Inappropriate Child Behaviours, which was a school-wide problem; and Unaddressed Home Problems, which was linked to the problem of school indiscipline. Additionally, adequate support could not be provided for unaddressed home problems that affected learning. This was because teachers were unqualified and the social worker could not handle the volume of cases.

Table 3. Challenges That Affected Quality Teaching and Learning

Challenges	Details

1. Inappropriate Child Behaviours	• School Indiscipline
	  ○ Bullying of younger children
	  ○ Cursing
	  ○ Littering
	  ○ Lack of care for the new school

2. Unaddressed Home Problems	• Teachers were unqualified to treat children's problems • Social worker was swamped with work

Discussion

This study sought to uncover teachers' views about factors that supported or hindered quality teaching and learning at the Infant level of a primary school. The school was new with improved facilities—a marked improvement over the old school building. There were high expectations for good quality teaching and learning. The findings revealed three broad areas that seemed to impact the quality of teaching and learning in the Infant level of the school: Critical School Supports, Home/School Connection, and existing Challenges.

The Critical School Supports identified in the study were: Teacher Attributes, Resources, Conducive Learning Environment, Special Supports for Infant Teaching, and Preparation for Relocation. Of those five areas, only two were partially addressed—Providing a Conducive Learning Environment and Providing Resources. The environment was enhanced in that the building was new and improved, and air conditioned classrooms were more conducive to learning. Additionally, some resources were provided, but they were insufficient. Critical Supports were apparently not provided to improve Teacher Attributes necessary for quality teaching.

The findings revealed that even though there was a common view that caring and commitment were critical to quality teaching and learning, these attributes seemed to have different meanings to the teachers. For Mary, caring was equated with rigid discipline and keeping children on task. Even though she was well intentioned she may have been hurting

children socially and emotionally. Edith seemed to have a more holistic view of the ethic of caring. For her, an understanding of factors in the home was often necessary for dealing with problems that arose in the classroom. Beryl, on the other hand, encouraged students to be free to express themselves in ways that seemed to contribute to chaos in the classroom.

The difference in views about quality teaching could be attributed in part to teaching experience and the level of teacher training. Edith had 18 years teaching experience and had completed an undergraduate degree in child psychology. Her views reflected contemporary understandings of how young children learn and develop, and of issues that are likely to impact on their learning. Mary had 19 years teaching experience and a diploma in teaching. Her goals seemed to focus on academic achievement and classroom discipline. Katz and Chard (2000) caution against focusing on academic goals for children. They recommend that in early education, teachers should pursue intellectual goals that encourage investigation and problem solving as opposed to strictly academic goals that limit children's cognitive development.

Beryl had two years teaching experience and had recently graduated with a Teaching Diploma. Her views about teaching and practice in the classroom reflected a laissez-faire approach to teaching.

Tricia had 16 years teaching experience. Her views seemed to have been influenced by the changes in teaching appointments she had experienced in a short space of time, and her unpreparedness for the teaching situations she met. She generalized about the needs of children in her class, which seemed not to be based on her knowledge of their individual needs. Tricia referred to children as good or bad "batches"; she believed that children who did not get help at home knew "*nothing at all*." Also, her code switching from Standard English to dialect to address all children because one child did not understand seemed to indicate a "one size fits all" approach to teaching. Since she did say that her teacher training did not prepare her for the job, more training for teaching young students would have helped.

In addition, Special Supports for Infant Teachers were apparently not provided and teachers and students did not receive Preparation for Relocation.

We can conclude, therefore, that teachers received only minimal support for quality teaching and learning. That support was limited to the non-human aspect, that is, the physical building improvement and resources. Critical supports related to the human aspects of teaching, such as providing special supports for Infant teachers and preparing

teachers and students psychologically for the relocation, were not provided.

This finding supports the position adopted by Hiebert et al. (2002) and Lieberman and Miller (2001) that teachers in an educational change effort should be an important consideration in any attempt to improve the quality of teaching and learning. This did not occur at the site studied. Teachers were not given the time or support necessary to internalize the new goals. As a result, it seems as though teachers were right in feeling that a lot more had to be changed to provide quality teaching and learning.

The Home/School Connection also needed to be addressed. Problems that existed in relation to parental support for learning, low educational expectations on the part of parents for their children, and inadequate parent/teacher communication were not addressed. It is currently recommended practice that schools support close ties with parents and families of young children. Copple and Bredekamp (2009) advocate collaboration between families and staff to develop a relationship that benefits the child's holistic development. The National Association for the Education of Young Children's (NAEYC) *Code of Ethical Conduct and Statement of Commitment* (2005) states that respect for family child-rearing practices and rights for decision making should be recognized in establishing trust between school and parents. This implies that parents and the relationship they have with their children should be considered in planning for good quality education. At the school studied this was not addressed.

Finally, the existing Challenges identified by the teachers were not addressed. Children behaved inappropriately and did not show care for their new school. In particular, there was inadequate support to resolve problems that the children brought with them from their homes. As a result, old problems persisted at the new school. This type of transfer of old problems to the new school situation could be interpreted as an undesirable school culture that did not change. Altrichter and Elliot's (2000) view that the history of the school largely determines the culture that exists should have been considered and addressed. It must be further noted that an old school culture does not automatically change with the provision of a new school building.

Additionally, Carlopio's (1998) definition of change as the adoption of an innovation mainly for improving outcomes through an alteration of practices seemed to have been what was intended. The new school facilities were intended to produce quality teaching and learning. However, teachers expressed the view that several "other" factors were not considered. The view that professional preparation and inclusion of

teachers in the change process from the onset is necessary seems relevant to this discussion (Cochran-Smith, 2002).

Issues to Be Considered in School Improvement Initiatives

Though the findings of this qualitative research cannot be generalized, the insights gained can be considered in addressing similar situations of educational change. The writers identify some issues that should be given consideration in future efforts to implement change in the school context. Firstly, for school improvement to take place, all stakeholders (particularly teachers) should form part of a collaborative team to address the teaching/learning aspects of the school. These aspects include new and relevant perspectives on curriculum design, curriculum development, teaching, learning, and assessment, which constitute the core technologies of education. Secondly, there is the need to formulate policies, plans, and interventions, like in-house professional development workshops to change the old practices and support and sustain a regime of new practices and institutionalize them. Thirdly, reward systems, mentoring, supervision, and evaluation/assessment are also necessary structures. These are new organizational arrangements that motivate teachers and students, but they are relatively rare today in our schools and should form part of the change initiative. Finally, action research can encourage collaborative involvement, and assist with changing values and the new system of norms or professional and behavioural practices that are associated with successful change and sustainable development.

Conclusion

The views expressed by teachers regarding the provision of quality teaching and learning included what should be considered when moving to a new school. Additionally, supports for teaching young children and general improvements for providing quality education were explored. This study identified, like previous research in educational change and innovation, that creating a model school involves more than improving the school building and infrastructure. Additionally, new findings were that three specific areas of focus should be considered when establishing a model school: providing Critical School Supports, facilitating a strong Home/School Connection, and seeking to eliminate the Challenges that affect teaching and learning. A huge financial investment was made in the new school building and physical environment. However, notions of quality, excellence, effectiveness, and school improvement as being comprehensive and integrative elements that should be included in a

systems approach to culture formation were not considered. What happened was that the school shifted from an old to a new venue. As a result, the model school envisioned where teaching and learning would be at an optimum was not achieved.

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