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EVERYTHING IN DI DARK MUSS COME TO LIGHT: A POSTCOLONIAL INVESTIGATION OF THE PRACTICE OF EXTRA LESSONS AT THE SECONDARY LEVEL IN JAMAICA’S EDUCATION SYSTEM

A Dissertation
Presented to
the Faculty of the Morgridge College of Education
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of the Requirements for the Degree of
Doctor of Philosophy

by
Saran Stewart
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Advisor: Frank Tuitt, Ph.D.
ABSTRACT

Despite the vast research examining the evolution of Caribbean education systems, little is chronologically tied to the postcolonial theoretical perspectives of specific island-state systems, such as the Jamaican education system and its relationship with the underground shadow education system. This dissertation study sought to address the gaps in the literature by critically positioning postcolonial theories in education to examine the macro- and micro-level impacts of extra lessons on secondary education in Jamaica. The following postcolonial theoretical (PCT) tenets in education were contextualized from a review of the literature: (a) PCT in education uses colonial discourse analysis to critically deconstruct and decolonize imperialistic and colonial representations of knowledge throughout history; (b) PCT in education uses an anti-colonial discursive framework to re-position indigenous knowledge in schools, colleges, and universities to challenge hegemonic knowledge; (c) PCT in education involves the “unlearning” of dominant, normative ideologies, the use of self-reflexivity, and deconstruction; and (d) PCT in education calls for critical pedagogical approaches that reject the banking concept of education and introduces inclusive pedagogy to facilitate “the passage from naïve to critical transitivity” (Freire, 1973, p. 32). Specifically, using a transformative mixed-methods design, grounded and informed by a postcolonial
theoretical lens, I quantitatively uncovered and then qualitatively highlighted how if at all extra lessons can improve educational outcomes for students at the secondary level in Jamaica. Accordingly, the quantitative data was used to test the hypotheses that the practice of extra lessons in schools is related to student academic achievement and the practice of critical-inclusive pedagogy in extra lessons is related to academic achievement. The two-level hierarchical linear model analysis revealed that hours spent in extra lessons, average household monthly income, and critical-inclusive pedagogical tents were the best predictors for academic achievement.

Alternatively, the holistic multi-case study explored how extra-lessons produces increased academic achievement. The data revealed new ways of knowledge construction and critical pedagogical approaches to galvanize systemic change in secondary education. Furthermore, the data showed that extra lessons can improve educational outcomes for students at the secondary level if the conditions for learning are met. This study sets the stage for new forms of knowledge construction and implications for policy change.
ACKNOWLEDGMENT

I express my deepest gratitude and sincerest appreciation to my family, friends, mentors, committee members, and most of all, my participants and gatekeepers who supported me throughout the years. Without you, this journey would not have been possible or completed. I encourage all of you to read Chapter 7 that details the dedication of this dissertation and acknowledgement of my work.

Lastly, I recognize and salute the sacrifices of those who have paved the road to academia and made it possible for emerging scholars such as myself to follow suit. For those who follow, stay focused, transparent, and accountable in your pursuit of education as the practice of freedom.
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CHAPTER 1. INTRODUCTION

The Jamaican education system is a legacy of British colonialism rooted in the days of slavery (Bacchus, 2006; Rose, 2002). The stratified repercussions of colonialism maintained and reinforced a social dichotomy between White elites and laboring Blacks, which continues to divide the country by class and race. As poignantly explained by Campbell (2006), “Colonial education has been one of the most damaging tools of imperialism because it has inculcated populations from a young age with ways of understanding themselves as culturally worthless” (p. 195).

The resulting effects of colonial education have arguably led to the rising number of unattached youths in Jamaica, inequality amongst schools, and baseline examination pass rates. Today, “there is an estimated 114,500 to 163,000 unattached youths living in Jamaica, who are between the ages of 15 to 24, currently in no formal or informal education, and are also not employed or unemployable” (Ministry of Education, 2008, p. 22). In 2004, the Jamaican Ministry of Education, Youth and Culture reported that the main problems and challenges facing the Jamaican education system revolved around access to full secondary education, equity and quality of schools, poor performance rates, and increasing gender disparities amongst students. In 2008, the Honourable Andrew Holness, Jamaican Minister of Education, reported to the parliamentary cabinet that 71% of a sample population cohort of 16 year olds in Grade 11 passed two or less subjects at
the minimum grade level (Ministry of Education, 2008). The Ministry of Education, further delineated that roughly 32% of grade-four-level children were “at risk” for illiteracy (Planning Institute of Jamaica, 2009). One promising sign is that an increase in after-school tutoring and academic lessons, formally termed *extra lessons*, has emerged to address the growing gap in achievement due to inequities between schools and teaching standards (Spencer-Rowe, 2000). In response to this crisis, the primary purpose of this study was to investigate how, if at all, extra lessons can improve secondary educational outcomes for students in Jamaica.

**Context and Problem Statement**

There are significant disparities in the equity and quality of Jamaican schools between the public primary and private preparatory sectors, namely the quality and number of teachers, classroom resources, and parent involvement (Smith & Ashiabi, 2008). The all-age schools have an increasing dearth in Caribbean Examination Council (CXC) achievement rates within the basic proficiency level (Ministry of Education, 2010-2011). Initially, “schooling in Jamaica was knowledge production that was entirely under the control of missionaries” (Campbell, 2006, p. 195), whose main interests were to deliver moral and religious education tocivilize the Negro population. Accordingly, Rose (2002) stated that the legacies of British colonialism were “to foster autocratic types of rule and to perpetuate colonial attitudes of subservience” (p. 3). For over a century, the upper echelons of British colonial rule designed policies to remedially “educate and where necessary indoctrinate the colonized to accept an inferior role, both in terms of their status and the jobs they were allowed to fill” (Bacchus, 2006, p. 260). For example,
British scholars, such as Anthony Trollope, have written vigorously on the status and purpose of the emancipated Jamaican Negro. The following excerpt, written in 1860 by Trollope, illustrates this British mindset:

He imitates as a monkey does a man...he is idle, unambitious as to worldly position....Intellectually, he is apparently capable of but little sustained effort; but singularly, enough, here he is ambitious. He burns to be regarded as a scholar, puzzles himself with fine words, addicts himself to religion for the sake of appearance....I do not think that education has as yet done much of the black man in the Western World. He can always observe, and often read; but he can seldom reason. (as cited in Williams, 1964, p. 31)

Trollope’s description would follow and precede others as one of many distinguished European scholars who regarded former slaves as unworthy of education and only suited for life on the plantation. The resulting effects of colonial rule on the emancipated Negro led to the emergence of plantation pedagogy (Bristol, 2010) in which teaching was an inherited educational practice of oppression and subserviency constructed out of the plantation society or plantocracy. This style of pedagogy resulted in what Freire (1993) would later term a style of banking education where students (the oppressed) were the empty vessels, and teachers (the oppressors) were the sole depositors of knowledge. Williams (1994) has argued that the education system violated “the fundamental principle that education should proceed from the known to the unknown, from the village to the great wide world” (p. 15), because the curriculum was based on foreign materials that were alien to the “daily lives of the pupils or to their environment” (p. 15). There is little wonder that after 100 years of schooling in Jamaica, the 2009 National Report of Jamaica on the United Nations Millennium Development Goals stated
that a critical educational transformation is needed in order for Jamaica to achieve
developed-country status by 2030 (Planning Institute of Jamaica, 2009).

There is no denying that Jamaica is in need of an educational transformation;
however, the overwhelming question is how Jamaica can achieve educational
transformation. In this study, I investigated the possible transforming effects of one
response to the poverty of educational experience for the majority of students in Jamaica
–private tutoring or more popularly termed in Jamaica, extra lessons. Despite the vast
research examining the evolution of Caribbean education systems, little is
chronologically tied to the postcolonial theoretical perspectives of specific island-state
systems, such as the Jamaican education system and its relationship with the underground
shadow education system (Bray, 2006; Spencer-Rowe, 2000). The shadow education
system represents the private tutoring industry as a supplement of public schooling rather
than a replacement (Bray 2006). As illustrated in Chapter 2, the heavy emphasis of an
examination-driven school system drives the demand for extra lessons by parents from
the low to middle socioeconomic class to seek additional private tutoring for their
children at the primary and secondary levels (Bray, 2006). Indicative to Jamaica of this
high demand is the report on household expenditures on education in the 2009 Jamaica
Survey on Living Conditions (JSLC). The report indicated that extra lessons accounted
for the third highest household education expenditure, 16.1% of the total annual
household expenses (JSOC, 2009, p. 10)—third highest to transportation and lunch and
snacks. Spencer-Rowe (2000) conducted a government funded investigation of the
practice of extra lessons at the primary level after the public notice of education expenses
on extra lessons in 1995. This comprehensive government report used a mixed methods analysis to deduce (a) the prevalence and scope of extra lessons; (b) the management and supervisory structure; (c) the cost/benefits to schools, pupils, teachers, and parents; (d) the scope of curricular offering; (e) the grounds of learners targeted; (f) the criteria for pupil participation; (g) the pupil’s perception of extra lessons; and (h) the school-related factors, which contribute to the practice.

This growing demand for private tutoring has significantly impacted an underground and informal supply of education outside of the purview of the standard public education system. However, due to the lack of regulatory approaches or recognition from the government, there is little data on the impact of this growing phenomenon (Spencer-Rowe, 2000). This dissertation study addressed the need to conduct empirical research on the background, characteristics, rationale, and possible policy implications for extra-lessons in Jamaica. Accordingly, in Chapter 2, I argue that the extra lessons system in Jamaica is possibly one tool with which to look at increasing secondary student academic performance in the CSEC examinations and developing a student-centered teaching and learning model for teacher training.

**Purpose and Research Questions**

The overarching purpose of this study was to examine from the postcolonial theoretical perspective the macro- and micro-level impact of extra lessons as they pertain to scope, prevalence, student academic achievement, and overall perception of extra lessons at the secondary level. Accordingly, the primary question asks,
• From a postcolonial theoretical perspective, how if at all, might extra lessons improve educational outcomes for students at the secondary level in Jamaica?

Educational outcomes refer to academic achievement as well as self-efficacy outcomes, such as motivation, self-esteem, confidence, and the like. Thereafter, five sub-issue questions have been divided into micro and macro levels to support the investigation of the primary question:

Micro-level sub-questions:

1. What is the relationship between extra lessons and students’ academic achievement at the secondary level?

2. What aspects of a critical-inclusive pedagogical framework can be aligned with the teaching and learning practices utilized in extra lessons?

3. How do teachers, students, parents and key government officials describe their experiences with and the impact of extra lessons on students’ overall educational outcomes in three of Jamaica’s six education regions?

Macro-level sub-questions:

1. What is the social history of education in Jamaica and how does it influence the current state of the education system?

2. What are the scope and prevalence of the practice of extra lessons at the secondary level in Jamaica?

Postcolonial Theoretical Perspective

I selected postcolonial theories as my lens to methodologically examine the literature, design the methodology and analyze the data, as a means to unlearn colonial
subjugation, thereby positioning myself as the postcolonial subject and not as Smith (2005) stated, the postcolonial object of research. Similar to Dei and Doyle-Wood (2006), this study sought to “challenge and sever the epistemic violence of Western cultural knowledge as it relates to the material exigencies of marginalized subjects and communities” in Jamaica (p. 151).

From a postcolonial theoretical perspective, this dissertation study examined how extra lessons improve educational outcomes for students at the secondary level in Jamaica. Furthermore, I made the argument that a counterhegemonic, critical-inclusive pedagogy is needed to transform the current state of the education system. The literature review has helped to purposefully fill the gaps of Caribbean postcolonial literature and add to the existing amalgamation of critical ideologies in the field. In contextualizing postcolonial theories in education, I began to explore a new composite of emerging ideologies in education that used decolonizing research to produce principles of critical change to education. Buchmann (2001) stated in her study on the Kenyan education system, that “little research has acknowledged the existence of these types of activities [private tutoring] in developing countries” (p. 106). As such, the research has presented data on extra lessons not previously available that implement decolonizing approaches to the mainstream secondary education system in Jamaica. The implications suggest policy changes to regulate and subsidize costs to “at-risk” and underprivileged students. It is my hope that this research will set the stage for new forms of knowledge construction and legitimation of decolonizing research to produce an indigenous epistemology (Smith, 1999).
Postcolonial Theoretical Framework

In order to examine the history of education in Jamaica to its current state and the subsequent impacts on the current education system, I searched for and analyzed scholarship through a postcolonial theoretical lens. The research and history of colonies written by Eurocentric, Western scholars have resulted in years of false discourse and hegemonic policies not designed by and for indigenous peoples (Smith, 1999). As Smith (1999) stated, “Research is inextricably linked to European imperialism and colonialism” (p. 1), because it was written from the vantage point of the privileged. Postcolonial theories allow for history and research to be retold and re-presented through the eyes of the colonized (Smith, 1999), thereby highlighting propaganda and providing tools to reconstruct silenced histories. Furthermore, postcolonial theories make visible and name the history and legacy of European colonialism (Rizvi, Lingard, & Lavia, 2006), thereby problematizing the effects of colonial rule. Accordingly, an analysis refracted through a postcolonial theoretical lens highlights the bias rhetoric of colonial history and research written about Jamaica by Western scholars, such as Anthony Trollope. Toward this end, postcolonial theories in research involve the deconstruction and decolonization of imperialistic and colonial representations of knowledge throughout history (Smith, 2005).

Postcolonial Theories

Postcolonial theories (PCT) are an amalgamation of several critical ideologies that form a complex analytical approach to problematize the effects of colonial subjugation and the marginalization of indigenous peoples (Fanon, 1961; Ghandi, 1998; Loomba, 1998; Said, 1978; Smith, 1999; Spivak, 1988; Tikly 2001). Postcolonial theories
foreground racial differences in the political, social, economic, and cultural relationships between the Global North or developed countries and the Global South or developing countries (Fanon, 1961; Johnston, 2003; Spivak, 1988). The Global North, which includes the United States, is comprised of fully industrialized Western states that enjoy the advantages of functioning in a competitive market economy, trading in free economic markets while enjoying a high quality of life for its citizens (Pirages & DeGeest, 2004). The Global South on the other hand is comprised of many developing states functioning at a regional level, hindered by issues within their economic, political, and societal sectors (Pirages & DeGeest, 2004). Toward this end, scholars have used postcolonial theories to problematize the representation of developing countries and issues of power, voice, and cultural subordination (Andreotti, 2006; Rizvi et al., 2006). The uniqueness of a postcolonial theoretical approach lies within its paradoxically simple but complex definition, which “refers to that, which has been preceded by colonization” (Johnston, 2003, p. 35). However scholars, such as Dirlik (1994), problematized the term postcolonial to have a simultaneous dual reference to global conditions after colonization and an “epistemological and psychic orientation that are products of those conditions” (p. 332). Towards this end, postcolonial theory is appropriately termed a hybridity of theories or a form of meta-theories that is ever evolving and has to be contextually positioned according to the researcher as well as the region (Bahri, 1995; Johnston, 2003). It is important to understand the concept of hybridity in relation to postcolonialism as an inescapable attribute in any postcolonial critique; it [hybridity] points to the psychic trauma that colonized subjects experience when they come to realize that
they could never attain unto the “whiteness” they have been taught to desire nor shed the “blackness” that they have learned to devalue. (London, 2006, p. 43)

As a result, the literature and discourse in which I engaged this research was for and by the postcolonial subject.

**Foundations of postcolonial theories.** Although the first reference points of postcolonial theories have been attributed to Said’s (1978) *Orientalism*, Fanon’s (1961) *The Wretched of the Earth*, and Spivak’s (1988) “Can the Subaltern Speak?”, scholars, such as Ghandi (1998), Loomba (1998) and Andreotti (2011), have recognized the contributions of Marxism, post structuralism, and postmodernism to the provenance of postcolonialism. Marxist engagement with imperialist thoughts recognizes the capitalistic market-society in Europe as a result of colonialism. Postcolonial scholars, such as Dirlick (1994) and Ghandi (1998), positioned postcolonialism as a child of poststructuralism and postmodernism. Poststructuralism defined the literary criticism and philosophical movement of the 1960s, which preceded the outgrowth of postcolonialism. Ghandi (1998) later argued that as a result of poststructuralism, postcolonialism learned to “diagnose the material effects and implications of colonialism as an epistemological malaise at the heart of Western rationality” (p. 26). Postmodernism is the ontological movement of critical theories of deconstruction that refers to the contemporary period of Western culture (Postmodernism, 2010). Dirlik (1994) argued that postcolonialism is a result of postmodernists’ views of global capitalism and that the most notable effects have led to “the increased visibility of academic intellectuals of Third World origin” (p. 330). The provenance of postcolonial theories and their theoretical and philosophical predecessors has contributed to the ambiguity of this complex theory.
Towards this end, the emerging discourse on the reconceptualization of colonialism through re-narrativization is attributed to postcolonial theories (Tikly, 2001). Essentially, this allows for a deconstruction of “the collective memory of imperialism” (Smith, 1999, p. 1) and the “reclamation of knowledge, language and culture” (Smith, 2005, p. 88). Accordingly, I used postcolonial theory to guide the selection and use of scholarship to reveal an authentic history of education in Jamaica from the vantage point of the colonized, thereby foregrounding scholarship written by and for the Caribbean people.

**Postcolonial Theories in Education**

As an interdisciplinary approach, postcolonial theory can be used to link other academic disciplines, such as education, to galvanize progressive activism to challenge the impacts of colonial rule (Johnston, 2003). I used postcolonial theory to highlight the effects of colonial education in Jamaica and the endemic effects of the resulting education system. Reddock (1994) critiqued the effects of colonial education as a means to not “liberate the colonized, but rather was the means whereby the values and interests of the colonizers and masters would be internalized by the colonized and perceived as their own” (p. 48). Spivak (1988) first used postcolonial theories to foreground her notion of unlearning privilege, thereby truly emancipating the mind of the subaltern. Adapted from Antonio Gramsci but popularized by Spivak (1988), *the subaltern* represents a person who is “condemned to silence,..[unable to] invoke a unified voice [because he/she has] neither the conceptual language to speak nor the ear of colonial and indigenous men to listen” (“subaltern,” 2004, p. 193). She continued by explaining that the emancipation
of the colonized mind is an ongoing, generational struggle that has to be unlearned in order for indigenous peoples to truly overcome colonialism. Borrowing from Habermas (1968), postcolonial theory in education should call for critical emancipatory knowledge that foregrounds the ideals of critical thinking and cultural identity. Accordingly, postcolonial theory provides a conceptual framework to interrupt the “negation of the unrecognized accounts of the postcolonial subject” (Lavia, 2006, p. 289). Thereby, narratives from the postcolonial subject provide an ontological reconditioning of the postcolonial mind that conversely values and chronicles untold histories. The importance of contextualizing postcolonial theories in education can be traced to Marcus Garvey’s impetus on education for the masses in which he stated, “Education is the medium by which a people are prepared for the creation of their own particular civilization, and the advancement and glory of their own race” (1923, p. 6).

In an effort to contextualize postcolonial theory in education, my review of PCT literature has denoted the following concepts:

- Postcolonial theory in education uses colonial discourse analysis to critically deconstruct and decolonize imperialistic and colonial representations of knowledge throughout history (Andreotti, 2011; Ghandi, 1998; Loomba, 1998).
- Postcolonial theory in education uses an anti-colonial discursive framework (Dei, 2000) to re-position indigenous knowledge in schools, colleges and universities and challenges hegemonic knowledge.
• Postcolonial theory in education involves the “unlearning” of dominant, normative ideologies; the use of self-reflexivity; and deconstruction (Spivak, 1988, 2004)

• Postcolonial theory in education calls for critical pedagogical approaches that reject the banking concept of education (Freire, 1993) and introduces inclusive pedagogy (Tuitt, 2003) to facilitate “the passage from naïve to critical transitivity” (Freire, 1973, p. 32).

Postcolonial theories in education are an amalgamation of several counterhegemonic ideologies that challenges the traditional construction of knowledge. This contextualization of postcolonial theory in education is a meta-theory of epistemological approaches and frameworks used to legitimize and reconstruct knowledge in schools, colleges, and universities. To conclude, I used this meta-theory dichotomously to (a) deconstruct Jamaica’s historical education system and (b) establish new ways of knowledge construction and critical pedagogical approaches to galvanize systemic change. I interwove the application of the tenets of postcolonial theory in education within and throughout the literature view.

Deconstruction and re-presentation of traditional Eurocentric and Western curriculum. Colonial discourse analysis is a methodological construct used to critically deconstruct and decolonize imperialistic and colonial representations of knowledge throughout history (Ghandi, 1998; Loomba, 1998). Further explained, colonial discourse analysis examines the “processes of knowledge production and their role in the creation and perpetuation of (neo) colonial violences and inequalities” (Andreotti, 2011, p. 85).
Important to note is that unlike other forms of discourse analyses, colonial discourse analysis is ideological in examination and not semantic (not relating to language form and function). The ideological context and construct “seeks to examine the intersections of ideas and institutions, knowledge and power” (Loomba, 1998, p. 54) to better galvanize an understanding of colonial epistemologies. Additionally, this examination allows for the deconstruction and re-presentation of traditional Eurocentric and Western curriculum in Jamaica to become more representative of the Jamaican people. The analysis further empowers the work of other Jamaican scholars to be used in the national curriculum and the academy as sources of counterhegemonic knowledge.

**Anti-colonial discursive framework.** According to Dei (2000) an anti-colonial discursive approach acts as a dichotomous framework, because it is

Both a counter-oppositional discourse to the denial and repudiation of the repressive presence of colonial oppression, and an affirmation of the reality of recolonization processes through the dictates of global capital. (p. 117)

More importantly, the anti-colonial discursive approach recognizes the importance of culturally responsive and nationalistic-constructed knowledge, inclusive of oral stories, reclamation of native languages and dialects, “cultural histories and daily human experiences and social interactions” (p. 117). It is through the application of this approach that indigenous knowledge is affirmed and recognized as an “integral part of the ongoing co-creation and re-creation of academic knowledge/work” (p. 113).

Additionally, Dei (2004) established questions, methods, and strategies to apply an anti-colonial discursive framework to academia. He argued that the formulated
question should interrogate institutionalized power and privilege. Some key questions that he posed include

> How does one arrive at meaningful and genuine theories (discursive frameworks) that take into account different philosophical traditions (e.g., Western and Indigenous thought)? Are Indigenous moral and cognitive conceptions compatible with Western science? (p. 263)

The questions serve to problematize traditional Western frameworks used to conduct research on indigenous people. Thereafter, Dei argued that a key strategy in applying this approach is to integrate indigenous knowledge into Western academies and examine how these knowledge systems can both complement and conflict with each other. The polarity between the two possible outcomes renders new construction of knowledge and a move towards decolonizing knowledge. As rightly stated by Campbell (2006), indigenous knowledge can “allow Jamaicans to restructure their knowledge systems to reflect their local experiences” (p. 196).

**Unlearning normative ideologies by using self-reflexivity and deconstruction.**

The notion of *unlearning privilege* is rooted in the “ethical encounter with the Third World...[and the] undoing of the ‘consciousness of superiority lodged in the self’” (Andreotti as cited in Spivak, 2004, p. 534). This unlearning in essence is rooted in constant self-discourse and restraining “the ethnocentric Subject from establishing itself by selectively defining the Other” (Spivak, 1988, p. 292). This process of counter-discourse is challenging knowledge formation, knowledge centers, and ways-of-knowing that have been designed and perpetuated by Eurocentric discourse. This process is further the reconstruction of knowledge-creator roles and the sharing of power: acknowledging that knowledge is not solely constructed by dominant thinkers but by the marginalized,
the repressed, the subaltern, and the other. Andreotti (2011) argued that Spivak’s work of unlearning and deconstruction inspires people to “engage in a persistent critique of hegemonic discourses and representations as they inhabit them” (p. 45). Thereby, the use of self-reflexivity and deconstruction allows for the unpacking—the application of critical analysis and re-interpretation of research and perceived truths. Within the act of transformation and change, the practice of unlearning, self-reflexivity, and deconstruction of normative ideologies are central factors to re-visioning Jamaica’s education system.

**Critical-inclusive pedagogy.** One argument for transformational change can be constructed within a critical-inclusive pedagogical approach. For this study, the constructs of the extra lessons system in Jamaica have been chosen as one possible avenue in which to practically apply the critical-inclusive pedagogical framework to observe a more student-centered teaching approach to benefit the marginalized students of Jamaica. The conceptual mapping for a critical-inclusive pedagogical framework centers around the use and application of Tuitt’s (2003) five tenets of Inclusive Pedagogy to attain Friere’s (1993) ideal of conscientização. See Appendix A for a conceptual illustration of the hybridization of the critical-inclusive pedagogical framework.

**Critical Freirian approach.** Essentially, my definition of critical pedagogy is taken from Freire’s (1993) work in the Pedagogy of the Oppressed, which existentializes the term conscientização to mean critical consciousness. Freire challenged each person to reach a level of critical consciousness in order to be truly dialectical and dialogical in the world. Accordingly, Freire problematized the banking system of education, revealing the inequities, injustices, and misappropriation of teaching and learning in the classroom. He
went further in stating, “a characteristic of the ideology of oppression, negates education and the knowledge as processes of inquiry” (p. 72). In unveiling the inequities in the education system, Freire then revealed new concepts of pedagogy, honing in on the need for “problem-posing” education that truly transforms rather than transfixes men and women into becoming dialogical. He went on further to describe the concept of critical pedagogy as the practice of freedom “by which men and women deal critically and creatively with reality and discover how to participate in the transformation of their world” (p. 34). In this regard, Freire (1993) acknowledged that the “teacher’s thinking is authenticated only by the authenticity of the student’s thinking” (p. 77). Critical pedagogy can be considered a reflection of theory “which gives agent to a kind of knowledge inherently productive of enlightenment and emancipation” (Guess, 1981, p. 2). From this position, critical theory qualitatively looks at how to transform social reality without recourse to the fundamental concepts of traditional philosophy inherent to postcolonial Jamaica.

*Inclusive pedagogy.* As the methodological framework for this study, I have chosen inclusive pedagogy, because it is a pedagogical construct that “advocates teaching practices that embrace the whole student in the learning process” (Tuitt, 2003, p. 243). Furthermore, it is a transformative teaching approach that is methodological in its applicability to developing a possible change model for the Jamaican education system.

inclusive pedagogy. These tenets include (a) faculty-student interaction, (b) sharing power, (c) dialogical professor-student interaction, (d) activation of student voice, and (e) utilization of personal narratives.

Faculty-student interaction is composed of the reciprocal relationships fostered in and outside of the classroom between faculty and student that encourage and promote a sense of caring, belonging, and welcoming environments (Baker, 1998; Tuitt 2003; Zimmerman, 1991). Following this ideal, Tuitt (2003) argued that sharing power occurs when in any given moment and space, in and outside the classroom, the student becomes the faculty and the faculty becomes the student. This idea propagates that knowledge and the dissemination of knowledge are co-created between the faculty and student, because the faculty is no longer solely responsible for constructing or depositing knowledge. Toward this end, at the core of sharing power is the notion of dialogical professor-student interaction, which Tuitt (2003) and hooks (1994) would argue is a process grounded in respect but challenges the discourse between student and faculty, with the aim to create “collaborative learning environments” (Tuitt, 2003, p. 248). An integral characteristic for enhancing student learning is the activation of student voice, in which Tuitt recognized that “all students have a voice and that they should be encouraged to use it” (p. 249). This recognition and subsequent empowerment of its use is a response to silencing, and the occurrence of marginalized groups entering the classroom and not being welcomed to express or vocalize their opinions. An anecdotal method that also activates student voice is the utilization of personal narratives, wherein reflexiveness is evoked and critical thought through experiential knowledge is written as a response to
required readings (Beynon & Dossa, 2010; Tuitt, 2003). This characteristic foregrounds life experiences as a method to deconstruct class readings so that the relevancy of students’ experiences are included and valued in the classroom.

Essentially, these five characteristics are adaptable to the unique course, faculty, and students involved; however the goal of achieving “an optimal learning environment” (Tuitt, 2003, p. 263) for all students is universal throughout the applicability of inclusive pedagogy. I have proposed that each of these five tenets, coupled with the ideologies of critical pedagogy, can cultivate an appropriate pedagogical model for the study to increase the equity and quality of Jamaican schools as well as increase student academic achievement.

Application of Postcolonial Theories in Education Throughout the Dissertation Study

The decision to use a postcolonial theoretical lens was purposeful in looking for transformational outcomes rooted in a social justice agenda for Jamaican students. “Methodologically, the transformative paradigm reframes the researcher’s world view in terms of establishing the focus of the research, development of research questions, and decision about data collection, analysis, interpretation, and use” (Mertens, Bledsoe, Sullivan, & Wilson, 2010, p. 199). In this dissertation study, the research questions were informed by a postcolonial theoretical lens that purposefully provided a foundation for the examination of the literature review, the design of the research study, and an analysis of the data.
In Chapter 2, I have used the first and second PCT in education tenets primarily to (a) deconstruct and re-present traditional Eurocentric knowledge, and (b) utilize an anti-colonial discursive framework to both collect and deconstruct primary archival sources. As aforementioned, social history is a branch of history that specifically examines “the movements of the poor…the history of social protest or socialist movements” (Hobsbawm, 1971, p. 21). The gravitation towards this approach appealed to scholars who desired an approach different from the “classical Rankean one” (Hobsbawm, 1971, p. 22), an approach in which one could construct history from the masses. This discipline further evolved into “one that respects human agency…one that poses problems, describes and analyzes the available evidence, and explains” (Tilly, 1989, p. 453), and one that addresses the grand narrative of history to reconstruct counter narratives (Tilly, 1989). Specifically, using a postcolonial theoretical framework, I examined the literature while foregrounding the scholarship, voices, and historical perspectives of the colonized from the position of the postcolonial theoretical viewpoint. This re-positioning, as Smith (2005) has argued, is “engaging in a counterhegemonic struggle over [traditional] research” (p. 87). Following my reconstruction of the social history of the Jamaican education system, I engaged postcolonial theories and a critical-inclusive pedagogical framework to identify a vision of transformation for Jamaica (Freire, 1993; hooks, 1994; Tuitt, 2003). In this respect, I agree with Garvey who stated that “a people without a knowledge of their past history, origin and culture is like a tree without roots” (Marcus Garvey Quotes, n.d.). Accordingly, Smith (1999) argued that “history is important for understanding the present and that reclaiming history is a critical and essential aspect of
decolonization” (p. 30). History in this sense is not the traditional Western construct of history but the testimony to and restoration of a spirit lost, “to bring back into existence a world fragmented and dying” (Smith, 1999, p. 28). Important to note is that the sense of reconstructing the social history is “not the same thing as the discipline of history, and so our accounts collide, crash into each other” (Smith, 1999, p. 28).

Toward this end, in a manner similar to colonial discourse analysis, I analyzed the archives, House of Commons Parliamentary Papers, Jamaican Ministry of Education original reports, letters, photographs, CSEC curriculum, performance rates, and memos of British imperialism in Jamaica to examine the legacies of missionaries and the prevailing design of a religious and moral system of education. Coupled with the colonial discourse analysis, I used an anti-colonial discursive framework to (a) incorporate local languages, “Indigenous cognitive categories and cultural logic to create social understandings” (Dei, 2000, p. 117); (b) utilize and combine indigenous literature with socioeconomic understandings of society; (c) recognize and contribute to the importance of research done by “minoritized, indigenous and local scholars in reintegrating local and native languages in the education of the young” (Dei. 2004, p. 260); and (d) celebrate and value the use of oral, visual (i.e., photographs), and traditional materials of resistance and re-historization (Dei, 2000). Thereby, this approach centered the voices of the masses through the lens of the researcher in re-telling the social history, using emotions, narrative, and dialogue as intellectual guides (Smith, 1999).

To sum Chapter 2, the study has not only deconstructed Jamaica’s historical education system from the point of view of the masses, but it has also unearthed and
established new ways of knowledge construction and critical pedagogical approaches to disrupt normative ideologies. The purposeful decision to re-historicize Jamaica’s social history was to re-present the “branch of history that emphasizes social structures and the interaction of different groups in society rather than affairs of the state…focused on disenfranchised social groups” (“Social History,” 2012). For the many narratives that have been untold, I used images to reconstruct the past, corroborated by primary sources.

Chapter 3, the methodology chapter, focuses mainly on operationalizing the third and fourth tenets of PCT in education: (a) using self-reflexivity as a decolonizing methodology, and (b) assessing the education outcomes of extra lessons as a construct of critical-inclusive pedagogy. Primarily, the entire chapter has been informed by and grounded on transformative paradigmatic assumptions that support postcolonial theories as a social justice framework (Mertens, 2003). Specifically mirroring techniques used in indigenous methods, such as “poetry, drama, storytelling, and critical personal narratives” (Denzin & Lincoln, 2008, p. 22), I used qualitative methods that reflect indigenous methodologies, such as self-reflexive journaling. I have also “quantitized” the principles of a critical-inclusive pedagogical framework and included the scale on the student questionnaire. Lastly, the analysis and interpretation of the mixed data was informed by a postcolonial theoretical perspective.

According to Onwuegbuzie, Johnson, and Collin (2009), the transformative-emancipatory worldview employed in this study is best coupled with cross-over mixed analyses that were used in the last stage of the mixed methods analysis. Additionally, growing up in a postcolonial society, I participated in a self-reflexive reflection (PCT
Tenet 3) throughout this process to comparatively assess the intersections of the postcolonial theoretical perspective with my personal views as a researcher.

In Chapter 4, I have presented the findings of the quantitative analysis, in which the hybrid framework for critical-inclusive pedagogy is represented on a Likert-scale as well as a predictive variable. In Chapter 5, I have revealed the findings specifically describing the colonial drivers/ legacies of education and have used postcolonial theories as a means to analyze and present the findings.

Lastly in Chapter 6, I have opened the discussion by explaining the postcolonial perspective as the re-centering of periphery stories of marginalized people. This re-centering also emerged a contextual focus to better understand the expansive system of extra lessons and how if conducted under the optimal conditions for learning can provide transformational change.
CHAPTER 2. REVIEW OF THE LITERATURE

Social History of the Education of Jamaica

The social history of education in Jamaica is complex and requires not just a chronological deconstruction of the past but also a geographical and sociological representation. The history of education is rooted in the loins of colonial rule and entrenched in the responses to iconic events, such as the abolition of slavery in 1834, the emergence of the West Indies Federation in the 1950s, and the declaration of independence in 1962 (Blake, 2000; Ross-Brewster, 2000; Shepherd, 2000).

The contextualization of slavery and the legacy of internalized oppressions better explain the current state of the Jamaican education system, as a result of colonial rule, education globalization, and the UN Millennium Development Goals. I examined the social history of education in Jamaica in three stages: (a) the pre-emancipation period (1655-1834), (b) the post-emancipation period (1834-1962), and (c) the post-independence period (1962-2011). Thereafter, I continued my review of the literature with an analysis of the sociohistorical impacts on the current state of the education system and a discussion of extra lessons around the world and in Jamaica. To critically examine the pre- and post-emancipation period, I selected mostly postcolonial theorists and scholars who retold and re-presented the history of Jamaica from the viewpoint of the Caribbean researcher.
**Education Under British Rule (1655-1962)**

**Pre-emancipation (1655-1834).** There is little evidence of education in Jamaica in the 17th century, with the exception of a procured bill of the sum of £500 issued in 1663 to pay “five ministers of religion and one schoolmaster serving in the new colony” (Cundall as cited in Hamilton, 1997, p. 133). There is some evidence of increased events in education during the 1700s due to the bequeathing of estates to endow schools, such as Wolmer’s Free School in 1736 (Hamilton, 1997). However, these schools focused primarily on the education of poor Whites in Jamaica. In time, the surge of the sugar industry would dramatically change the demographic composition and class system in Jamaica.

**Contextualizing slavery in education.** The development of the sugar industry led to “the increased demand for unskilled and semi-skilled labour” (Bacchus 2006, p. 261). This demand led to an increase in the African slave trade to the Caribbean. As such, many Africans were sold to British plantation owners in Jamaica, who initially opposed educating the colonized for fear of rebellions or the semblance of equality (Bacchus, 2006; Williams, 1950). The very rumour of rebellions resulted in many slaves being sentenced to death. Figures 1 and 2 present a copy of the slave court ruling in the parish of Hanover for the hanging of slaves conspiring to be involved in a rebellion.
Figure 1. Slave court ruling in the parish of Hanover, signed by Justices of the Peace, to execute six slaves for conspiracy of rebellion; Lucea, July 14, 1824. MS729. Adapted from National Library of Jamaica.
Figure 2. Back side of slave court ruling in the parish of Hanover, signed by Justices of the Peace, to execute six slaves for conspiracy of rebellion; Lucea, July 14, 1824. MS729. Adapted from National Library of Jamaica.

With the influx of slaves into the country, the various African “ethnicities, from Akan to Bantu and Ga-Andangme to Yoruban” (Campbell, 2006, p. 196) soon made up the Afro-Jamaican population. This population initially spoke many languages but eventually developed a blended form, which survived the generations. The widespread mandate to establish the English language in the colonies further inserted inequalities and epitomized hegemony between the White elites and the slaves. As London (2006) stated,
“[Slaves were] forbidden through a number of strategies to engage in their native tongues” (p. 34). A postcolonial critique of the imposition of the English language curriculum in Jamaica illustrates the further stratification of the social classes (Campbell, 2006). Furthermore, by prohibiting Africans to speak in their native tongue, the British lessened the occurrence of rebellions and forced alliances between warring tribes.

Toward this end, this social history is difficult to re-construct from the viewpoint of the masses, because much of the history was not written by those enslaved. As such, my research led me to go beyond the gray literature of parliamentary papers and critically examine court minutes, manuscripts, letters by former slaves, archived newspapers, and reconstituted images of the past. In an attempt to best contextualize education in slavery, I have presented the psychosocial manifestations of slavery that provide context for the lack of presence of an education system for the masses during this era. In order to contextualize the psychosocial emotions of the Negro child, I examined an extract from a narrative of the son of a Negro woman explaining the witnessing of his mother’s sale in front of him and the lasting images of abandonment. The son detailed in his narrative that his mother had been a slave since the age of 15, and she was captured from a part of the Gold Coast called Anamabo. He noted in the narrative (Figure 3) that she was a house slave and was highly favored for her cooking. As a result, she was sold to a Barbadian dining at her Master’s table. The son wrote in the last line of the narrative, “The bargain was concluded at table, and the next day my mother left me forever” (Jamaica, n.d). It was not notated by the National Library of Jamaica if the narrative was written by the son or interpreted by someone else, but it is clear through my research of the slave narratives...
and British birth registrars of slaves in Jamaica that the separation between slave children and their mothers were rampant throughout slavery.

Figure 3. The Narrative of a Son of a Negro Woman; Jamaica, n.d.. MS193. Adapted from the National Library of Jamaica.
To further contextualize the psychosocial impacts of the era is to understand the rationale of the judicial authorities that mandated, supported, and reinforced slavery in Jamaica. The subjective ambivalence to the pervasiveness of cruel and inhumane treatment of slaves was documented in the cross-examination of former Chief Justice of Jamaica, John Grant Esquire, who advocated for the continuance of the Slave Trade to Jamaica (Minutes of the Evidence, 1792). When asked by the prosecutor if Whites would be suitable for the same labor as slaves in Jamaica, Grant responded, “Europeans and any other White inhabitants beyond all doubt are unable to perform the field labour of that country; they cannot stand the labour of that country” (as cited in Minutes of the Evidence, 1792, p. 8). He went on to explain that slaves were content doing labor:

At all times of their labour, even during the hardest which I consider being hoeing the canes, they are cheerful when kindly treated….They go to the field by day-light, about five or six o’clock; they have from half an hour to an hour allowed them for breakfast and two hours at dinner time and then they labor till sun set in the evening...They have 1 day every 2 weeks as day off to tend to their land. (as cited in Minutes of the Evidence, 1792, p. 11)

When asked about the level of punishment for misbehavior, Grant responded, “The master, or his agent or overseer is refrained to give no more at one time, or for once offence, than thirty-nine lashes and under-servants are confined to give no more than ten” (as cited in Minutes of the Evidence, 1792, p. 14). When questioned if slaves by the law of Jamaica are personal or real property, Grant said, “In Jamaica, Slaves are real estate with respect to inheritance and personal estate with respect to creditors; so that Negroes go to the heir, subject to the debts of the ancestor” (as cited in Minutes of the Evidence, 1792, p. 18). In the event of murder where Blacks witness it, “Slaves are not admissible as witnesses against White or free people” (Grant as cited in Minutes of the Evidence,
Even though physiologically human, psychologically the Negro was equivalent to the value of livestock and made to believe that his or her self-worth was not worthy of value.

Therefore, education for the masses was of little importance and relevance to the system of plantocracy. In combing through the archives and the House of Commons Parliamentary Papers, I came across the mention of schools in a cross examination of J. Baillie Esq. with regard to the conditions and treatment of slaves:

In speaking of those schools, I am not speaking of slaves particularly; I am speaking of a school at Montego Bay that received Brown Children, whether Slaves or others I know not, it was a public School, and upheld by the Parish. (as cited in Minutes of the Evidence, 1832, p. 328)

When asked by the prosecutor about how many slaves he knew of who were able to read, Baillie responded, not one. Baillie elaborated on his statement by adding,

I think myself, the Negroes are not disposed to Study; that is One great Difficulty. There must be heavy Expenses attending the Establishment. Unless the Government were to pay for the Schoolmasters, for 300 People [slaves] which I have, it would be a heavy Expense to establish Schools for them. (as cited in Minutes of the Evidence, 1832, p. 328)

During this time period, there was seldom mention of slaves attending school; however, Archibald John Monteith (formally named Aneaso) referenced his experience with schooling in his slave narrative:

After 8 years, my master went to England, and sent me with other children to Savannah La Mar to attend school. I however saw no use of learning or going to school & church, and I never heard, from those who had charge of us, a word about God, or about what was done in Church. I learned nothing; but we jumped, and danced and romped, and did pretty much as we pleased. (Monteith as cited in Warner-Lewis, 2007)

There was little value placed on education by Monteith, because it was remedial, unstructured, and did not relate to God. During the early 19th century, with the emergence
of talks of the abolition of the slave trade and movement towards the abolition of slavery, abolitionists organized the publication, *Albums of the Society for the Relief of Negro Slaves*. A copy found at the National Library of Jamaica had as its cover page the following image (see Figure 4):

![Cover page of the Album of the Society for the Relief of Negro Slaves](image)

*Figure 4. Cover page of the Album of the Society for the Relief of the Negro Slaves. (n.d.). Jamaica, MS193, p. 2. Adapted from National Library of Jamaica*

Important to note is that the funds raised from the sale of these albums would go towards the “Education of the Descendants of the African Race” (*Albums of the Society*,
n.d., p. 2). This particular album documented a collective image from various primary sources of illegal branding of slaves, torture, and ill-treatment that went unprosecuted.

On March 13, 1824, the Jamaica Gazette printed, “Tukey, a Creole girl, four feet ten inches, marked R.C. on left shoulder, and pocked-picked in her face to William Dunn Esquire, Ocharias Bay” (as cited in Minutes of the Evidence, 1832, p. 338). Such advertisements for runaway slaves were prevalent throughout the gazette during that time, alluding to the hidden narrative of children running away from their masters (Minutes of the Evidence, 1832).

To further document the counter narratives is to give a postcolonial theoretical account of those who were silenced and left out of the history books: It was 1829; Massa “called old Charles to pick the largest bundle of bamboo switches he could find” (Jamaica, 1831, p. 4). Rev. Mr. Bridges, Rector of St. Ann, commanded old Charles to cut all the flesh off Kitty Hilton, a female quadroon slave.

She was then stripped of every article of dress, tied up by the hands, her toes barely touching the ground, and flogged until the back part of her, from the shoulders down to the calves of her legs, was one mass of lacerated flesh. (Jamaica, 1831, p. 4)

Kitty Hilton escaped and ran to the nearest magistrate, only to be turned away and sent back to her Massa (Jamaica, 1831). She ran again and found a magistrate that could “see” her—her hanging flesh and beaten-in eye socket. Kitty Hilton did not receive justice in the formal sense, because the House of Magistrates ruled 14 to 4 that Mr. Bridges should not be prosecuted (Jamaica, 1831). However, her narrative was written in the form of abolitionist letters that objected to the ruling and called for an end to slavery. That end would not come for another 5 years.
In the meantime, colonizers realized that brutal acts of punishment were only a means of temporary conditioning, so they started looking at the “ideological conditioning of the masses...to enhance the effectiveness of the physical control mechanisms” (Bacchus, 2006, p. 262). This resulted in the widespread use of Christianity as a mechanism to enforce the subordinate role of the slave to his owner, enforcing subservience as a passage to redemption and heaven (Bacchus, 2006).

*Figure 5*. Letter inquiring about the extension of religious education to the Negro population; Kingston, Jamaica, 21st July, 1825. MS733, p. 3. Adapted from National Library of Jamaica

The first signs of a system of education emerged when the British anti-slavery movements started speaking out against the cruel and inhumane treatment of the Negro
population. It was as if education would complement a supplementary form of discipline for the soon-to-be “freed” slaves. Figure 5 displays a letter denoting the urgency to extend religious education to the Negro population.

Accordingly, “in May 1833, Mr. Stanley, the colonial secretary stated that…a loan of fifteen millions sterling to the planters was proposed; and a special magistracy, together with a system of education” (Gardner, 1971, p. 286) would be essential to carrying out the post-abolition process.

On the 18th of August, 1833, the Act for the Abolition of Slavery Throughout the British Colonies was written to be enacted as follows:

All and every the Persons who on the said First Day of August One Thousand eight hundred and thirty-four shall be holden in Slavery with in any British Colony, as aforesaid, shall upon and from and after the said First Day of August One thousand eight hundred and thirty-four become and be to all Intents and Purposes free and discharged of and from all Manner of Slavery, and shall be absolutely and for ever manumitted; and that the Children thereafter to be born to any such Persons, and the Offspring of such Children, shall in like Manner be free from their Birth; and that from and after the said First Day of August One thousand eight hundred and thirty-four Slavery shall be and is hereby utterly and for ever abolished and declared unlawful throughout the British Colonies, Plantations, and Possessions Abroad. (Act for the Abolition of Slavery, 1833)

The Emancipation Act of 1833 was similar to a double-edged sword, because slaves were divided into three distinct classes: (a) praedial attached, (b) praedial unattached, and (c) non-praedial (Act of the Abolition of Slavery, 1833). This division of classes resembled a hybrid or pseudo form of slavery juxtaposed by the title, apprentice laborer. Those labeled as praedial attached were apprentice field laborers working in agriculture (Act of the Abolition of Slavery, 1833). Those labeled praedial unattached were a mix of agricultural workers and non-agricultural workers, working on their own
lands or on lands that did not belong to their previous owners (The Slavery Abolition Act, 1833). Those labeled non-praedial were non-field laborers who were sometimes small-business artisans (Act of the Abolition of Slavery, 1833). Little changed for the former slaves, because the apprentice classes were designed to reflect a pseudo form of slavery that arguably inflicted more internalized oppression—now slaves were free but still treated as slaves.

Post-Emancipation (1834-1962)

Shortly after the abolition of slavery in 1834, the British government enacted the Negro Education Grant (1835–1845), which allowed for a surge of elementary schools on the island. Sir George Grey’s statement on the appropriation of the grant denotes the following:

I am directed by Lord Glenelg to acquaint you that the sum of 20,000 l. has been placed by Parliament at the disposal of His Majesty’s Government, to be granted in aid of voluntary contributions toward the erection of school-houses in the Colonies and Settlements, to which the provisions of the Act for the Abolition of Slavery apply. (as cited in Grey, 1836)

The purpose of the grant was to support the re-socialization of ex-slaves to the colonial economy (Bacchus, 2006). As a result, Calabar College was founded in 1843 by the Baptist Missionary Society (Howe, 2000). The Negro Education Grant allowed for moral and religious education to be the key components of the curriculum, however still encouraging the “free blacks to continue toiling on the sugar estates” (Bacchus, 2006, p. 262). The Negro Education Grant was a pivotal moment in the start of the Jamaican education system. It was the first systemic education grant issued in the country for the establishment of approximately 200 school houses throughout the country (Latrobe,
1837). Under the Negro Education Grant, “the Lady Mico Charity, beginning in 1836, established four teacher training institutions and hundreds of elementary schools in the British Colonies in the West Indies, Mauritius and Seychelles” (The Mico University College, 2012). The Mico University College, which still exists today, is the oldest resulting effect of the Negro Education Grant.

The British government sent Mr. Charles Latrobe to assess the status and allocation of the grant funding used in Jamaica. Latrobe (1837) acknowledged in his 1837 report that it was very difficult to ascertain information across all the entities that received funding, because the information was improperly collected in each school. He noted that there were four types of schools: (a) regular school houses that could also be used for worship, (b) schoolhouses on the side of chapels or attached to established chapels, (c) school rooms in basements of chapels, and (d) an entire chapel devoted to “daily instruction given to the Negro children” (p. 6). Missionaries were the primary recipients of the funding, and important to note was the reluctance of some missionaries to use the funds towards education of the Negro population. Latrobe stated,

The Baptist Missionary society is understood to entertain the option that funds raised by it for missionary purposes, or specifically for the preaching of the Gospel among the heathen, cannot be consistently devoted to the purposes of education, and consequently the individual missionaries have been thrown almost wholly upon their resources for the prosecution of their schemes for the education of the colored classes. (p. 8)

Some of the important notes he made in his report critiqued the level of resources provided to free children of apprentices as well as the issue of regular attendance, hindering the progress of students. Furthermore, some of the challenges were exacerbated by scarcity of resources, such as food:
The want of provisions operated to the detriment of the schools, insomuch as that the poor apprentices or free coloured people had no “bread kind” of any description to give their children to take with them to school. (Latrobe, 1837, p. 9)

Latrobe (1832) also pointed out that there were four types of teachers on the island: (a) European, (b) White masters and mistresses—Creole, (c) adult colored persona born on the island, and (d) young males and females. He went on to state that the most trained and most needed were the European teachers whom the schools could not retain.

As little provisions as the masses had, along with) the constant trivial sentencing to the corrections house or to the magistrate for punishment, Latrobe (1837) could not help but note how intellectually strong the Negro population was:

It is a remark, universally made throughout the island that the children of the coloured classes of every shade show a remarkable facility for the attainment of the rudiments of such branches of instruction as are taught them. This is more especially the case with writing and arithmetic; and in these branches the progress made…is extraordinary. (p. 9)

The Negro Education Grant provided initial means for the establishment of an education system, however funding was cut after 10 years of its enactment. Gordon (1958) commented on the enactment of the Negro Education Grant:

The ten-year subsidy was intended by the British Government to provide nothing short of a popular system of education in the colonial territories. In that period the institution of compulsory education, the training of teachers and the provision of “a sort of high schools” were all advanced as suitable objects for the expenditure of the grant. This in effect was expected of aid which reached the final total of £235,000 for all the ex-slave colonies, with the fluctuating but very substantial support and work of the missionary societies and the much more problematic assistance of the local legislatures. (p. 141)

Important to note is that the system of apprenticeship coupled with education was not successful or encouraged by the Whites. Because plantation owners were compensated for the loss of slaves (Act of the Abolition of Slavery, 1833), some were
innately resistant to the thought of an emerging educated class of slaves. Arguably, the
implementation of apprenticeships was an incremental approach for White planters to
continue their atrocities on the Negro population. Toward this end, the Society for the
Relief of Negro Slaves printed the document, *Working of the Apprenticeship System in
the British Colonies*, shown in Figure 6, illustrating a summary of atrocities on the
apprenticed laborer in the British colonies.

As noted in the above document, apprenticed laborers or freed slaves would
essentially succumb to inconceivably more brutal genocidal punishments than during
slavery. Slave narratives from James Williams also revealed the sadistic and cruel
treatment of apprentices post emancipation:

They handcuff me to a woman belonging to Little-field, to send to the workhouse; she have a little child carrying on her back and basket on her head, and when she
want to give pickaniny suck, she obliged to rest it on one hand to keep it to the
breast, and keep walking on; police don’t stop to make her suckle the child. When we get to the workhouse, that same evening they give me the fifteen lashes; the flogging was quite severe, and cut my back badly; Then they put collar and
chain upon my neck, and chain me to another man. (as cited in Patton, 2001, p. 10)
WORKING OF THE APPRENTICESHIP SYSTEM IN THE BRITISH COLONIES.

Extract from the Speech of the Marquis of Sligo to the Legislature of Jamaica, February, 1836.

I feel it necessary to state the reasons which have induced the British government to adopt the measures which have been adopted in the British colonies for the abolition of apprenticeship. The subject has been under the consideration of the British government for several years, and the measures which have been adopted have been recommended by the most able and experienced statesmen of the country. The apprenticeship system has been a great source of hardship and suffering to the inhabitants of the colonies, and it is believed that the adoption of the measures recommended will be beneficial to the colonies and to the British nation.

I beg to inform the House that the measures adopted in the colonies will be carried into effect as soon as possible. The measures have been recommended by the most able and experienced statesmen of the country, and it is believed that the adoption of the measures will be beneficial to the colonies and to the British nation.

TO THE EDITOR OF THE PATRIOT.

Dear Sir,—I have the honor to submit to you the petition of the inhabitants of the colony of St. Vincent, requesting the abolition of apprenticeship in the colony. The petition is signed by a number of respectable citizens of the colony, and it is believed that the petition will be favorably received by the government.

The colony of St. Vincent is a place of great importance to the British nation, and it is believed that the abolition of apprenticeship will be beneficial to the colony and to the British nation.

Sincerely yours,

J. Smith.

Figure 7 depicts an image of the correction (workhouse) house in Jamaica where apprentices who were punished would walk the treadmill while being flogged with the “cat.” Important to note in the image is that those who did the flogging were also recently freed slaves or Negro overseers. The stratification of classes and oppressive roles within the Negro population further divided apprenticed populations and embedded the internalized oppression inflicted by those who also looked like them.

Figure 7: An interior view of a Jamaican house of corrections, from a narrative of events since the 1st of August 1834 ... together with the evidence taken under a commission appointed by the Colonial Office to address the truth of the narrative; ... the whole exhibiting a correct picture of a large proportion of West Indian society; and the atrocious...
cruelties perpetrated under the apprenticeship system, by James Williams in 1837. London, United Kingdom. Printed for the Central Emancipation Committee, 1838 [FCO Historical Collection HT1165 NOR].

The subsequent decline of the sugar industry in the West Indies led to lower wages and poorer living conditions for former slaves (Rose, 2002). Many former slaves refused to work the estates and started small-subsistence farming and/or artisan and craftsmanship work. The freedom enjoyed by those who worked independently of the planter society led to a yearning for more socioeconomic advancement for their children (Williams, 1994). As a result, the children of slaves were highly encouraged to attend elementary and primary day schools. As the economy worsened, the cost for tuition, uniforms, and materials made it impossible for poorer parents to send their children to school (Bacchus, 1994). Additionally, the economic downturn of the period led to the “termination of the Negro Education Grant in 1845” (Bacchus, 1994, p. 6).

Missionary societies who developed the system of elementary education for the newly freed slaves also reduced financial assistance and had to close 23-day schools in the 1860s (Bacchus, 1994). The photograph in Figure 8 shows a school house in rural Jamaica, taken circa 1900. The image critically depicts the socioeconomic class of the children without the necessary resources to succeed, such as shoes, clean clothes, and proper benches to sit on.
The plantation owners and planter economy heavily influenced the system of government. As a result, the governor and Colonial Office did little to sustain, build upon, or contribute to the education sector. The influence of the planters’ policy to not instruct the masses and the government’s lack of interest to encourage education plagued the economic growth of the society. In 1861, Sewell reported,

> It is estimated that there are 65,000 children in Jamaica between the ages of five and fifteen, and for their education, the Legislature voted last year the sum of £2,950 – less than a shilling for the instruction of each child during a space of twelve months. (p. 255)

The image in Figure 9 illustrates the resulting effects of the scarce resources placed on the education of Negro children. This image depicts a small group of children in front of a school house, holding up slates for writing.

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*Figure 8:* Image of school children in country districts c. 1900 in rural Jamaica. Taken from Caine, WRH (1908), *The Cruise of the Port of Kingston.* London, United Kingdom: Collier. Adapted from National Library of Jamaica.

“THE SCHOOLS IN THE COUNTRY DISTRICTS
are small and poorly equipped... The school-house itself usually consists of nothing more pretentious than a single room built of a series of upright posts to which has been roughly nailed a number of stout planks.” (See p. 188.)
The conflict over the provision for the education of the masses would continue for decades. Eventually, the rationale of using education as a method of subservience and stratification would make the legislators more agreeable to legitimizing education for the masses. The Education Act in 1849 led to the development of the first education board, which sought to increase grants for education (Sewell, 1861).

Religious and moral education continued to be the primary and foundational basis of the curriculum, the aim of which was to enforce the role and place of the emancipated Negro in the social and economic hierarchy of society. The constant repressive roles of education led to many conflicts, in particular the uprising of the Morant Bay Rebellion, led by former slave and current national hero, Paul Bogle (Bacchus, 1994; Rose, 2002). Secular education and the call for a denominational standardized curriculum would soon
follow as a result, leading to uprisings such as the Morant Bay Rebellion in 1865. In 1879, the Jamaica Schools Commission was established to provide educational trusts and control of several free schools in the country (Bacchus, 1994; Hamilton, 1997).

In 1882, the Cambridge Local Examinations were introduced in Jamaica as a measure of improvement to the education system. As noted by Cundall (1911),

Of late years, considerable improvements have been made. In most of the secondary schools the curriculum is now based on the requirements of the Cambridge University Examination Syndicate. (p. 867)

Reflecting the influx of missionary-designed curriculum, it was customary for missionaries to visit schools, as is the case in Figure 10.

Figure 10. A group of American missionaries sitting or standing by desks in an empty schoolroom, Jamaica, circa 1890. Adapted from Encyclopædia Britannica Image Quest.
The increase of government grants led to an increased standardization of elementary education in which schools received grants based on performance. This led to improved standards of curriculum and instruction. The elementary curriculum focused on reading, writing, and arithmetic, with some religious training and occasional geography and history instruction (Hamilton, 1997). In addition, boys were given training in agriculture and other manual arts, and girls received lessons in sewing and domestic science. These separate tracks for boys and girls were formalized in the Lumb Report of 1898 (Hamilton 1997). The report emphasized the need for agricultural training in order to counteract trends seen as threatening to the colonial economy and society: Students were developing a distaste for manual labor and were moving from the countryside to the cities and towns to take up clerkships and other similar occupations.

The school system continued to expand at the beginning of the 20th century, but nonetheless continued to be guided by the 19th century colonial practice of educating children to fit their station in life (Hamilton, 1997; Whiteman, 1994). Several local, radical, socialist groups started to emerge in the early 1900s that advocated for pro Afro-Jamaican unity and nationalism. In particular, Marcus Garvey, “a prominent black leader who founded the Universal Negro Improvement Association (UNIA) in 1914 and the Rastafarian Movement” (p. 223) was deliberate in his actions to promote and empower Black Nationalism in Jamaica. He stressed the establishment of a Jamaican university and for “blacks to acquire power through self-reliance, education, science, industry, and politics” (Rose, 2002, p. 224). Similar to Garvey’s ideology was Anderson’s (2003) belief that
inequality on a national basis is the recognition that poverty, like racial oppression itself, cannot be viewed in structural isolation from those members of society most responsible for its continuation. (p. 49)

The Garveyism movement would forever be known as the start of a radical opposition to colonialism in Jamaica. Coinciding with the time period of the Garveyism movement is the image in Figure 11 of students and staff of Mico College in Kingston, Jamaica in 1913.

Figure 11: Image of Mico College students and staff in Jamaica, 1913. Adapted from the National Library of Jamaica, Special Collections Department.

As a response to the socially segregated education system in Jamaica, the Kandel Report was conducted to assess the state of education in Jamaica (William, 1994). In addition to closing the gap between the gendered track curriculum of the 1898 Lumb Report, the Kandel Report (1943) also established a secondary education curriculum that was more socially equitable, delineating the need for a ministerial system of education in

The common theme in the education system was that only parents who could afford to send their children to high school were able to do so (Kandel Report, 1943). The limited accessibility thereby created an elitist system dominated by White Jamaicans. By 1950, the Central Education Authority was “established to execute the functions of the School Commission and the Board of Education” (Ministry of Education, 2012, sec. History of the MoE [Timeline - 1950]), and Honorable Joseph Malcolm (1950–1953) was appointed as Minister of Education (Ministry of Education, 2012). In 1956, the Education Advisory Council, a statutory body, was established to replace the Central Education Authority (Ministry of Education, 2012). As a measure to alleviate the social inequities in education and “provide necessary manpower for economic growth, the Common Entrance Examination (CEE) based on the British model for selecting students for high school was introduced in Jamaica in 1957” (Robinson, 1986). This exam was considered a rigid non-curricular examination that would be predictive in selecting students to be placed in traditional high schools (Spencer-Rowe, 2000). However, no more than 25% of students who sat for the exam each year would receive a place in a traditional high school. Spencer-Rowe (2000) stated, “The remaining 75% either remained in all-age schools or ‘flowed freely’ to the then new secondary and comprehensive high schools” (p. 6). Shortly after, along with the talk of independence drawing near, so was the need to establish a Caribbean university.
Establishment of the University of the West Indies. The introduction of a university system did not occur until post World War II. During World War II, Britain used its colonies to house Jewish refugees, imprison German soldiers, and recruit expendable armies (Howe, 2000). In 1943, Colonel Oliver Stanley called for a commission on higher education for the British colonies. There were two commissions developed: The first was sent to evaluate West Africa, and the second was sent to evaluate the West Indies. The West Indies Commission was led by Sir James Irvine, “principal and vice chancellor of St. Andrews University” (Howe, 2000, p. 11).

In 1945, the Asquith Report “became the blueprint for the establishment of university colleges in Africa and the West Indies” (Howe, 2000, p. 11). In the report, Irvine’s committee highlighted the main challenges in establishing a university for the West Indies but was steadfast in supporting the establishment of a unitary university. The main challenge that came from the Asquith Report was that funding would be a significant issue, because the economic state of the British West Indies was poor at the time. Additionally, the primary and secondary education standards were remedial and needed significant improvement if they were to supply graduates for the university (Howe, 2000).

The agreement by which the university would be funded and founded came from the Colonial Development Welfare Fund, and the control of syllabus, exam administration and degree conferrals would be by the University of London (Hall, 1998). The University College of the West Indies (UCWI) was established in 1948 to serve all the colonies in the British West Indies. Its purpose was essentially to help manage the
transition from colonial to neocolonial regimes during the 1940s to 1950s (Roberts, 2003). Due to the stronghold of the University of London, UCWI acted as a type of federation to keep the Caribbean subordinate to Britain. On the current UWI website, UCWI was recognized as a college of the University of London. Essentially for West Indians, there was a “political and ideological struggle for the soul of the university” (Howe, 2000, p. 15).

The UCWI was sited on the former Mona Sugar Estate in which Gibraltar and Malta refugees were housed during World War II (Brandy & Carpenter, 2008). The Faculty of Medicine was the first established faculty and enrolled 33 students in 1948, of which 22 were men and 10 were women (Brandy & Carpenter, 2008). Access was a primary issue for many West Indian students, because the UCWI was exceptionally difficult to attend due to lack of scholarships or very difficult entrance examinations. There were 800 students in the first pool of applications, but the restrictions were very difficult; thus, many students attended nearby U.S. colleges that were considered easier to access (Roberts, 2003).

During the 1940s to early 1960s, there were instrumental movements towards self-determination, signifying increased nationalism whereby West Indians wanted to be independent of British rule and the West Indian Federation. With the end of World War II, many movements emerged, including the West Indian Federation, 1958–1962. The West Indian Federation was comprised of 10 territories in the Anglophone West Indies: Jamaica, Antigua, Barbados, Trinidad and Tobago, Grenada, Montserrat, St. Kitts/Nevis/Anguilla, Dominica, St. Lucia and St. Vincent, along with British Guiana and
British Honduras (W. I. Federal Archives Center, n.d). Essentially, the Federation represented a unitary British West Indian governing body, making it easier for Britain to control a central governing body rather than 10 individual bodies. The unity of this body, however, allowed for more cross-communication amongst the other British colonies, and as such, these colonies forged ties in establishing separate sovereignties. The UCWI at the time played an instrumental role in the Federation in producing “several outstanding West Indian citizens and serv[ing] as a symbol of West Indian hopes for regional unity” (W.I. Federal Archives Center, n.d., para. 1).

The appointment of Sir William Arthur Lewis marked a pivotal change in the administration of UCWI. He was the first Black Vice-Chancellor and first Black West Indian principal of UCWI from 1958–1960 (Girvan, 2009). He played an instrumental role in the decree of the Royal Charter and subsequent autonomy of the university. Having a Black, Vice Chancellor was instrumental in the history of the university as well as the country, because it represented an era of change. Before then, only British or White West Indians led the university, but for the first time, a Black man would lead the university. He was a brilliant man: “He was the first West Indian to take First Class Honours at the London School of Economics, and a Ph.D. in Industrial Economics at age 25” (Girvan, 2009, p. 83). Additionally, “he was the first black Nobel Laureate in Economics as well as the first West Indian Nobel Laureate in any field” (Girvan, 2009, p. 83).

On the eve of independence, April 1962, a Royal Charter was sent to the university declaring it autonomous and no longer dependent on the University of London
Hall (1998) noted that the history of the University of the West Indies is a result of three influencing factors: “a growing sense of nationalism” (p. 1) in the British colonies, Britain’s wanting to rid itself of problematic colonies after the end of World War II, and “an increasing interest of the United States of America…to extend American influence in the Caribbean region” (p. 1), especially after the overthrow of Batista by Fidel Castro in Cuba.

Post-Independence (1962–Present)

During the 1940s to 1960s, independence was granted to many countries, forcing self-governance and economic reliance on the former colonies. After independence, the need for an educated population was great in order to establish and sustain self-governance, but the standard curriculum continued to be a close replica of British modules founded on a normative White ideology. Lavia (2006) described the premise and reason for colonial curricula as

A manifestation of imperialist ideology sought to ensure that the education of “young colonials” involved mastery of colonial values and ways of being, limiting excising and ignoring any semblance of anything that might perhaps be considered as merging from historical and social truth of the colonized. (p. 284)

Sir Bustamente Alexander was the first elected prime minister of Jamaica, who was of Irish descent and known as a trade union leader (Rose, 2002). Sir Bustamente led the Jamaican Labor Party (JLP), which was heavily criticized as defending the colonial status quo that attracted “wealthy conservative owners with various interests in agriculture and industry” (Rose, 2002, p. 230). As a result, there was little change in the education system for the masses. Under the JLP governance, “the 70:30 system was introduced to provide more spaces in public high schools for students coming from
primary level schools” (Ministry of Education, 2012, sec. History of the MoE [Timeline-1962]). The ratio was later found to be highly inequitable, favoring higher socioeconomic classes who could afford to send their children to high schools (Rose, 2002). Additionally, the Education Act of 1964 was “the first post-independence legislation which outlined the statutory and operational aspects of the education system” (Ministry of Education, 2012, sec. History of the MoE [Timeline - 1965]). In 1966, “the New Deal for Education was introduced to provide school space for every child at the primary level” (Ministry of Education, 2012, sec. History of the MoE [Timeline - 1966]). As a result, 40 primary schools with placements for 16,800 students were created (Ministry of Education, 2012).

Even after independence, most textbooks used in Jamaican schools were written and published in Great Britain, Canada, and the United States, having little relevance to Jamaican children (Whiteman, 1994). Additionally, the textbooks serving as the key instrument in curricular instruction mirrored industrialized Western societies (Whiteman, 1994). The disconnect that the textbooks represented inhibited the progress of student learning. Furthermore, Bogues (2009) noted,

One of the repressive actions that the first independent government did in Jamaica was to ban books, carrying on an old colonial tradition. These banned books included books on Marxism as well as all the major radical books and newspapers that emerged out of the U.S. Black Power movement. The banning of books was part of an attempt to inoculate the Jamaican nation from “foreign” influence, which could corrupt the young independent nation. (p. 138)

The banning of books and exile of Black Power influencers, such as Walter Rodney in 1968, further allowed the White and colored elite classes of Jamaica to marginalize the education of Black populations (Bogues, 2009). Scholars, such as
Nettleford (1978) and Rodney (1990), began to question the continued neocolonialist use of British examinations in Jamaica, calling for a reformation of curricula and texts. Similarly, Farrell (1967) noted the importance that education would have to play in the newly independent state in order to reverse the effects of colonialism. He stated, “Education has long served as a broker institution for the colored section of Jamaican society and is now serving that same function for some of the black rural masses” (p. 175), in an effort to contribute to “the shift from pluralism to heterogeneity which appears to be occurring in Jamaican society” (p. 175).

It was not until, 1972, with the election of Michael Manley, the leader of the People’s National Party (PNP), that a number of significant social reforms started to change the structure of education in Jamaica (Rose, 2002). Manley’s social reformation started with education, making primary to postsecondary education free, granting “every Jamaican a chance to become educated and to improve their situation” (Rose, 2002, p. 246). Manley’s goal was to eliminate illiteracy among the masses by 1976, so he established a number of policies and boards to achieve this goal. He established the National Literacy Board, later replaced by the Statutory Board for Adult Education, Jamaican Adult Literacy, which hired volunteers to teach reading and writing to adults (Rose 2002). The middle and upper classes were very opposed to the policy changes, the improvement of the lower class, and the potential mixing of races. The premise of Manley’s policies was to transform Jamaica into a classless society where all Jamaicans were provided equal access to education for the betterment of the society as a whole. Manley (1974) stated, “All children must pass through similarly endowed institutions
wherein they must mix, regardless of parental background, and from which they must proceed to higher levels on the basis of merit alone” (p. 39). Essentially, he removed the elitist barriers to education in which the colonials stratified the social hierarchy to benefit the middle and upper class. In restructuring the new education system, Manley also increased the number of years of education from 15 to 17 and updated the teacher-training program to resemble a process of self-transformation (Rose, 2002).

**Importance of patois.** Following Manley’s impetus on social reform came the promotion of Jamaican folklore writers and artistes who promoted Afro-Jamaican culture and language, which were often unrecognized in formal settings. Accordingly, an anti-colonial discursive framework recognizes and values works from Dr. The Hon. Louise Bennett (favorably called Miss Lou), a Jamaican poet and activist who used the Jamaican language of patois in her work to reveal the sociocultural paradigms of colonialism and postcoloniality in Jamaica and abroad.

*Patois* is a combined mixture of English, Spanish, Twi, Yoruba, and other African languages (Campbell, 2006). As a result of prohibiting education among the Jamaican slave society, Jamaican patois and oral traditions survived throughout the centuries, building the “cultural capital of Jamaica’s African populations” (Campbell, 2006, p. 196). As an aspiring postcolonial scholar, I am challenged by scholars, such as Miss Lou and NgugiwaThiong’o, who diverge from the “Queen’s English” and write in their cultural language. Their writing represents a “counter discourse to rupture the hegemony of colonial language and colonial forms of knowledge production” (Shahjahan, 2005, p. 219). Jamaican patois has been contested for years as a lower socioeconomic
representation of class, culture, education, and etiquette. However, according to Davidson and Schwartz (1994), “The newly found status of Patois means that individuals who use Patois and one of its parent languages should be considered bilinguals….the Patois is a stable and complete language system with a reorganized phonology, lexicon, and syntax” (p. 48). An anti-colonial discursive framework empowers scholars to use and teach patois as an indigenous language form to re-connect culture to academic scholarship in the classroom (Dei, 2000). Nevertheless, patois, the language of the people, was not allowed in classrooms or formal settings. Miss Lou, in her 1944 poem, “Bans a Killin,” writes against the informal banning of patois:

So yuh a de man, me hear bout!
Ah yuhdemsey dah-teck
Whole heap o’ English oat seydat
Yuhgwine kill dialect!
Meck me get it straight Mass Charlie
For me noh quite undastan,
Yuhgwine kill all English dialect
Or jus Jamaica one? (Bennett, 1966, p. 218)

The poem goes on to critique the use of English dialects in Yorkshire, Lancashire and other parts of England, and postulates how biased the argument is to only ban the Jamaican dialect. Jenkins (2002) elaborated on this point by stating, “Bennett defends the Jamaican vernacular with reference to the plurality of Scots, Irish Cockney, and Northern dialects” (p. 579). There are many proverbs, folk tales, and fables within the Jamaican culture that have been forgotten or historically amputated because of colonial legacy. In this regard, Anancy/Anansi stories were inherited from African slaves in Jamaica as a means to “carve out a space of freedom through clever manipulations of potentially dangerous situations” (Campbell, 2006, p. 197). Anancy/-Anansi stories were integrated
into the primary education curriculum as a means to teach children moral values. A call to ban Anancy/Anasi stories in schools became the agenda at a regional education conference by teachers who argued that there was a concern about the negative influence of the main character Anancy/Anansi (Campbell, 2006). As Campbell (2006) further stated, “Underneath these calls to ban Anancy/Anansi is a deep-seated inferiority complex” (p. 205) rooted in colonialism.

The importance of continuing Anancy/Anansi stories, Jamaican proverbs, fables, and oral traditions is based on recognizing these knowledges as points of Jamaican intellectual agency. Through a postcolonial theoretical lens, I argue that Anancy/Anansi stories represent an important part of Jamaica’s history and culture. Accordingly, I wanted to highlight the importance of teaching and using patois in classrooms, because even now, the children of Jamaica informally dialogue in patois but refrain from using the language in formal settings, especially in the classroom. The separation of self and language implies that children cannot bring their whole self into the classroom but instead are asked to separate who they are from what they learn. Thus, patois is a necessary language of the people that should be formally encouraged in classrooms where students should be allowed to engage in bilingualism and taught to write and understand the historical manifestation of patois.

**Caribbean Examination Council.** It was not until 1972 that the Caribbean Examination Council (CXC) was established to “provide regionally and internationally recognized secondary school leaving examinations relevant to the needs of the Region” (Planning Institute of Jamaica, 2009). The first CXC exams were tested in 1979, allowing
for students the option to take either the General Certificate of Examination (GCE) “O” Level exams or the CXC exams. Many students continued to take the GCE “O” Level exams, because those were recognized and honored for admission to British universities.

In 1999, the Ministry of Education replaced the Common Entrance Examination with the Grade Six Achievement Test (GSAT). According to the Ministry of Education, 2006 Ministry Paper, GSAT forms a part of the National Assessment Programme (NAP) which is aimed at “determining how students are learning at key stages throughout the primary level and their readiness to access secondary level education” (MoE, 2006, p. 1). The examination is used to place students in secondary institutions by ranking their overall performance based on the curriculum-based exam.

The Honorable P. J. Patterson, Emeritus Prime Minister of Jamaica, stated in 1999 that “the old hierarchical ways of... education, training and internationalization, must give way... and the emergence of economic activities which rests primarily on the pillars of knowledge...pose formidable demands for all of us” (Patterson, 2000, p. 8). His sentiments spoke specifically to the emergent demand of an educated population to survive in the 21st century, globalizing era.

The Jamaican education system is situated within the history of the country and layered with many hidden historical events that will never leave the pages of the House of Commons parliamentary papers. By beginning to reveal and uncover the constructs of this system bounded by racial and socioeconomic layers, Jamaicans can start to critically analyze the structure of the current state of the education system.
Research Setting: Current State of Jamaica’s Education System

Jamaica is the largest English-speaking country in the Caribbean, with an approximate population of 2.8 million people (Statistical Institute of Jamaica, 2012). With 14 parishes, the capital of the country is Kingston. Although Kingston is the capital city, there are a total of six principal cities in the country: Kingston, Portmore, Spanish Town, Montego Bay, May Pen, and Mandeville (Statistical Institute of Jamaica, 2012). According to World Bank 2012 indicators, 53.3% of the population lives in urban areas whereas 46.7% lives in rural areas.

The Ministry of Education, Youth and Culture (MoEYC) administers, delivers, and is responsible for all aspects of education in Jamaica. As illustrated earlier, Jamaica’s current education system is an evolution of the British education system. It has a four-tiered education system consisting of early childhood, primary, secondary and tertiary levels (Ministry of Education 2009-2010, p. 1). Figure 12 provides a clear flow chart of the formal public education system in Jamaica. Additionally, the chart illustrates the various points of entry and exit examinations that students have to take throughout the public education system.
In 1999, a comprehensive program was established for early childhood education for children ages 0 to 5. However, it was not until 2003 that the Early Childhood Commission Act was established to standardize the curriculum, policies, and regulations of Early Childhood Education (ECE) in Jamaica.

Primary education essentially lasts for 6 years and is offered in primary schools, preparatory schools, junior high schools, and all-age schools. Jamaica’s primary education system follows the “grade” system from grades 1 to 6. Included in the primary system is the all-age system, which provides the lowest quality of education in the public system and runs from Grades 1 to 9. Typically, students in the all-age system are
remedially educated and are lacking the qualifications necessary to progress to upper secondary school (Grades 9 to 13).

Students are tested in Grades 1, 3 and 4 using the Readiness Inventory Test, Diagnostic Test and Literacy Test, respectively. The Common Entrance Examination (CEE), which was discontinued in 1999 and replaced by the Grade Six Achievement Test (GSAT), was essentially used to stratify students’ placement in secondary schools. Due to the limited supply of secondary schools and the outnumbering demand for student placements, there was a resulting access issue for thousands of children each year.

The standard secondary system follows the form structure, which equates to Grades 7 to 13 or Form 1 to 6. Secondary education consists of two levels: lower and upper. Lower secondary education spans Grades 7 to 9 or Forms 1 to 3. All-age schools and junior high schools only cover lower secondary education. Upper secondary education covers Grades 10 and 11 or fourth and fifth form. On average, in fifth form, students sit for their exit examinations or the Caribbean Secondary Education Certificate (CSEC) exams. After successful completion of the CSEC exams, students are eligible for graduation with high school diploma. Subsequently, students can either apply to sixth form for two additional years or enter a community college. Opportunities to matriculate to upper secondary schools from junior high schools and all-age schools exist when student sit for the Grade Nine Achievement Test (GNAT). Students at full secondary schools (Grades 7 to 11) and comprehensive high schools take the Caribbean Examination Council exams in Grade 11. After this examination, some of the comprehensive high schools and full secondary schools offer Grades 12-13 or sixth form
(upper and lower sixth form) in preparation for taking the General Certificate of Education Advanced-Level (GCE A-Level) or the Caribbean Advanced Proficiency Examinations (CAPE). Students in sixth form can sit for two rounds of the Caribbean Advanced Proficiency Examination (CAPE) to graduate and be eligible for entry at the upper tertiary or university levels.

Several types of institutions and programs in Jamaica provide tertiary or higher education. These range from teacher colleges, community colleges, and vocational training colleges to the University of Technology and the University of the West Indies. Bachelor degrees normally takes 3 years to complete for students who have passed the GCE A-level or CAPE qualifications and 4 years for students who have only completed the CSEC qualifications.

**Curriculum**

The national curriculum is designed and developed by the MoEYC but lacks “articulation between critical levels of the system” (United Nations Educational, Scientific and Cultural Organization (UNESC, 2010, The Educational Process, para 1). Prior to 1994, there was no standardized curriculum for secondary education, making it difficult to measure aptitude across the various schools. There have been significant curricular policies over the years to regulate and reform efficacy and quality of schools in Jamaica. The early childhood curriculum follows an eclectic approach to promote creative and psychomotor development. The primary education curriculum follows a more integrated approach that seeks to align with the secondary education curriculum. At the secondary level, issues of equity and quality are more prevalent, because the
curriculum in Grades 7 to 9 are not equitably delivered across all schools. Essentially, the problem lies in the disparate number of trained and untrained teachers in the education system.

According to the 2009-2010 Ministry of Education’s *Teacher Statistics Overview*, there were 25,329 teachers serving in public formal education (early childhood through tertiary level), of which 3,506 were untrained teachers; 5.5% of untrained teachers serve in secondary institutions (Ministry of Education, Youth and Culture, 2009-2010). The issue of equity and quality is one of several that plague the education system.

**Major Problems and Challenges**

Access to full secondary education has become a formidable and systemic issue that plagues the Jamaican education system. The Jamaican Ministry of Education census in 2003, noted that of the 328,362 children who graduated from primary school, only 245,124 students were placed in high school (The Ministry of Education Youth and Culture, 2004). The remaining 83,238 children were not provided access to education because of the lack of secondary schools in the country.

Although the ministry has implemented a number of reforms and increased the budget to allocate for new spaces for students, the issue of equity is also an issue. Junior high schools and all-age schools are ill equipped in resources and qualified capacity to equitably deliver the standardized curriculum to all students. This lack of access and equity is a direct precursor to poor performance rates in grade level exams.

The number of students performing below grade level is ever-increasing. The total primary completion rate in 2009 was 74.59%, which represents a continued decline
since 1990 when the completion rate was at its highest in history at 95.8% (World Bank Data, 2011). Additionally, the growing disparities in education between boys and girls have continued to puzzle scholars and policy makers alike. At the primary level, the ratio of boys to girls’ enrollment and completion are very close, however the widening gaps start to emerge as students matriculate to the secondary and tertiary education levels.

Jamaica’s current state of education has close to a 100% enrollment rate of primary students at the early childhood level and close to 90% at the primary level (Planning Institute of Jamaica, 2009). At the secondary level, enrollment is lower and the widening gap between access and equity plagues the success of the education system. In 2007, the Jamaican government instituted free secondary-level tuition, allowing for increased enrollment access (Planning Institute of Jamaica, 2009). However, the retention rates continue to be low, and discrepancy in resources, equity, and a universal curriculum across the country has continued to hinder the completion rates of students (Ministry of Education, 2008). The government-run all-age schools continue to report the lowest performance rates of students, and are a leading contributor to despondent youths (Ministry of Education, 2008). The resulting effects are a decreased educated workforce, high adult illiteracy rates, and staggering decreases in enrollment rates from secondary to tertiary levels. As such, more and more parents are turning to private tutoring or extra lessons after school to secure successful CSEC pass rates for their children.

**CSEC results.** In 1998, the Caribbean Examination Council introduced the Caribbean Secondary Examination Certificate (CSEC) exit exams to measure the level of general proficiency of students’ scholastic aptitude in Jamaica. The importance of the
CSEC exam passes are the result of exit requirements for successful completion of high school and lower matriculation to tertiary education. At the very minimum, students in Jamaica are required to achieve a “C,” pass, or III (3) in mathematics, English language, and English literature CSEC exams to matriculate to higher education. The Ministry of Education reported the 2009/2010 CSEC results revealed that of the 41,252 students who sat for the mathematics exam, 7,201 received grades of 1 and 2, and 9,042 students received a grade of 3 (C), which equates to a total of 39.4% of students passing the mathematics exam. Of the 42,711 students who sat for the English language exam, 64.9% passed with a grade of 3 or higher. This indicates that after 5 years of secondary schooling, approximately one in every two children in secondary school is performing below grade level in the CXC Mathematics and English Language exams combined.

Similar to Lochan and Barrow (2008), I agree that the demand for extra lessons in Jamaica is driven by the “colonial heritage of an examinations driven school system” (p. 45). As a result, the phenomenon of extra lessons is outside the purview of the formal public education system and is not regulated by the Jamaican government, leaving an exponential demand for extra lessons and a growing supply sector.

**Transformational Change**

The Jamaican education system is a highly stratified, British legacy of teacher-centered schooling. The disparities between equity and access across the country have a resulting impact on the low persistence rates and even lower CXC exam pass rates. The transformational change needed for Jamaica’s education system can be constructed within a critical-inclusive pedagogical approach. The constructs of the extra lessons
system in Jamaica are possibly one avenue in which to practically apply the critical-inclusive pedagogical framework. Thereby, extra lessons as further explored in this dissertation study can create an opportunity for postcolonial education to exist as established by the aforementioned tenets.

**Understanding Extra Lessons**

Due to the heavy emphasis of an examination-driven school system, many parents from low-middle to middle socio economic backgrounds seek additional private tutoring for their children at the primary and secondary level. This growing demand for private tutoring has significantly impacted an underground and informal supply of education outside of the standard public education system. To date, there is only one known investigation of the practice of extra lessons in schools at the primary level in the Jamaican education system (Spencer-Rowe, 2000). From that study, Spencer-Rowe (2000) stated,

> For several years the public formal education system has coexisted peaceably with an Informal system known as “extra lessons.” Born out of a real or perceived need to supplement the formal system, this form of private tuition is as pervasive as it is exclusive, catering primarily to those parents who anxiously desire the “best” of the system for their children. (p. 4)

Spencer-Rowe’s (2000) study emerged out of the public interest in 1995, “when the Jamaica Survey for Living Conditions canvassed parent’s contributions to education” (p. 4) and found that extra lessons fees ranked third highest of the household expenses. Conversely, results from the 1999 Literacy Test revealed that after exposure to 4 years of primary schooling, “approximately one in every 2 children were performing below grade level” (Spencer-Rowe, 2000, p. 5). As a result, the Ministry of Education organized extra

As aforementioned, extra lessons are essentially private tutoring and/or additional academic lessons outside of the regular school curriculum. Lochan and Barrow (2008) defined extra lessons as “all teaching/learning activities outside of the normal school timetable that attempt to cover the formal school curriculum at a cost to the student or parent” (p. 46). Extra lessons in the Caribbean represent a response to inequitable teaching in the classroom and amongst schools, overcrowded classrooms and the inadequacy of preparing students for CXC exams (Brunton, 2000; Lochan & Barrow, 2008). Although there is significant research on extra lessons around the world (Bray 2007; Brunton, 2000; Dang & Rogers, 2008; Lochan & Barrow, 2008), there is little research on extra-lessons in the Caribbean, especially in Jamaica.

The widespread phenomenon of the private-tutoring industry has extended to most of Asia, parts of Europe, North America, and a handful of countries in Africa (Bray, 2007; Dang & Rogers, 2008). Pending on the location, extra-lessons is otherwise called or termed “shadow education” (Bray, 1999), private tutoring, or juku in Japan. Most popularly used in research is the term shadow education, which is used to define the private tutoring industry as a supplement of public schooling rather than a replacement. Bray (2013) attributes the rationale for the existence of the shadow system “because of the stratified nature of the school system and post-school opportunities” (p. 18). Furthermore, the existence of shadow education “depends on the mainstream education
system; it does not stand alone as an independent educational activity” (Dang & Rogers, 2008, p. 163). Some countries, such as Japan, China, Republic of Korea, Ukraine, and Vietnam, recognize and regulate private tutoring. Countries, such as Cambodia, Myanmar, and Mauritius prohibit private tutoring, whereas other countries, such as Canada, the United Kingdom, and Nigeria, ignore the occurrence of private tutoring (Dang & Rogers, 2008). Shadow education around the world has many layers, and there is not a one-size-fits-all solution for the varying types of shadow education. As a result, I have presented the literature that covers the most salient characteristics of private tutoring and the supply and demand of shadow education, and then I have addressed the educational, social, and economic impact.

**Characteristics of Private Tutoring**

There are various delivery forms of private tutoring: Some are conducted in the home as one-on-one tutoring; others are conducted in small groups at institutes, centers, or schools; and still other delivery forms occur on video screens, the internet, over the phone, or by mail (Bray, 2007; Dang & Rogers, 2008; Mischo & Haag, 2002). There is mixed consensus on private tutoring, pending on culture, “nature of mainstream education systems, and the structures of economies” (Bray, 2007, p. 23). Private tutoring in Germany has been researched since the 1950s and the importance is “demonstrated by the fact that about 15 Million Euros are spent on tutoring each week by the pupil’s parents” (Mischo & Haag, 2002, p. 264). However some researchers are fearful of the exacerbation of social inequalities, disruption of the public education system, and teacher corruption and coercion (Bray, 2007; Dang & Rogers, 2008). With that said, there has
been an overall increase in the scale of tutoring around the world, especially for countries that stress effort, such as Asian countries that are influenced by Confucian traditions (Bray, 2007; Dang & Rogers, 2008). For the study, I was particularly interested in systems that are primarily teacher-centered, in line with Bray’s (2007) comment that “private supplementary tutoring becomes more necessary” (p. 29).

Private tutoring exists at the primary and secondary levels and is taught by teachers, university students, high school students, and even parents. The common link that occurs across the various forms of private tutoring is that there is a fee allotted to the service. This fee has proven useful as a measurement for many researchers focusing on the corruption and/or macro-economic factors associated with private tutoring; however, the cost of private tutoring has also provided research with tools to measure possible policy regulations on standardizing private tutoring (Brunton, 2000; Dang & Rogers, 2008; Lochan & Barrow, 2008). In some cases, corruption occurs because mainstream teachers: may take advantage of students and parents by not completing the syllabus in class time and offer mandatory private-tutoring in which the parents have to pay the teacher to complete the syllabus (Bray, 2007). Countries, such as Singapore, Morocco, and the Republic of Korea have issued stringent mandates prohibiting “mainstream teachers to accept payment for supplementary tutoring for their own students” (p. 39).

The intensity is another characteristic worth mentioning, because it has been investigated around the world. Bray (2007) noted that “students receive tutoring more intensively at the secondary rather than the primary level; and within those levels they demand more tutoring in the grades which lead up to major examinations” (p. 31). De
Silva’s (1994) study in Sri Lanka indicated that students in Grade 13 receiving private tutoring in science spent an average of 11.5 hours per week.

**Supply and Demand of Shadow Education**

There are two forces that drive shadow education. The first is demand for shadow education, which is derived by four main factors: (a) perceived return on education, (b) exam driven culture, (c) poor quality schools, and (d) growing middle class (Bray & Lykins, 2012). Nevertheless, when the cost of shadow education increases, the demand for shadow education will decrease. Consequently, the second force that drives shadow education is the supply of the service. Specifically, the following four factors create the supply for shadow education: (a) current and former teachers, (b) formal private institutions, (c) individual tutoring, and (d) distance or cyber tutoring (Bray & Lykins, 2012). Collectively, the supply and demand forces have been illustrated throughout this paper and have been illustrated in the diagram shown in Figure 13.
Educational, Social, and Economic Impact

Researchers contend that measurable outcomes on the impact and efficacy of private schooling are difficult to ascertain, because potential endogeneity of tutoring is not always accounted for (Bray, 2007; Dang & Rogers, 2008). However there are some researchers who address endogeneity in their studies and provide foundational data for other scholars to replicate. Mischo and Haag’s (2002) study in Germany, along with Buchmann’s (1999) study in Kenya, deduced that private tutoring improved students’ academic performance. Lochan and Barrow’s (2008) study in Trinidad and Tobago
determined that students “confirmed the claim that extra-lessons did help to improve their performance in the subject” (p. 65).

The social implications of private tutoring have mixed responses. Some researchers state that the pressure on students to pass examinations and gain acceptance to a university compel parents to spend what they do not have on private tutoring and pressure students to forego other extra-curricular activities to attend private tutoring. De Silva’s (1994) study in Sri Lanka reported that students were very tired after private tutoring sessions and complained about not having free time to explore personal interests. Lochan and Barrow’s (2008) study in Trinidad and Tobago deduced mix reports: One group of students complained that “lessons curtailed their time from extracurricular activities like sports, recreation and so on” (p. 66), whereas the other group of students (the majority) reported that extra lessons did not affect their social life. Important to note are the consequences of social inequalities found as a result of private tutoring. As Bray (2007) noted, “Supplementary tutoring is more easily available to the rich than to the poor [and has the] mechanism which maintains and perhaps increases social inequalities” (p. 61). This is essentially a call for a regulated and subsidized appropriation of extra-lessons on the systems level, which will alleviate costs for students who cannot afford extra lessons.

With regards to economic impact, most researchers draw from the extensive literature on the rate of return on education. Empirical evidence has demonstrated that “education increases the productivity and efficiency of workers by increasing the level of cognitive stock of economically productive human capability” (Olaniyan & Okemakinde,
In this respect, private tutoring is viewed as additional private education and thereby increases the human capital of a student. Besides individual student gain, private tutoring represents an employable market driven force for tutors. As Bray (2007) stated, “[Private tutoring] employs large numbers of people, who in turn gain incomes and through their spending generate employment for others” (p. 66). This cyclical effect drives economic growth and has a positive impact on the economy.

**Conclusion**

Based on the literature review, the Jamaican education system is a highly stratified, British legacy of teacher-centered schooling. The disparities between equity and access across the country have a resulting impact on the low persistence rates and even lower CSEC exam pass rates. From a postcolonial perspective, “schools must be open spaces that give opportunities to people from non-traditional backgrounds, from the margins, and from the most disadvantaged segments of our communities to realize their goals and dreams” (Dei & Doyle-Wood, 2006, p. 154). Based on the literature review, how can educators transform the current education system?

A postcolonial theoretical perspective suggests that the current educational system in Jamaica is a remnant of the colonial education system, which was not set up to educate slaves and descendants of slaves but instead maintain control of masses so that they could move from a physical slave state to a psychological slave state. Thus the current formal educational system is not designed to produce successful educational outcomes for the masses. Accordingly, curriculum and pedagogical reform are essential in Jamaica so that
the monopoly of the privileged ceases to linger in the education system. A movement towards a more student-centered curriculum and pedagogy would include:

The development of students’ identities, self-understandings, and understandings of the world by providing them with insights into the cultural values and the tools that they need for interpreting the ambiguous cultural contexts in which they are now living. (Kanu, 2006, p. 216)

Kanu (2006) used *sankofa*—“meaning return to the past to move forward” (p. 203)—as inspiration for his imagination of a postcolonial curriculum. Applicable to postcolonial Jamaica, he goes further to explain that the process of hybridization involves the reconstitution of the self: that there is constant movement forward informed by the past and “that no matter how much is subtracted from the individual there is always a remainder” (p. 219) to reconstruct the self. I believe that the re-construction of the Jamaican education system has already commenced in small pockets of resistance by a few deliberate in transforming the system.

Toward the close of this chapter, I introduced extra lessons as an informal counter system to the teacher-centered schooling so that some students could experience educational psychological freedom and educational success. In Chapter 3, I have hypothesized that students who have access to extra lesson achieve at higher pass rates. I have also investigated that one reason why extra lessons in Jamaica has been successful is that it is grounded in a critical-inclusive pedagogical framework. This dissertation study presented an argument to investigate empirical data on extra lessons not previously available. Additionally, using the aforementioned tenets of postcolonial theories in education, I foregrounded research for new forms of knowledge construction and
legitimized decolonizing research and pedagogies to produce implications for critical change to the Jamaican education system.
CHAPTER 3. METHODOLOGY

The dissertation study was grounded and informed by a postcolonial theoretical framework that embedded postcolonial theories in education throughout the design of the research questions, the analytical review of the literature, and the design of the research study. Accordingly, Mertens et al. (2010) argued that mixed methods research that is reflective of the transformative paradigm is identified by adherence to a social justice agenda; explicit acknowledgement of factors that are culturally based in the definition of what is perceived to be real; recognition and challenging of power differences in relationships in the research context and wider society; and the need to develop methodological approaches that are responsive to the aforementioned complexities. (p. 199)

The mixed methods approach evolved out of a need to generalize exploratory findings, explain initial results, enhance a study with a second method, corroborate multiple methods of data, and best employ a theoretical stance (Creswell, 2007; Creswell & Plano Clark, 2011). Toward this end, Creswell and Plano Clark (2011) stated, “A combination of both forms of data provides the most complete analysis of problems” (p. 21). As a methodology, the mixed methods approach involves philosophical worldviews and assumptions that guide the direction of the collection and analysis of data and the systematic interaction phases of quantitative and qualitative approaches in the research process (Creswell & Plano Clark, 2011; Morse, 2003; Tashakkori & Teddlie, 1998). Experts in mixed methods research have argued that the combination of quantitative and qualitative methods provides a complete picture of the research problem (Creswell &
When reviewing mixed methods studies in education, prominent mixed methodologists, such as Tashakkori and Teddlie (1998), argued that the practice of mixing methods enhances the “quality of educational research and make it more accurate and useful” (as cited in Rocco et al., 2003, p. 596). Ivankova and Stick (2007) argued in their study on students’ persistence in doctoral programs that the mixing of both types of methods would better capture the trends and details of situations, such as doctoral students’ persistence in competitive environments. In regionally assessing studies conducted in and/or about Jamaica, Rao and Ibanez (2003) conducted a mixed methods analysis on the social impact of social funds used in Jamaica, which yielded more comprehensive findings as a result of mixing both the quantitative and qualitative approach. Additionally, there was a qualitative study conducted as a follow up to a previous econometrics study on home and school predictors of achievement in Jamaica (Lockheed & Harris, 2009). The original econometric investigation by Glewwe, Grosh, Jacoby, and Lockheed (1995) provided findings that were not always interpretable and resembled more of a “snapshot” of the research problem rather than a comprehensive understanding. A complementary qualitative study (Lockheed & Harris, 2009) was conducted based on the findings of the econometrics study on the same schools targeted in the original study. This follow-up qualitative approach provided a more complete and comprehensive understanding of the original research problem (Lockheed & Harris, 2009). As introduced in Chapter 1, Spencer-Rower (2000) investigated the practice of
extra lessons at the primary-school level in the Jamaica education system, using a mixed methods approach.

For this study, I employed a transformative mixed methodology, which allowed me to focus on the emancipatory implications “to advance social justice causes by identifying power imbalances and empowering individuals and/or communities” (Creswell & Plano Clark, 2011, p. 96). Furthermore the study considered similar recommendations found in Spencer-Rowe’s (2000) report to implement an extra lessons program for “at risk” students at the primary level and restrict the practice of students being taught by their class teachers in extra lessons. Specifically, the study examined the macro- and micro-level determinants of extra lessons on secondary education in Jamaica as a mechanism to advance transformative goals for the students of Jamaica. This chapter begins with a review of the research question and sub-issue questions, followed by an overview of a mixed methods approach. Within the mixed methods approach, I have explained the rationale for choosing a transformative design as well as the grounding analytical frameworks guiding the methodology. The quantitative and qualitative approaches have each been explained according to the order of the sub-issue questions. Lastly, a hierarchical linear model design, selected as the study’s quantitative approach, has been described, followed by a case study analysis.

**Rationale for Choosing Mixed Methods Approach**

There have been several studies conducted on shadow education or private tutoring around the world using primarily econometrics analyses (Briggs, 2001; Buchmann, 2002; Dang, 2007; Lavy & Schlosser, 2005; Lochan & Barrow, 2008;
Mischo & Haag, 2002; Ono, 2007; Zhang, 2011). The rationale for using econometrics is often attributed to micro- and macroeconomics data used in the studies to make generalizable findings about private tutoring in individual countries. However, Zhang (2011) coupled her econometrics model with a tri-level HLM model. Hierarchical linear models are widely used in the social sciences, especially in determining educational effects at multiple levels or across levels (Raudenbush & Bryk, 2002). The dissertation study has viewed this approach from a transformative-emancipatory paradigm (Mertens, 2003) and assessed the effects of student-level achievement nested in the school-level factors. Similar to Lockheed and Harris’s (2009) study, the qualitative approach has complimented the HLM design to provide a comprehensive understanding of extra lessons at the secondary level in Jamaica.

Toward this end, in selecting a mixed methods approach, I focused primarily on how to best address the research purpose and answer the research question and sub-questions guiding the study. According to Creswell and Plano Clark (2011), a typology-based approach centers around the study’s purpose and questions, and provides a range of available options to consider that are well defined, facilitate the researcher’s use of a solid approach for addressing the research problem, and help the researcher anticipate and resolve challenging issues. (p. 60)

Based on this premise, the overarching research question and subsequent purpose of the study examined, from the postcolonial theoretical perspective, how, if at all, extra lessons might improve educational outcomes for students at the secondary level in Jamaica. Accordingly, educational outcomes refer to academic achievement as well as self-efficacy outcomes, such as motivation, self-esteem, confidence, and the like. Thereafter,
five sub-issue questions were divided into micro and macro levels to support the investigation of the primary question:

Micro-level sub-questions:

1. What is the relationship between extra lessons and students’ academic achievement at the secondary level?
2. What aspects of a critical-inclusive pedagogical framework can be aligned with the teaching and learning practices utilized in extra lessons?
3. How do teachers, students, parents and key government officials describe their experiences with and the impact of extra lessons on students’ overall educational outcomes in three of Jamaica’s six education regions?

Macro-level sub-questions:

1. What is the social history of education in Jamaica and how does it influence the current state of the education system?
2. What are the scope and prevalence of the practice of extra lessons at the secondary level in Jamaica?

The framing of these questions allowed for both methodologies to provide a better understanding of the research problem. I addressed each sub-level question in the individual methodologies, with the holistic goal of answering the primary question.

Paradigmatic, Methodological Assumptions, and Worldviews

The use of postcolonial theories in education, as a theoretical lens to both view and understand oppression as well as to establish new ways of knowledge construction, was intentional throughout the entire dissertation study. As explained in Chapter 1, I have
viewed postcolonial theories in education as a counter-hegemonic approach, and I have argued in this chapter that a transformative-emancipatory paradigm is best suited to ground the research design and analysis. The transformative paradigm is characterized as placing central importance on the lives and experiences of marginalized groups such as women, ethnic/racial minorities, members of the gay and lesbian communities, people with disabilities, and those who are poor. (Mertens, 2003, p. 140)

Following from this paradigmatic view are methodological assumptions and guiding philosophical worldviews. According to Mertens (2003), methodological assumptions guide “the research [that] is conducted with involvement of all relevant communities, especially the least advantaged” (p. 142). Similar to postcolonial theories, the methodological assumptions of the transformative paradigm recognize the absence, misrepresentation, and omission of traditionally marginalized voices (Mertens, 2003). As reflected in Chapter 2, Mertens (2003) stated that although quantitative, qualitative, or mixed methods can be used in a transformative paradigm, “contextual and historical factors must be described, with special sensitivity given to power that can influence the achievement of social justice and avoidance of oppression” (p. 142). Toward this end, the social history of education in Jamaica, presented in Chapter 2, revealed that the current state of education is a resulting form of British colonial legacy. Extending from that assumption is that extra lessons can create an opportunity for postcolonial schooling to exist that is truly emancipatory in the teaching and learning of the underprivileged students in Jamaica.

Accordingly, the participatory worldview has an overarching principle that promotes an action agenda, which provides change for the participants and researched
Institutions (Creswell & Plano Clark, 2011). Ontologically depicted as a political reality, the participatory worldview engages in a collaborative approach between researcher and the researched so that there is co-construction of knowledge (Creswell & Plano Clark, 2011). Accordingly, this worldview promotes advocacy and focuses on participant agency in which the researched participant is able to use his or her voice and be saliently heard in the process. This statement is reminiscent of Smith’s (2005) view that within postcolonial theories, the participant is no longer the object of research but the subject of knowledge construction. Because of the participatory nature of this worldview, the methodology of the dissertation research was designed to be co-constructive, where the participants “help with designing the questions, collecting the data, analyzing it, and shaping the final report of the research” (Creswell, 2007, p. 22). In this respect, the mixed methods study has been grounded on change and advocacy.

In selecting a postcolonial theoretical framework, I employed a deconstructive approach to normative, Westernized ideologies as a means to construct a critical, transformative approach to benefit secondary education in Jamaica. Accordingly, I primarily used Tenet 4 of the postcolonial theories in education (described in Chapter 1): a critical-inclusive pedagogical (Freire, 1993; Tuitt, 2003) framework, which is based on the ideology of transformation. As such, the framework provided guiding tools in which to test and measure the aforementioned research questions.

**Reasons for Mixed Methods Approach**

The rationale to best answer the above research questions was guided by Greene, Caracelli, and Graham (1989) and Bryman’s (2006) reasons for selecting a mixed
methods approach. For the purposes of this dissertation study, I employed the following grounding rationale: triangulation, complementarity, initiation, offset, completeness, different research questions, credibility, and context (as referred to in Creswell & Plano Clark, 2011). Each of these reasons is explained in more detail below in terms of how it related specifically to the research study.

**Triangulation.** According to Greene et al. (1989) and Bryman (2006), triangulation seeks mutual corroboration from both qualitative and quantitative methods. Accordingly, I triangulated the results of the qualitative data with the quantitative data to better answer the aforementioned primary research question.

**Complementarity.** This reason explains the elaboration and further clarification of the results of one method with those of another method (Greene et al., 1989). The data from the quantitative data was better clarified with the data from the interviews, focus groups, and observations.

**Initiation.** Greene et al. (1989) explained this aspect as the discovery of contradictory, new perspectives of frameworks, which seeks the reconstruction of questions or results from one method with questions or results from another method. The analysis of this study was grounded on a postcolonial theoretical framework, which is highly contradictory to a Western HLM analysis. By analyzing a 2-level HLM model using a postcolonial theoretical perspective, I initiated a new composite of knowledge construction.

**Offset.** Whereas both research methods have their own strengths and weaknesses, the combination of both “allows the researcher to offset their weaknesses to draw on the
strengths of both” (Bryman, 2006, p. 106). In this study, the quantitative results were better explained with a deeper understanding of the qualitative results.

**Completeness.** Bryman (2006) explained that this aspect of the mixed methods approach results in a more comprehensive account of the study being conducted. As this is one of the few studies of extra lessons in Jamaica, I wanted a thorough analysis of this phenomenon using both quantitative and qualitative research methods.

**Different research questions.** This logic supports the argument that each research question can be best answered individually or in combination with both research methods (Bryman, 2006). The aforementioned primary research question and sub-issue questions called for both an individual and mixed approach.

**Credibility.** Bryman (2006) stated that the integrity of findings is better enhanced by the combination of both research methods. The mixing of methods enhanced the level of credibility in the study.

**Context.** Bryman (2006) explained this component of the rationale as focusing on the enhancement of the contextual qualitative research findings with the generalizability of a quantitative study. Because this study was based on a postcolonial theoretical perspective, it was, by nature, qualitative, but the possible relationships uncovered through a survey instrument made for more generalizable findings.

These eight reasons for mixing methods guided the data collection, analysis, and interpretation of data. As noted in Creswell and Plano Clark (2011), although these reasons are not absolute and can be weighted with alternative justifications, they provided
a grounding rationale for mixing methods to best answer the research questions of this study.

**Mixed Methods Approach**

According to Creswell and Plano Clark (2011), there are four key factors to decide on when selecting a mixed methods design. Each of these key factors involves the extent to which the qualitative and quantitative strands interact. A strand encompasses “the basic process of conducting quantitative or qualitative research: posing a question, collecting data, analyzing data, and interpreting results based on that data” (Teddlie & Tashakkori as cited in Creswell & Plano Clark, 2011, p. 63). The four decision factors include

1. Level of interaction between the strands
2. Priority of the strands
3. Timing of the strands
4. Procedures for mixing the strands. (Creswell & Plano Clark, 2011, p. 64)

**Level of interaction.** The level of interaction between the quantitative and qualitative strands can be either independent or interactive. If the level of interaction is independent, then the researcher conducts the quantitative and qualitative strands separately and distant from each other. The researcher can draw conclusions from both strands in the interpretation of the overall study. If the level of interaction is interactive, then both the quantitative and qualitative strands interface prior to the interpretation and conclusion phase of the study. Each strand can interact in the research design and data collection phase (Creswell & Plano Clark, 2011; Greene, 2007). Accordingly, this study used an interactive approach between both strands.
**Priority of the strands.** There are three options for “the relative importance or weighting of the quantitative and qualitative methods” (Creswell & Plano Clark, 2011, p. 65) for conducting a mixed methods research study. Both the quantitative and qualitative methods can have an equal priority in which neither method outweighs the other. Priority can also be given to the quantitative methods, in which there is greater emphasis on the quantitative strands. Likewise, priority can be given to the qualitative methods in which greater emphasis is placed on the qualitative strands (Creswell & Plano Clark, 2011).

**Timing of the strands.** According to Creswell and Plano Clark (2011), timing “refers to the temporal relationship between the quantitative and qualitative strands” (p. 65). There are three types of timing discussed in Creswell and Plano Clark (2011): (a) concurrent timing, (b) sequential timing, and (c) multiphase timing. **Concurrent timing** occurs when both the quantitative and qualitative strands are implemented simultaneously “during a single phase of the research study” (p. 66). **Sequential timing** occurs when the collection and analysis of one type of data occurs before the other. There is essentially an established succession of order of data collection and analysis. **Multiphase combination timing** occurs when there are three or more phases combining both concurrent and sequential timing throughout the study (Creswell & Plano Clark, 2011).

**Procedure for mixing the strands.** The mixing of the quantitative and qualitative strands is the process of combining and integrating each strand throughout the study (Creswell & Plano Clark, 2011). Both the points of interface as well as the mixing strategies are integral concepts to a mixed methods study. The **point of interface** is the “stage of integration” (Creswell & Plano Clark, 2011, p. 66) that can occur at four stages
of the study: design, data collection, data analysis, and interpretation. The mixing
strategies recommended by Creswell and Plano Clark (2011) include

1) Merging the two data sets, 2) connecting from the analysis of one data to the
collection of a second set of data, 3) embedding of one form of data within a
larger design or procedure, and 4) using a framework (theoretical or program) to
bind together the data sets. (p. 66)

**Mixed methods designs.** The mixed methods approach involves multiple
designs. The six main designs mentioned and highly cited in Creswell and Plano Clark
(2011) are (a) convergent parallel design, (b) explanatory sequential design, (c)
exploratory sequential design, (d) embedded design, (e) transformative design, and (f)
multiphase design. Because I have selected a transformative design, I explain below in
detail the components of this design and its relevance to the research study.

**Transformative design.** This design is grounded within a transformative
framework “to conduct research that is change oriented” (Creswell & Plano Clark, 2011,
p. 96). The transformative design revolves around a concurrent or sequential collection
and analysis of quantitative and qualitative data that is framed within a “transformative
theoretical framework that guides the methods decisions” (Creswell & Plano Clark, 2011,
p. 73). Based on my examination and positioning of postcolonial theories in education in
Chapter 2, I framed the theoretical framework as a transformative schema grounded in
change. Toward this end, I used as a guide Creswell and Plano Clark’s (2011) four
primary reasons for choosing a transformative design:

1. The research seeks to address issues of social justice and calls for change
2. The researcher sees the needs of underrepresented or marginalized populations
3. The researcher has a good working knowledge of the theoretical framework
   used to study underrepresented or marginalized populations
4. The researcher can conduct the study without further marginalizing the population under study. (p. 97)

In addition to Creswell and Plano Clark’s (2011) reasons, I selected this design approach because I agree that “an explicit goal for [transformative] research [is] to serve the ends of creating a more just and democratic society that permeates the entire research process, from the problem formulation to the drawing of conclusions” (Mertens, 2003, p. 159).

Some of the prototypical characteristics left to describe are the level of interaction, priority of the strands, and point of interface. Within a transformative design, the level of interaction between both methods is interactive, meaning that “a direct interaction exists between the quantitative and qualitative strands of the study” (p. 65). There is usually equal priority given to each of the strands, and the timing of strands can either be concurrent or sequential. Lastly, the primary point of interface for mixing occurs at the design level (Creswell & Plano Clark, 2011).

Some of the strengths of using a transformative design are indicative of an emancipatory worldview in which “the purpose of knowledge construction is to aid people to improve society [where] knowledge reflects the power and social relationships within society” (Creswell & Plano Clark, 2011, p. 44). Some of the underlying strengths of this design are that “research helps to empower individuals and bring about change and action” (Creswell & Plano Clark, 2011, p. 99). Furthermore, participants are active subjects of the study, and the research garnered is useful to community members and stakeholders (Creswell & Plano Clark, 2011). An inherent challenge of transformative design is that there is little literature and research done using transformative design. As a
result, the use of transformative design has been justified throughout the entire study, and trust has been garnered with participants and conducted in a “culturally sensitive way” (Creswell & Plano Clark, 2011, p. 99).

**Research Design**

I employed a transformative mixed-methods design, grounded and informed by a postcolonial theoretical lens. Using this perspective is both ontologically and epistemologically contradictory, because the methods I selected were a mix of conventional and non-conventional approaches. As such, this research design was not devoid of the traditional “academy of researchers” and the “larger political struggle of decolonization” (Smith, 2005, p. 88). As Smith (2005) stated, “[The] retaining of connections” between the traditional and non-traditional “offer the best possibility for a transformative agenda” (p. 88).

Accordingly, I quantitatively uncovered and then qualitatively highlighted how, if at all, extra lessons might improve educational outcomes for students at the secondary level in Jamaica. I collected the data sequentially and employed an interactive level between both the quantitative and qualitative strands so that both strands were constantly informing the other during the study. Furthermore, the design allowed for equal priority of both strands. As aforementioned, I implemented the strands in a sequential phasing, starting with the quantitative strand and ending with the qualitative strand. The point of interaction began with the design of the research question and continued throughout the data collection, analysis, and into the interpretation stage. This study employed a full mixed methods design, using the postcolonial theoretical framework to bind together the
data sets and connect both strands from collection to analysis. The quantitative data provided descriptive statistics and tested the following hypotheses: (a) The practice of extra lessons within schools is related to higher academic achievement and (b) critical-inclusive pedagogy in extra lessons is related to academic achievement. The qualitative data employed the postcolonial theoretical tenets in education to inform the data collection and analysis of the findings (see Appendix B for a diagram of the transformative design).

**Dissertation Setting**

The setting for the dissertation study encompassed three areas:

1. Upper secondary high schools, with fifth forms (Grade 11) throughout the 14 parishes and/or six education regions.
2. Three of the six education regions of the Ministry of Education for conducting the focus groups of students, parents and extra lessons teachers.

The Ministry is comprised of 11 agencies and 6 regional offices across the 14 parishes (Ministry of Education, 2012). Please see Figure 14 for a map of the six education regions in Jamaica. According to the 2010/2011 Jamaican Education Statistics Report, there are 149 secondary high schools, excluding technical high schools and agricultural high schools. Table 1 below shows the distribution of public secondary high schools by region and parish.
Table 1

*Distribution of Public Secondary High Schools by Region and Parish*

<table>
<thead>
<tr>
<th>Region</th>
<th>Parish</th>
<th>Secondary high schools</th>
</tr>
</thead>
<tbody>
<tr>
<td>Kingston</td>
<td>Kingston</td>
<td>12</td>
</tr>
<tr>
<td></td>
<td>St. Andrew</td>
<td>27</td>
</tr>
<tr>
<td></td>
<td><strong>Total</strong></td>
<td><strong>39</strong></td>
</tr>
<tr>
<td>Port Antonio</td>
<td>St. Thomas</td>
<td>5</td>
</tr>
<tr>
<td></td>
<td>Portland</td>
<td>5</td>
</tr>
<tr>
<td></td>
<td>St. Mary</td>
<td>9</td>
</tr>
<tr>
<td></td>
<td><strong>Total</strong></td>
<td><strong>19</strong></td>
</tr>
<tr>
<td>Brown’s Town</td>
<td>St. Ann</td>
<td>7</td>
</tr>
<tr>
<td></td>
<td>Trelawny</td>
<td>7</td>
</tr>
<tr>
<td></td>
<td><strong>Total</strong></td>
<td><strong>14</strong></td>
</tr>
<tr>
<td>Montego Bay</td>
<td>St. James</td>
<td>10</td>
</tr>
<tr>
<td></td>
<td>Hanover</td>
<td>5</td>
</tr>
<tr>
<td></td>
<td>Westmoreland</td>
<td>7</td>
</tr>
<tr>
<td></td>
<td><strong>Total</strong></td>
<td><strong>22</strong></td>
</tr>
<tr>
<td>Mandeville</td>
<td>St. Elizabeth</td>
<td>9</td>
</tr>
<tr>
<td></td>
<td>Manchester</td>
<td>10</td>
</tr>
<tr>
<td></td>
<td>Clarendon</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td><strong>Total</strong></td>
<td><strong>22</strong></td>
</tr>
<tr>
<td>Old Harbour</td>
<td>Clarendon</td>
<td>13</td>
</tr>
<tr>
<td></td>
<td>St. Catherine</td>
<td>20</td>
</tr>
<tr>
<td></td>
<td><strong>Total</strong></td>
<td><strong>33</strong></td>
</tr>
<tr>
<td><strong>Jamaica</strong></td>
<td><strong>Grand Total</strong></td>
<td><strong>149</strong></td>
</tr>
</tbody>
</table>


In addition to regional classification, secondary schools are classified on a point system, depending on the course duration:

- 3-Year Course – 3 points per student
- 5-Year Course – 4 points per student
- 7-Year Course – 5 points per student
- Class IV = 5,501 points
- Class III = 3,451-5,500 points
• Class II = 2,201-3,450 points

• Class I = 2,200 points (Ministry of Education, 2010-2011b)

Following the above-mentioned classifications, the Ministry of Education School Profiles 2010-2011 classified secondary high schools by school code; urban versus rural locale; co-ed, all female, male gender classification; and school organization.

Table 2

Summary of Secondary High School Classifications in Jamaica by Parish

<table>
<thead>
<tr>
<th>Parish</th>
<th>Gender</th>
<th>School organization</th>
<th>Class</th>
<th>Locale</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>M</td>
<td>F</td>
<td>Co</td>
<td>Whole Day</td>
</tr>
<tr>
<td>Kingston</td>
<td>3</td>
<td>2</td>
<td>7</td>
<td>10</td>
</tr>
<tr>
<td>St. Andrew</td>
<td>2</td>
<td>6</td>
<td>19</td>
<td>20</td>
</tr>
<tr>
<td>St. Thomas</td>
<td>0</td>
<td>0</td>
<td>5</td>
<td>2</td>
</tr>
<tr>
<td>Portland</td>
<td>0</td>
<td>0</td>
<td>5</td>
<td>4</td>
</tr>
<tr>
<td>*St. Mary</td>
<td>0</td>
<td>1</td>
<td>8</td>
<td>6</td>
</tr>
<tr>
<td>*St. Ann</td>
<td>0</td>
<td>1</td>
<td>5</td>
<td>5</td>
</tr>
<tr>
<td>Trelawny</td>
<td>0</td>
<td>1</td>
<td>6</td>
<td>4</td>
</tr>
<tr>
<td>St. James</td>
<td>1</td>
<td>2</td>
<td>7</td>
<td>7</td>
</tr>
<tr>
<td>*Hanover</td>
<td>0</td>
<td>0</td>
<td>5</td>
<td>4</td>
</tr>
<tr>
<td>*Westmoreland</td>
<td>0</td>
<td>0</td>
<td>7</td>
<td>5</td>
</tr>
<tr>
<td>St. Elizabeth</td>
<td>1</td>
<td>1</td>
<td>7</td>
<td>5</td>
</tr>
<tr>
<td>Manchester</td>
<td>0</td>
<td>1</td>
<td>9</td>
<td>8</td>
</tr>
<tr>
<td>Clarendon</td>
<td>0</td>
<td>0</td>
<td>16</td>
<td>14</td>
</tr>
<tr>
<td>St. Catherine</td>
<td>0</td>
<td>0</td>
<td>20</td>
<td>11</td>
</tr>
</tbody>
</table>

<sup>a</sup>Ext = Extended; <sup>b</sup>Ur = Urban; <sup>c</sup>Rl = Rural.
Table 2 provides a summary of the secondary high school classification in Jamaica by parish. Important to note is that the enrollment in almost every parish exceeds the capacity which results in over-populated class size.

Figure 14: Map of Jamaica’s education regions. Adapted from Planning Institute of Jamaica, Ministry of Education, Youth and Culture, 2005.

Transformative Design

The transformative design involved an interactive level of integration between the quantitative and qualitative strands. In doing so, I developed both the quantitative and qualitative protocols using the following four construct areas: (a) scope and prevalence, (b) educational outcomes, (c) critical-inclusive pedagogical tenets, and (d) socioeconomic
implications (see Table 5 for quantitative construct and content areas). In Phase 1 of this study, the transformative aims were to (a) identify the effect on student academic achievement for those who participate in extra lessons, and (b) identify access and equity data between students enrolled in extra lessons and those not enrolled. In Phase 2 of this study, the transformative aims were to (a) include key extra lessons stakeholders, such as students, parents, extra lessons’ teachers and government administrators; (b) gather data and explain the growing phenomenon of extra lessons in a postcolonial theoretical context; and (c) gather data from those who can make systemic change.

To accomplish these aims, two phases of data collection and analysis occurred, with three stages of interface. The first phase of quantitative data collection and analysis included the following:

1. A student questionnaire was piloted and administered to a multi-stage stratified sampling frame (Fowler, 2009) of 1,654 Grade 11 students in 62 secondary high schools. Descriptive statistics as well as a 2-level HLM analysis were used to examine interaction effects between student-level and school-level factors (discussed below in detail).

The first stage of interface was introduced within the design of the instrument (to be described later in detail), which quantified the qualitative tenets of Tuitt’s (2003) inclusive pedagogy using a five-point Likert scale (See Appendix C for complete student questionnaire). The second stage of interface occurred within the selection of participants for Phase 2 data collection and analysis, as well as in the qualitative design protocol. Based on the descriptive statistics results of Phase 1, I selected three education regions to
comprise the holistic multi-case study in Phase 2. From this, I selected three sample populations for Phase 2: (a) a sub sample of students who completed the survey and their parents from three of the six regions, (b) a convenience sample of students’ extra-lessons teachers, and (c) a third convenience sample of macro-level administrators involved with the education system (i.e. government officials). The second phase of qualitative data collection and analysis included the following:

1. A stratified purposeful sampling frame (Fowler 2009; Hodgkin, 2008) to select students, extra-lessons teachers, and parents according to region, as well as a confirming/disconfirming sampling scheme to bound the 3 cases.
2. In-depth focus groups and interviews in each of the three regions.
3. Three 2-hour observations of extra-lessons classes in two of the three education regions as well as document collections of respective curriculum, syllabi, and student classwork papers.
4. Three one-on-one interviews with key education administrators in the Ministry of Education.

The final stage of interface coincided with the transformation aims for the interpretation stage to (a) build a comprehensive picture of the status of shadow education/extra lessons in Jamaica and the accompanying micro and macro factors influencing extra lessons, (b) explore financing tutoring programs as a flexible means of educating disadvantaged children, and (c) challenge inequities of secondary education in Jamaica. Within the interpretation stage of the transformative design, I included a postcolonial theoretical analysis of the findings.
Mixed Methods Data Collection

The dissertation study utilizes both *intramethod* and *intermethod* mixing throughout the study. For example, within the constructs of the extra lessons student questionnaire, I used both open- and closed-ended items concurrently on a single questionnaire, which is an example of intramethod mixing (Johnson & Turner, 2003). Furthermore, the use of direct observations is an example of intermethod mixing (Johnson & Turner, 2003). Appendix D provides a summary of both the quantitative and qualitative data collection procedures to support the transformative research design explained above. In the following sections, an overview of the mixed methods data analysis procedures and a description of the quantitative and qualitative methodology used in this study are presented.

Mixed Methods Data Analysis

Although explained in detail later on, I provide in Appendix E a tabulated summary of the mixed methods data analysis procedures that I utilized in the aforementioned research design. Onwuegbuzie and Teddlie (2003) defined a mixed methods data analysis technique as

> the use of quantitative and qualitative analytical techniques, either concurrently or sequentially, at some stage beginning with the data collection process from which interpretations are made in either a parallel, an integrated or an iterative manner. (p. 353)

The data analysis matrix shown in Appendix E provides a comprehensive look at how I analyzed the data. My interpretation and foreshadowed integration of both sets of data have been mentioned at the end of this chapter to holistically provide an understanding of the macro- and micro-level impacts of extra lessons at the secondary level in Jamaica.
Quantitative Methodology

The quantitative data sought to answer the following: (a) What is the relationship between extra lessons and students’ academic achievement at the secondary level? and (b) What are the scope and prevalence of the practice of extra lessons at the secondary level in Jamaica? Accordingly, the HLM analysis tested the following hypotheses:

- **Hypothesis 1**: The practice of extra lessons within schools is related to higher academic achievement.
- **Hypothesis 2**: Critical-inclusive pedagogy in extra lessons is related to academic achievement.

**Sample.** A multi-stage stratified sampling frame (Fowler, 2009; Spencer-Rowe, 2000) was used to distribute the population sample of Grade 11 students currently in secondary schools across all 14 parishes. The 2010/2011 Jamaica Education Statistics report revealed that there was a total of 37,958 fifth-form students in 149 schools across all 14 parishes (MoE, 2010-2011a). Additionally, the Ministry of Education is decentralized into six administrative regions in which two to three parishes are grouped within each education region. Stratified sampling at the student level was important to allow representation across the six regions. According to Daniel (2012), “The number of elements allocated to the various strata is proportional to the representation of the strata in the target population” (p. 132). Table 3 shows the sample of students surveyed in each parish and corresponding education region.

The sample of 1,654 Grade 11 students was derived from 62 schools across all 14 parishes. Using Optimal Design Software for Multi-Level and Longitudinal Research
(Raudenbush, et al., 2011), I chose 62 clusters with effect sizes of .25 (small), .50 (medium) and .75 (large). With an average of 27 persons per cluster and a small effect size ($\delta = 0.25, \rho = 0.10$), the power is .7 (see Appendix F for diagram of power analysis). Among the 62 schools, 14 were same-sex schools, 48 were coeducational schools, 11 were rural schools, and 51 were urban schools. Table 4 reports the gender and locale of sampled schools. Total schools sampled account for 42% of all secondary high schools.

Table 3

<table>
<thead>
<tr>
<th>Regions</th>
<th>Parish</th>
<th>Population</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Students</td>
</tr>
<tr>
<td>Kingston</td>
<td>Kingston</td>
<td>486</td>
</tr>
<tr>
<td></td>
<td>St. Andrew</td>
<td></td>
</tr>
<tr>
<td>Port Antonio</td>
<td>St. Thomas</td>
<td>214</td>
</tr>
<tr>
<td></td>
<td>Portland</td>
<td></td>
</tr>
<tr>
<td></td>
<td>St. Mary</td>
<td></td>
</tr>
<tr>
<td>Brown’s Town</td>
<td>St. Ann</td>
<td>132</td>
</tr>
<tr>
<td></td>
<td>Trelawny</td>
<td></td>
</tr>
<tr>
<td>Montego Bay</td>
<td>St. James</td>
<td>248</td>
</tr>
<tr>
<td></td>
<td>Hanover</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Westmoreland</td>
<td></td>
</tr>
<tr>
<td>Mandeville</td>
<td>St. Elizabeth</td>
<td>242</td>
</tr>
<tr>
<td></td>
<td>Manchester</td>
<td></td>
</tr>
<tr>
<td>Old Harbour</td>
<td>Clarendon</td>
<td>332</td>
</tr>
<tr>
<td></td>
<td>St. Catherine</td>
<td></td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td></td>
<td><strong>1654</strong></td>
</tr>
</tbody>
</table>

Table 4

School Sampling in Terms of Gender and Locale

<table>
<thead>
<tr>
<th>Gender</th>
<th>Locale</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Same-Sex</td>
<td>Co-Ed</td>
</tr>
<tr>
<td>All Secondary Schools in Jamaica</td>
<td>22</td>
<td>127</td>
</tr>
<tr>
<td>Schools in Study</td>
<td>14</td>
<td>48</td>
</tr>
<tr>
<td>Percentage</td>
<td>64%</td>
<td>38%</td>
</tr>
</tbody>
</table>

Within each high school, anywhere from 1 to 7 classes were randomly chosen in which a sub-sample of randomly selected students were chosen or in some school’s cases, all students in the classroom were sampled. An average of 27 students per school were sampled with a range from 20 to 32 students at each school sampled.

**Instrument.** One student questionnaire was designed and piloted for this study (see Appendix C). The resulting full study survey is an online, 32-item, confidential survey consisting of 16 items adapted from a similar study conducted in Hong Kong (Bray, 2013), 7 originally constructed items informed by the literature in the field (Bell, 2006; Spencer-Rowe, 2000; Tuitt, 2003; TIMSS Students Questionnaire, 2003; Zhang, 2011), 7 demographic items and 2 open-ended questions (see Appendix R). The questionnaire addresses the following four main construct areas shown in Table 5.
Table 5

Construct Areas for Student Questionnaire

<table>
<thead>
<tr>
<th>Construct Area</th>
<th>Content</th>
</tr>
</thead>
</table>
| Prevalence and Scope of Extra Lessons               | Cost per month  
Value of extra lessons  
Reasons for taking extra lessons  
Activities in extra lessons  
Average hours spent per week  
Type of extra lessons  
Location of extra lessons                                                                 |
| Education Outcomes                                  | Overall effectiveness of taking extra lessons  
Grade 10 (Fourth Form) end-of-year grade average                                                                                       |
| Critical Inclusive Pedagogical Framework            | Tenet 1: Faculty-student interaction  
Tenet 2: Sharing power  
Tenet 3: Dialogical teacher-student interaction  
Tenet 4: Activation of student voice  
Tenet 5: Utilization of personal narratives                                                        |
| Socioeconomic Implications                          | Average household monthly income  
Parents/ guardians education level  
Parents/ guardians occupation  
Number of rooms in home  
Number of children in home                                                                 |

Pilot study. I conducted a pilot study on the instrument to test for the psychometric properties of the instrument, including content validity; construct validity, which includes convergent and discriminant validity; criterion-relation validity, which includes either concurrent or predictive validity; and reliability statistics, which in most cases is internal consistency. Before being piloted to 100 participants in Jamaica, the extra-lessons questionnaire was reviewed by subject matter experts, such as two
methodologists/faculty members in the United States, one econometrician in the United States, two Jamaican subject-matter experts, and one professor of comparative international education with more than 21 years of experience in the field of shadow education.

The preliminary version of the pilot-study questionnaire received Institutional Review Board approval. The revised instrument was then sent to 100 participants in Jamaica between ages 18 and 24 who had taken the CSEC exams in Jamaica. Additionally, one college student and one upper sixth-form student over the age of 18 were asked to voluntarily provide their feedback on question design, length of questionnaire, and instrument design.

Regarding the original 34 items, participants were asked primarily to respond to statements, such as “To what extent do you agree or disagree that extra lessons or private tutoring has improved the following: CSEC (CXC) examination grades?” and “How would you respond to the following statement about your mathematics extra-lessons teachers?” using a five-point Likert scale. Other items that were placed on a five-point Likert scale pertained to the tenets of critical-inclusive pedagogy, as outlined in Chapter 2, such as “My extra lessons teacher used creative ways, such as Reggae music, Jamaican language, and examples I could relate to in class.” The scale endpoints were “Strongly disagree” and “Strongly agree,” with “Neither agree nor disagree” as the midpoint. The scale did include numbers. The questionnaire also had several multiple-choice/multiple-answer questions, such as one that asked students to indicate the types of extra lessons or private tutoring that they attended (e.g., private one-on-one, internet tutoring, lecture
style, and in-class by teacher). Other open-answered items asked questions pertaining to socioeconomic levels, such as “Please state the numbers of the following rooms in your home: living room, dining room, bedroom, and so on.” The five demographic-type items consisted of age, gender, exam grade, parish the student lives in, and parish in which the student goes to school.

To improve the validity and reliability of measures used in this model, most of the items in the questionnaire were adapted from and tested in Mark Bray’s (2013) study. Bray’s (2013) study aimed at securing more robust data on the scale, types, and intensity of private tutoring in Hong Kong secondary schooling from the perspective of the pupil; examining pupils’ perceptions on the ways in which tutoring has shaped their schooling experiences; and identifying teachers’ perspectives on tutoring and their responses to it (M. Bray, formal personal communication, May 2012). During the design of the questionnaire by Dr. Bray and his team in Hong Kong, several steps were followed to guarantee the validity and reliability of their instruments:

• They conducted a pilot study in three schools, with about 20-60 students in each school, and completed analysis on the data to see if the data results were according to their expectations (and why).

• They invited two college students to complete the questionnaire, and interviewed them on how they understood questions and items in it to see if the students’ understanding met their originally designed meaning of the questions.
• They conducted a second pilot study in a secondary school with a sampling method similar to the one used in the main study (together with pilot interviews).
• Then they modified the questionnaire (and interview questions) accordingly.
• They completed a third pilot study in another secondary school, with the same method previously stated and finalized the questionnaire accordingly.

**Reliability.** Instrument or questionnaire items are typically measured using both reliability and validity measures. Reliability is consistency across replication of a procedure and can be measured over time, forms, raters, and items (Bobko, 2001). Reliability can be measured using a correlation coefficient which indicates how scores on one test change relative to scores on a second test \(r_{\text{test1•test2}}\) (Bobko, 2001). There are four main types of reliability measures: (a) test-retest, (b) parallel forms, (c) inter-rater, and (d) internal consistency (Bobko, 2001). I employed internal consistency, which is a measure of how consistently each item measures the same underlying construct. Accordingly, I used Cronbach’s alpha to correlate performance on each item with overall performance across participants. Table 6 reports Cronbach’s alpha (Cronbach, 1951; Nunnally, 1978) to cross-examine the reliability of items used in the pilot study as compared to reliability of original items from Dr. Bray’s study. Most of the alphas calculated in the pilot study were above 0.7 except one alpha. The alpha of items measuring effect of extra lessons delivery type was 0.5926. Thus, this set of measures was considered unreliable and therefore not used in the empirical analysis, as noted in Appendix G.
## Table 6

**Cronbach’s Alpha of Selected Items Comparing Bray’s Study With the Pilot Study**

<table>
<thead>
<tr>
<th>Bray’s questions</th>
<th>Number of items</th>
<th>Cronbach’s alpha</th>
<th>Pilot study questions</th>
<th>Number of items</th>
<th>Cronbach’s alpha</th>
</tr>
</thead>
<tbody>
<tr>
<td>Q5: To what extent do you agree that private supplementary tutoring has improved your private tutoring has improved the following:</td>
<td>6</td>
<td>.785</td>
<td>Q14: To what extent do you agree or disagree that extra lessons or private tutoring has improved the following:</td>
<td>10</td>
<td>.895</td>
</tr>
<tr>
<td>Q7: To what extent do you agree with the following comparison about your school teachers and your tutors?</td>
<td>9</td>
<td>.631</td>
<td>Q17: How would you respond to the following comparative statements about your mathematics school teachers and your extra lessons math teachers or private tutors?</td>
<td>11</td>
<td>.826</td>
</tr>
<tr>
<td>Q11: To what extent do you agree with the following statements about “Tutorial Kings and Queens”</td>
<td>5</td>
<td>.778</td>
<td>Q16: How would you respond to the following statements about your mathematics extra lessons teacher(s) or mathematics private tutors</td>
<td>13</td>
<td>.903</td>
</tr>
</tbody>
</table>
Thereafter, Table 7 reports the reliability of items of the pilot study and the full dissertation study. The alpha of items in the full study decreased somewhat but were in acceptable ranges.

Table 7

*Cronbach’s Alpha of Selected Items For Pilot Study and Full Dissertation Study*

<table>
<thead>
<tr>
<th>Instrument Questions</th>
<th>Number of Items (Pilot Study)</th>
<th>Cronbach’s Alpha (Pilot Study)</th>
<th>Number of Items (Full Study)</th>
<th>Cronbach’s Alpha (Full Study)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Q14:</strong> To what extent do you agree or disagree that extra lessons or private tutoring has improved the following:</td>
<td>10</td>
<td>.895</td>
<td>10</td>
<td>.775</td>
</tr>
<tr>
<td><strong>Q16:</strong> How would you respond to the following statements about your mathematics extra lessons teacher(s) or mathematics private tutors</td>
<td>13</td>
<td>.903</td>
<td>12</td>
<td>.801</td>
</tr>
<tr>
<td><strong>Q17:</strong> How would you respond to the following comparative statements about your mathematics school teachers and your extra lessons math teachers or private tutors?</td>
<td>11</td>
<td>.826</td>
<td>11</td>
<td>.677</td>
</tr>
</tbody>
</table>

*Validity.* Validity refers to the degree to which evidence and theory support the interpretations of test scores entailed by proposed uses of tests (Bobko, 2001).

Essentially, a valid test measures what it was designed to measure. Validity refers to the test’s results and not the test itself. There are essentially three types of validity: content validity; construct validity, which includes convergent and discriminant validity; and
criterion-relation validity, which includes either concurrent or predictive validity. **Content validity** (Gatewood & Field, 1998) is a measure of how well the items represent the entire domain and can be evaluated using an expert in the field of study. Content validity was obtained for the instrument by disseminating, receiving feedback and then receiving approval of the pilot and final instrument from 5 content experts in the field.

**Construct validity** (Campbell & Fiske, 1959) can be measured using convergent or discriminant measures. It is a measure of how well a test assesses some underlying construct. Lastly, there are two types of criterion validity: concurrent and predictive. **Criterion-concurrent validity** measures how well a test estimates a criterion. This is measured by selecting a criterion and correlating scores on the test with scores on the criterion in the present. Criterion-predictive validity is a measure of how well a test predicts a criterion. This measure can be evaluated by selecting a criterion and correlating the scores on the test with scores on the criterion in the future. Construct and criterion validity were not tested for this study, because more data needed to be collected.

**Procedures.** I started data collection after obtaining IRB approval and the Jamaican Ministry of Education approval to conduct research in secondary schools. The Ministry of Education also provided me a copy of the principals and schools’ contact information. Prior to my arrival in Jamaica in November 2012, I sent two rounds of emails to each of the 149 principals. All 149 secondary schools were contacted to participate in the study: 72 agreed to participate, 4 did not agree; 1 school was no longer operational and 72 never responded. Due to the unanticipated extended length of data collection, scheduling conflicts and lack of resources, I collected data from 62 schools.
representing 42% of the total secondary school sample. Data collection was time-intensive, because I had to physically visit each school on multiple occasions. Due to the lack of email and internet communication, scheduling of visits proved to be difficult and only took place face-to-face.

Students from five of the 62 schools completed the survey online in the schools’ computer lab. Otherwise, hard-copies of the surveys were printed and individually distributed to each student. Due to protection of anonymity of each student, I received a waiver of signature for the consent forms from IRB (see Appendices J). Prior to the distribution of surveys, I explained the purpose of the current study, the data collection procedures, the time needed to complete the study, and the benefits and drawbacks of participation. After receiving verbal consent from each student, I handed out the consent forms attached to each printed survey and asked the students to read and agree prior to starting the survey. The same measures were taken with students who completed the survey in the computer labs. On occasion when students did not agree to take the survey, they were excused with permission from the teacher to work quietly on their own, while the other students completed the survey. All hard-copy questionnaires were collected on the day of the visit, sealed in an envelope, and identified by school names.

Due to extensive driving in remote and high-incidence violent communities, I hired a research assistant who also functioned as a driver. The research assistant was informally trained, as his main function was to serve as a driver. I paid him USD $100 from personal funds as well as all meals per diem. Data collection took 13 weeks to
complete. A total of 1,681 questionnaires were administered, of which 1,654 (98.39%) were completed and collected.

**School data.** After collecting the sealed envelopes, I referred to the *2010/2011 Jamaica School Profiles* (MoE, 2010–2011) to disaggregate each school by gender and locale. Accordingly, each schools’ respective urban and rural locale as well as same-sex or coeducational category was coded in the database for the empirical analysis.

**Data analysis.** This study used descriptive, non-parametric, and parametric techniques to analyze the data. A two-level hierarchical linear model (HLM) was used to address the hypotheses regarding student-level achievement at the school level. To provide context for the HLM analysis, I describe below the grounding framework guiding this model.

As explained in Chapter 2, the supply and demand of extra lessons is driven by both macro- and microeconomic factors. And as mentioned earlier in this chapter, there have been several studies conducted on shadow education or private tutoring around the world using complex sampling design analysis (Briggs, 2001; Buchmann, 2002; Dang, 2007; Lavy & Schlosser, 2005; Mischo & Haag, 2002; Ono, 2007; Zhang, 2011). The rationale for using HLM analysis is often attributed to the cross-level effects and partition variance and covariance of fitted models (Raudenbush & Bryk, 2002). As stated in Dang and Rogers (2008), “[To understand] the policy implications of growth of the private tutoring industry requires understanding not only its determinants—who is investing in tutoring and why—but also the consequences for those being tutored” (p. 169).
Hierarchical linear modeling. Hierarchical linear models (HLM) are a methodological approach that measures multilevel effects within nested units of analyses (Bryk & Raudenbush, 1988). With regards to educational research, “education data often have a nested structure of repeated observations on students, students within classrooms within schools, and so on” (Bryk & Raudenbush, 1988, p. 69). Bryk and Raudenbush (1988) determined that to correctly measure student outcomes, the research problem has three foci:

- To assess the growth of students over the course of the academic year (or segment of a year);
- To examine the possible effects of student background characteristics and individual educational experiences on this learning; and
- To determine how the organization of classrooms, the activities of teachers, and policies imposed from outside may influence the distribution of student outcomes within these settings.

(p. 66)

The study employed a two-level hierarchical linear model: (a) Level 1 consists of student-level variables, such as academic achievement, average household monthly income, number of hours spent in extra lessons, and a composite variable representing critical-inclusive pedagogical tenets; (b) Level 2 consists of school-level variables, such as school locale and school sex. Accordingly, I explain below the components of a two-level linear model as it relates to education data and outcomes, borrowing from Bryk and Raudenbush’s (1988) example of a two-level linear model, which researches the “effects of high school organization on the social distribution of student achievement” (p. 69).

The two-level HLM consists of both a within- and between-school model. The within-school equation is represented as follows:

$$Y_{ij} = \beta_{j0} + \beta_{j1}X_{y1} + \beta_{j2}X_{y2} + \cdots + \beta_{jk}X_{yk} + R_j$$
where the achievement of student \(i\) in school \(j\) is represented by the student background \(X_{ij}\) and \(jk\), “regression coefficients indicate the strength of associations between students background characteristics and the outcome” (p. 70). These regression coefficients can vary between schools, which leads to the between-school model:

\[
\beta_{jk} = \gamma_0 + \gamma_1 W_{1jk} + \gamma_2 W_{2jk} + \cdots + \gamma_{pk} W_{pk} + U_{jk}
\]

(3)

where \(jk\) represents the school effects in unit \(j\); \(W_{pj}\) represents school-level variables; \(\gamma_{pk}\) represents the effects of school characteristics on the distribution of achievement within schools; and represents unique effects associated with school \(j\) (Bryk & Raudenbush, 1988, p. 70).

Accordingly, Raudenbush and Bryk (2002) compared the simplest hierarchical linear model with a one-way ANOVA, with random effects yielding:

\[
Y_{ij} = \beta_0 + r_{ij}
\]

(4)

They further stated that \(r_{ij}\), the level-1 error term, is normally distributed “with a mean of zero and a constant Level-1 variance \(\sigma^2\)”. The level-2 model yields

\[
\beta_0 = \gamma_{00} + u_{0j}
\]

(5)

where \(\gamma_{00}\) represents the grand mean outcome in the population and \(u_{0j}\) is the random effect associated with unit \(j\) (p. 24). By substituting equation 4 into equation 5, the combined model yields HLM similar to a one-way ANOVA, with nested effects of group effect and people effect within the model.

\[
Y_{ij} = \gamma_{00} + u_{0j} + r_{ij}
\]

(6)
Also, important to HLM is the location of the level-1 predictor variables, the Xs. As Raudenbush and Bryk (2002) stated, “The intercept and slopes in the Level-1 model become outcome variables at Level 2” (p. 31).

2-level HLM. In first developing a model for this study, I used data collected from the pilot study and the Jamaican Survey for Living Conditions 2010 data set as follows:

Level 1 (Student) Model

\[
ACADACHV_{ij} = \\
\beta_{0j} + \beta_{1j}(EXTREWSK)_{ij} + \beta_{2j}(EXLEFTIF)_j + \beta_{3j}(CIPTENTS)_j + \\
\beta_{4j}(COSTMONT)_{ij} + r_{ij}
\]

Level 2 (Parish Model)

\[
\beta_{0j} = \gamma_{00} + \gamma_{01}(EXTREPS)_{j} + \gamma_{02}(SCHLQUAL)_{j} + \ u_{0j} \\
\beta_{1j} = \gamma_{10} + \gamma_{12}(EXTREPS)_{j} + \gamma_{12}(SCHLQUAL)_{j} + \ u_{1j} \\
\beta_{2j} = \gamma_{20} + \gamma_{22}(EXTREPS)_{j} + \gamma_{22}(SCHLQUAL)_{j} + \ u_{2j} \\
\beta_{3j} = \gamma_{30} + \gamma_{32}(EXTREPS)_{j} + \gamma_{32}(SCHLQUAL)_{j} + \ u_{3j} \\
\beta_{4j} = \gamma_{40} + \gamma_{42}(EXTREPS)_{j} + \gamma_{42}(SCHLQUAL)_{j} + \ u_{4j}
\]

Combined 2-Level Model

\[
ACADACHV_{ij} = \\
\gamma_{00} + \gamma_{01}(EXTREPS)_{j} + \gamma_{02}(SCHLQUAL)_{j} + \gamma_{10}(EXTREWSK)_{ij} + \\
\gamma_{12}(EXTREPS)_{j}(EXTREWSK)_{ij} + \gamma_{12}(SCHLQUAL)_{j}(EXTREWSK)_{ij} + \\
\gamma_{20}(EXTREWSK)_{ij} + \gamma_{22}(EXTREPS)_{j}(EXLEFTIF)_{ij} + \gamma_{22}(SCHLQUAL)_{j}(EXLEFTIF)_{ij} + \\
\gamma_{30}(CIPTENTS)_{j} + \gamma_{32}(EXTREPS)_{j}(CIPTENTS)_{j} + \gamma_{32}(SCHLQUAL)_{j}(CIPTENTS)_{j} + \\
\gamma_{40}(COSTMONT)_{ij} + \gamma_{42}(EXTREPS)_{j}(COSTMONT)_{ij} + \\
\gamma_{42}(SCHLQUAL)_{j}(COSTMONT)_{ij} + u_{0j} + u_{1j}(EXTREWSK)_{ij} + u_{2j}(EXTREWSK)_{ij} + \\
u_{3j}(CIPTENTS)_{j} + u_{4j}(COSTMONT)_{ij} + r_{ij}
\]

See Table 8 for a description of the variables in the proposed HLM.
Table 8

Description of Variables in Proposed HLM Model

<table>
<thead>
<tr>
<th>Variable Name</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Student –Level (Level 1)</strong></td>
<td></td>
</tr>
<tr>
<td>ACADACHV</td>
<td>Proxy for academic achievement based on overall weighted grade average at the end of fourth form year</td>
</tr>
<tr>
<td>EXTHRSWK</td>
<td>Ordinal range data to represent averaged numbers of hours spent in extra lessons per week throughout the year, including peak exam periods</td>
</tr>
<tr>
<td>EXTEFFE</td>
<td>A scaled assessment variable of the effects of extra lessons on measures such as examination grades, confidence in school, learning strategies and the like.</td>
</tr>
<tr>
<td>CIPTENETS</td>
<td>A composite measure of critical inclusive pedagogy tenets (faculty-student interaction; activation of student voice, use of personal narratives; dialogical discourse; sharing power)</td>
</tr>
<tr>
<td>COSTMONT</td>
<td>Average cost per month of extra lessons</td>
</tr>
<tr>
<td><strong>Parish-Level (Level 2)</strong></td>
<td></td>
</tr>
<tr>
<td>EXTLEXPS</td>
<td>Average household expense on extra lessons per year</td>
</tr>
<tr>
<td>SCHLQUAL</td>
<td>A composite measure based on 6 separate indices of the extent to which the schools’ education quality ranges from very good to bad.</td>
</tr>
</tbody>
</table>

However, after collecting the full-study sample, using parish level data proved to be insufficient to accurately compute the data. Accordingly, HLM statisticians concluded that increasing the number of level-2 groups yields increased accuracy of estimates (Bassiri, 1988; Hox, 1998; Swaminathan, 2001). As such, using the parish-level data would have yielded an N of 14. Therefore, collecting the school-level data proved to be sufficient to accurately compute the data. Variables were selected for the full study by reviewing similar studies in the literature (Dang, 2007; Zhang, 2011), running correlation coefficients of the pilot and full study, and answering the sub-issue research questions. Thereafter, variables, such as **EXTEFFE** and **COSTMONT**, were omitted from the
model. *EXTLEFFE* had no significant correlation to the academic achievement variable (*ACADACHV*). *COSTMONT*, although significantly correlated to *ACADACHV*, had more than 60% missing data values (see Chapter 4 for more detailed explanation). The variable for average household monthly income (*HHMTHINC*) was introduced to the model after careful review of comparative studies in the field (Dang, 2007). Due to the self-reported nature of the student questionnaire, there was potential threat to skewed data. As such, I researched comparable national income data and found that the mean data in the study fell within the average national wage earnings, however the mean was below the national salaried earnings (Statistical Institute of Jamaica, 2012). Accordingly, I explain in the limitations section about using self-reported survey data. The resulting variables used in the model are explained below in Table 9.

Table 9

*Description of Variables in Full HLM*

<table>
<thead>
<tr>
<th>Variable Name</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Student – Level (Level 1)</strong></td>
<td></td>
</tr>
<tr>
<td>ACADACHV</td>
<td>Proxy for academic achievement based on overall weighted grade average at the end of fourth form year</td>
</tr>
<tr>
<td>EXTHRSWK</td>
<td>Ordinal range data to represent averaged numbers of hours spent in extra lessons per week throughout the year, including peak exam periods</td>
</tr>
<tr>
<td>CIPTENETS</td>
<td>A composite measure of critical inclusive pedagogy tenets (faculty-student interaction; activation of student voice, use of personal narratives; dialogical discourse; sharing power)</td>
</tr>
<tr>
<td>HHMTHINC</td>
<td>Ordinal range data to represent average household monthly income</td>
</tr>
<tr>
<td><strong>School-Level (Level 2)</strong></td>
<td></td>
</tr>
<tr>
<td>SCHLOCAL</td>
<td>A categorical variable representing the urban versus rural area the school is located, in which urban = 0, rural = 1</td>
</tr>
<tr>
<td>SCHLSEX</td>
<td>Categorical variable representing the gender binary of the schools demographics, where co-educational schools were categorically coded as 0, all female schools were coded as 1 and all male schools were coded as 2.</td>
</tr>
</tbody>
</table>
The 2-level hierarchical linear model was developed from the one-way random effects ANOVA model, the unconditional model with academic achievement, average hours per week spent on extra lessons, critical-inclusive pedagogy tenets, and average household monthly income, to the contextual model with variables in the both levels. This combined model is referred to as a mixed model with fixed effects $\gamma_{00} \ldots \gamma_{30}$ and random effects $u_{0j} \ldots u_{3j}$ and $r_{ij}$. Models were compared based on the proportion reduction in variance (deviance levels) in both levels. To make the interpretation meaningful, predictors in the level-2 model were centered on the grand mean ($\text{SCHLOCAL}$ variable). HLM (v. 7) was used for model fitting.

**Second Stage of Interface**

An interactive level of interaction occurred during this stage, because “the design and conduct [of the qualitative strand] depend on the results from the other strand” (Creswell & Plano Clark, 2011, p. 65). After the data was collected from student questionnaires, I completed preliminary analysis of the data using descriptive, parametric, and nonparametric techniques. At the end of the survey, there was an open-ended question requesting participation in focus groups. Students who agreed to participate left contact information for me to select from. The qualitative scale that was quantified in the student instrument (critical-inclusive pedagogy tenets) was rephrased in the focus group protocol. I used the preliminary case study protocols that were designed and included in this dissertation study to conduct semi-structured interviews. However, the survey data shaped additional questions in the case study. Furthermore, following the transformative-emancipatory paradigm, I asked students, their parents, and extra lessons-teachers who
agreed to participate in the focus groups to shape the case study protocol, review the research questions, and member-check the transcripts.

**Qualitative Methodology**

To gain a better understanding and deeper context of the micro-level sub-questions, data from the quantitative section were used to provide a general descriptive overview of extra lessons in Jamaica and point to key variables that predict for academic achievement. Thereafter, I conducted a thorough exploration of the cases using the following guiding questions:

1. What aspects of a critical-inclusive pedagogical framework can be aligned with the teaching and learning practices utilized in extra lessons?

2. How do teachers, students, parents, and key government officials describe their experiences with and the impact of extra lessons on students’ overall educational outcomes in three of Jamaica’s six education regions?

Accordingly, I employed a case study approach that yielded data to provide more in-depth context to interpret the quantitative results found in the HLM analysis. For this purpose, I explain below in detail the case study design, sample procedures, data collection, and analysis approaches used in this study.

**Case study.** A case study method is “an empirical inquiry about a contemporary phenomenon (e.g., a ‘case’), set within its real-world context—especially when the boundaries between phenomenon and context are not clearly evident (Yin, 2009, p. 18). Creswell (2007) further expanded the definition of case study research as “a qualitative approach in which the investigator explores a bounded system (a case) or multiple
bounded systems (cases) over time, through detailed, in-depth data collection” (p. 73). In choosing this approach, I heeded both Creswell (2007) and Yin’s (2009) recommendations that both the research question as well as the determination of “clearly identifiable cases with boundaries” (Creswell, 2007, p. 74) would ultimately lead to the best approach. Alternatively, a case study method provides a great complement to the HLM analysis in that it “favors the collection of data in natural settings” (Yin, 2012, p. 5), compared with relying on only second-hand data or “responses to a researcher’s instrument” (Yin, 2012, p. 5).

Accordingly, as the researcher, I followed Yin’s (2009) five components of a research design, but only explain the first three as the most relevant to the study:

1. A study’s questions;
2. Its propositions, if any;
3. Its unit(s) of analysis;
4. The logic linking the data to the propositions; and
5. The criteria for interpreting the findings. (p. 27)

**A study’s questions.** The overarching research question and sub-questions essentially seek “to explain some present circumstance…[and] require an extensive and ‘in-depth’ description of some social phenomenon” (Yin, 2009, p. 4). Yin (2009) focused on the importance of selecting research questions that best ask for an explanation rather than an exploration of ideas or concepts. He further explained the differences and nuances of the “what,” “who,” “where,” “why,” and “how” questions. He postulated that the “what,” “who,” and “where” questions tend to be more exploratory and predictive in nature. He then explained that the “how” and “why” questions were more intrinsic in examining reasons for explaining social phenomenon and better suited for case studies.
Additionally, the issue sub-questions, as noted by Creswell (2007), “address the major concerns and perplexities to be resolved” (p. 109). As such, the aforementioned sub-questions best suit a case study methodology.

**Study propositions.** There should be rationale and direction in selecting a case study (Yin, 2009) as a mechanism to remain within the scope of the study. Yin (2009) argued that in some cases, the research question guides the proposition, which may lead to an exploration or exploratory case study. The fourth tenet of postcolonial theories in education regarding critical pedagogies sets the propositions in answering the first sub-question by guiding the case study design around the principles of a critical-inclusive pedagogical framework.

**Unit(s) of analysis.** This component hones in on what is being studied and how best to define the case. For the purposes of the study, the main unit of analysis was extra lessons in Jamaica’s secondary education.

**Types of case studies.** Creswell (2007) noted there are several types of case studies: the single instrumental case study, the collective or multiple case studies, and the intrinsic case study. Coined by Stake (1995), the *instrumental case study* focuses on an issue or concern that is studied by examining one bounded case. Similar to the instrumental case study is the *multiple case studies* approach, in which there is one issue or concern that is studied looking at several cases or bounded systems with overlapping occurring issues. The *intrinsic case study* focuses on the case itself or the bounded system, because it is unique in and of itself (Creswell, 2007; Stake, 1995).
For the purposes of the study, I selected a multiple case study, because this approach provided “insight into an issue or…[allowed me to] redraw a generalization” (Stake, 2005, p. 445) across multiple cases. As pointed out by Creswell (2007), Yin suggested that the researcher can replicate the procedures of each case to show the logic of replication. I selected multiple cases because the full dissertation study sought to illustrate the macro- and micro-level impacts of extra lessons in Jamaica from a postcolonial theoretical perspective. Accordingly, I used cases in a supportive role in order to facilitate an understanding of external interests (Stake, 2005). Similar to Yin’s (2009) five components of case study research design, I was guided by Stake’s (2005) six characteristics that he considered imperative when collecting data on the case:

1. The nature of the case, particularly its activity and functioning;
2. Its historical background;
3. Its physical setting;
4. Other contexts, such as economic, political, legal and aesthetic;
5. Other cases through which this case is recognized; and
6. Those informants through whom the case can be known. (p. 447)

**Case selection.** In reviewing the above six characteristics for studying a case, the selection of multiple cases is generally followed by

[a] detailed description of each case and themes within the case, called a within-case analysis, followed by a thematic analysis across cases, called a cross-case analysis, as well as assertions or interpretation of the meaning of the case. (Creswell, 2007, p. 75)

Stake (2005) stated that “the cases are expected to represent some population of cases (p. 450). More so, the case should be highly representative of the phenomenon of interest writ large (Stake 2005). Toward this end, the case should be highly indicative of the larger phenomenon being studied.
Case study design. As aforementioned, there are three types of case studies: intrinsic, instrumental, and collective or multiple case studies. In addition to the types of case studies are the types of designs, which are holistic or embedded. A holistic case study design examines the “global nature of an organization or of a program” (Yin, 2009, p. 50). An embedded design occurs when the researcher studies a subunit or subunits within a case (Yin, 2009). Both holistic and embedded designs can occur using single or multiple cases (see Appendix J). To accurately complement the macro-level quantitative assessment, I selected a holistic multi-case design with a single unit of analysis. To better clarify, I selected three of the six education regions that represent confirming and disconfirming cases (Miles & Huberman, 1994). The multiple cases were organized by regions and selected after the surveys had mostly been completed and preliminarily assessed (see Appendix K for a diagram of the multi-case design of extra lessons in Regions A, B, and C).

Case study approaches. According to Yin (2003, 2012), there are three types of approaches that guide case study methods: exploratory, descriptive, and explanatory. The exploratory approach is used to discern specifically what should be studied. Yin (2012) stated that in an exploratory study, the “fieldwork and data collection are undertaken prior to the final definition of study questions or specific methodological procedures” (p. 29). Descriptive case studies are considered the most common and offer rich and complete illustrations of the phenomenon being studied (Yin, 2012). The explanatory approach seeks to “explain how and why a series of events occurred” (Yin, 2012, p. 89).
This study followed a descriptive approach, because I wanted to provide a rich and complete description of extra lessons in Jamaica.

**Sample: Participants and cases.** I used the sampling strategy of confirming and disconfirming cases in which the purpose is to elaborate on initial analysis and seek exceptions that look for variations (Miles & Huberman, 1994, p. 28). I bounded the cases according to the Ministry of Education’s six education regions (noted above in Table 3). Each region has two to three parishes; accordingly, I selected three regions as individual cases or replications within the multiple-case design (Yin, 2009), which represent 7 parishes of the total 14. Regions were selected based on participation rates and regional locale.

In visiting 62 secondary schools across the six educational regions (14 parishes) and surveying 1,654 students, I selected students by their response to a survey question in which they listed an email address only if they were interested in participating in a focus group. Within each selected region, only students who agreed to participate were purposefully contacted for the focus groups. This form of cluster purposive sampling was used to select, from each of the three regions, a sample of students as well as their respective parents. Extra lessons teachers were selected through several processes: (a) snowballing in which students suggested teachers, (b) convenience sampling in which I or a school administrator selected teachers.

**Case 1.** Region A was comprised of students with the highest participation rate of extra lessons. Region A represents an urban, capital city of the country, where the largest population of the country resides and the largest number of secondary high schools is
present. Within Region A, 11 students and their respective 10 parents were selected to participate in the case study. Six extra lessons teachers were then selected to be in the focus group. Within the students’ focus group, there were five males and six females. Students ranged in age from 14 to 16; of these, five reported being 16. All students were currently in Grade 11 and reported having attended extra lessons from 1 to 5 years. I observed two extra-lessons classes in this region (explained in detail below). Table 10 reports the demographics of the study participants from Region A.

Table 10

*Participant Characteristics in Region A*

<table>
<thead>
<tr>
<th>Focus Groups</th>
<th>Gender</th>
<th>Mean Age</th>
<th>Mean Number of Years in Extra Lessons</th>
<th>Mean Number of Years Teaching Extra Lessons</th>
</tr>
</thead>
<tbody>
<tr>
<td>Students</td>
<td>Male</td>
<td>5</td>
<td>16</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>Female</td>
<td>6</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Parents</td>
<td>Male</td>
<td>3</td>
<td>43</td>
<td>n/a</td>
</tr>
<tr>
<td></td>
<td>Female</td>
<td>7</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Teachers</td>
<td>Male</td>
<td>3</td>
<td>51</td>
<td>n/a</td>
</tr>
<tr>
<td></td>
<td>Female</td>
<td>3</td>
<td></td>
<td>10</td>
</tr>
</tbody>
</table>

*Case 2.* Region B was selected based on the second highest participation rate of students in extra lessons. Region B is also the second largest region in Jamaica according to population of residents and number of secondary high schools. However, unlike Region A, Region B is more rural and has a lower socioeconomic rate than Region A. There were 7 students in the focus group: 2 males and 5 females. There were 10 parents/guardians who attended the parents’ focus group. Within the extra lessons teachers’ focus group, there were 8 participants. I observed one extra-lessons class in this
region (explained in detail below). Table 11 reports the demographics of the study participants from Region B.

Table 11

*Participant Characteristics in Region B*

<table>
<thead>
<tr>
<th>Focus groups</th>
<th>Gender</th>
<th>Mean age</th>
<th>Mean number of years in extra lessons</th>
<th>Mean number of years teaching extra lessons</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Male</td>
<td>Female</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Students</td>
<td>2</td>
<td>5</td>
<td>16</td>
<td>2</td>
</tr>
<tr>
<td>Parents</td>
<td>4</td>
<td>6</td>
<td>56</td>
<td>n/a</td>
</tr>
<tr>
<td>Teachers</td>
<td>3</td>
<td>5</td>
<td>47</td>
<td>n/a</td>
</tr>
</tbody>
</table>

*Case 3.* Region C was selected based on the lowest participation rate of students in extra lessons. Region C unlike the previously described regions has the smallest population of residents of the three regions in the study, as well as it is a predominantly rural region with low socioeconomic rates and high unemployment rates. Within this region, I was only able to conduct the student’s focus group, which had 6 participants. There was miscommunication as to scheduling of times for the remaining focus groups, as well as I was unable to return to the region at a later date due to the distance and lack of resources. After completing the student focus group, I conducted a one-on-one interview with 1 parent. I observed one extra-lessons class in this region (explained in detail below). Table 12 reports the demographics of the study participants from Region C.
Lastly, outside of the three cases, one-on-one interviews were conducted with key government officials. I used purposive sampling to select three key professionals in the Ministry of Education to provide a broader understanding of extra lessons and implications for policy change. Yin (2012) pointed out that these interviews are better called “elite interviews,” because such interviews come from key persons in the government agency in which only one or a few persons “will fill such roles” (p. 12).

Table 13 reports the demographics of the participants.

Table 13

<table>
<thead>
<tr>
<th>Participant Characteristics of Government Officials</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pseudonym</td>
</tr>
<tr>
<td>-----------</td>
</tr>
<tr>
<td>Ronnie</td>
</tr>
<tr>
<td>Grace</td>
</tr>
<tr>
<td>Mr. Green</td>
</tr>
</tbody>
</table>

*Note.* Pseudonyms, although listed above, were not used in the reporting of findings so as to protect confidentiality of the participants.
Data collection. According to Yin (2009), there are three principles of collecting data in a case study: (a) use multiple sources of evidence, (b) create a case study database, and (c) maintain a chain of evidence. In selecting multiple sources of data, the major advantage is “the development of converging lines of inquiry, a process of triangulation and corroboration” (Yin, 2009, p. 115). I collected data using two forms of interview procedures (i.e. focus groups and one-on-one interviews) with three constructs of participants that could offer converging and diverging responses on students’ experiences in extra lessons (see Appendices L, M, and N for students, parents, and extra-lessons teachers’ interview protocols respectively). Additionally, I conducted in-class observations of extra-lessons classes as well collected syllabi, teacher evaluations, and test grades (where available). As data were being collected, I heeded Yin’s (2009) recommendation to create a case study database, which would provide a “way of organizing and documenting data collected” (p. 118).

Case Study Report

Case Study Database

Citations to Specific Evidentiary Sources in the Case Study Database

Case Study Protocol (linking questions to protocol topics)

Case Study Questions

Lastly, Yin (2009) recommended maintaining a chain of evidence. This chain of evidence, depicted in Figure 15, describes the constant relationship between each component of the case study approach.

**Procedures.** Prior to the interview and focus group sessions, each participant was asked to read and sign an informed consent form that described the purpose of the study, the scope of questions to be covered in the focus group discussion, and information related to the confidentiality of the study, its voluntary nature, and other details that a participant must know to be protected, according to IRB guidelines (see Appendices L and M for consent forms for the students and parents’ focus group interviews, respectively, and Appendix I for the one-on-one interviews). In addition, participants were asked to complete a participant information sheet, so that I could keep a better record of all participants (data available upon request).

Both the one-on-one interviews and the focus group interviews were conducted at sites that were agreed upon as convenient by all concerned. The site in Region A was an extra-lessons institution, the site in Region B was a secondary high school library, and the site in Region C was a computer lab in a high school in that region. Each focus group ranged in time from 60 to 90 minutes. Each one-on-one interview ranged in time from 45 to 60 minutes. The focus group interviews and one-on-one interviews were digitally/audio-recorded as well as documented through note taking. After the one-on-one interviews and the focus group interviews, I sent the transcripts to an external transcriptionist company; however due to the overwhelming use of patois in the transcripts, I transcribed all data verbatim.
Observation. Yin (2009) suggested that there are two types of observation that can be used in a case study: (a) direct observation and (b) participant observation. Direct observation involves conducting a visual inspection of “human actions, physical environments, or real-world events” in a field setting (Yin, 2012, p. 11). Participant observation involves the researcher taking part in the observation as an active participant (Yin, 2009).

Due to the transformative, participatory nature of my guiding theoretical framework, I used participant observation in my study. From the extra-lessons teacher’s focus groups, I requested permission to observe extra-lessons classes. I conducted four 2-hour observations in extra lessons classrooms within and outside of the secondary high schools. Due to availability, I conducted two observations in Region A at an extra-lessons institution, external to a secondary high school. The first observation was conducted with a veteran math teacher who owned the extra-lessons institute and had a class of 17 students. The veteran math teacher had been teaching for 35 years. The second observation was conducted with a biology teacher who had been teaching for 7 years and had a class of 15 students. In Region B, I conducted one observation with three-teachers who collaboratively taught a class of 40 students in mathematics. In Region C, I was able to conduct one observation with a math teacher and his class of 20 students. The critical-inclusive pedagogical framework informed the observation protocol in order to record and benchmark human interactions—pedagogical and learning styles that fit within the five tenets explained in the framework (see Appendix P for the observation protocols).
**Documentation.** In addition to the archival sources and documents collected to analyze the social history of education in Jamaica, I collected curricular information from the four observed extra-lessons teachers as well as any benchmark exam grades and CSEC results available from each teacher. From the Ministry of Education, I collected 2012 Education Transformation Programme Update, 2010/2011 Education Statistics, 2010/2011 School Profiles, and all contact and demographic information for all schools in Jamaica. The main reason for collecting the curricular information was to corroborate the prior data already collected in focus groups. Collecting the above-mentioned documents provided critical information and better triangulated the divergent and convergent forms of data.

**Data analysis.** Using a confirming/ disconfirming sample scheme, Region A represented the de-factor confirming case in which to base the findings and thereafter seek exceptions that accounted for variations in Regions B and C. Yin (2009) recommended that each case data collection and analysis be processed separately. As such, I collected and analyzed Case 1 first in Region A by doing a holistic analysis. In doing extensive data analysis, I organized my files, made margin notes, and created a series of codes (described below) that developed into categories by doing categorical aggregation to establish themes or patterns (Creswell, 2007). First, I listened to each transcription and read through the transcripts several times to get re-acquainted with the data, and holistically deduced major patterns, significance, and inconsistencies. Along with manual coding, I used a CAQDAS software program, ATLAS.ti version 7, to better organize and keep track of my first- and second-cycle codes. More specifically, I input all
transcribed interviews into the software program and used the program to categorize, search, and merge codes into categories. The transcripts were analyzed line by line with analytic codes entered in the margins. I printed all codes with quotes after the initial line, by line coding and then manually highlighted the codes and used tent cards to categorize the data.

I engaged in peer review of my student focus group transcripts. A section of the base transcript (Region A, student focus group transcript) and initial codes were printed and reviewed by a graduate student, who identified similarities and dissimilarities in the coding structure. After peer-debriefing, I re-looked at the initial codes and themes and looked for additional emergent themes. After this, I drafted a codebook and sent the codebook and transcripts of Region A to a university research assistant in Jamaica to measure for interrater reliability. We achieved an acceptable level at 95%. Please note that there was a process of agreement and disagreement of codes in which I was continually refining codes.

Thereafter, I used the constant comparison method, thereby continually comparing the categories and codes of new transcripts, paying special attention to diversity of the dimensions in each category, until there was no new emerging theme, code, or category (Glaser & Strauss, 1967). I repeated the above process in Case 2 and Case 3. Lastly, I employed Creswell’s (2007) tabulated summary of the case study data analysis process, informed by Stake (1995) and Yin (2003).

After having analyzed the multiple cases in the study, I identified the common themes in all cases and looked primarily for the themes that transcended cases (Yin as
referred to in Creswell, 2007). A suggested analytic technique by Yin (2009) is pattern matching in which the logic compares “an empirical based pattern with a predicted one” (p. 136). Going into the case study, the logic I predicted was that students do better academically because of the presence of the five tenets of the critical-inclusive pedagogical framework in extra lessons. The pattern logic technique allowed me to look for patterns directly relating to the five tenets. More so, because I had multiple cases, I employed a replication logic in the cross-case analysis, thereby collecting key themes within each case and across the cases (Creswell, 2007; Yin, 2012). At this point, I interpreted the categories and used direct interpretation to develop naturalistic generalizations and implications. In order to conduct the level of analysis suggested by Creswell (2007) and Yin (2009), I used the analytical tool of coding.

**Coding.** According to Saldana (2009), “A code in qualitative inquiry is most often a word or short phrase that symbolically assigns a summative, salient, essence-capturing, and/or evocative attribute for a portion of language-based or visual data” (p. 3). Due to the depth and breadth of this study, I complemented my coding methods by completing analytic memos and video journals of all data collected, both quantitative and qualitative. Similar to research journals, analytic memos are a researcher’s reflective tool to record significant thoughts, reflections, and informal coding as they relate to why and what is being collected (Saldana, 2009).

Based on the literature (Miles & Huberman, 1994; Saldana, 2009; Tashakori & Teddlie, 2003) and the components of my study, I used the following first-cycle coding methods: grammatical and elemental (see Table 14 for details). Thereafter, I conducted
second-cycle coding after the completion of first-cycle coding. Of the second-cycle coding methods, I used pattern and focused coding. *Pattern coding* (Mile & Huberman, 1994) refers to the use of explanatory or inferential codes, “ones that identify an emergent theme, configuration, or explanation” (p. 69). Pattern coding is best used for development of major themes from the data, examining social networks and patterns of human relationships (Saldana, 2009, p. 152). *Focused coding* generally follows initial coding in the first cycle and searches for the “most frequent or significant Initial Codes” (Saldana, 2009, p. 155).

Table 14.

*First-Cycle Methods, Types of Codes, and Definitions*

<table>
<thead>
<tr>
<th>First Cycle Methods</th>
<th>Types of Codes</th>
<th>Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Grammatical Methods</strong></td>
<td>Attribute Coding</td>
<td>This type of coding logs initial data, including “demographic characteristics of the participants for future management and reference” (Saldana, 2009, p. 55).</td>
</tr>
<tr>
<td></td>
<td>Magnitude Coding</td>
<td>Often utilized in mixed methods studies to both “quantitize” and qualitize data, in particular, the intensity, frequency and direction of the data.</td>
</tr>
<tr>
<td><strong>Elemental Methods</strong></td>
<td>Descriptive Coding</td>
<td>Will allow me to summarize the basic issues or shorten phrases in the early stages of the analysis process by using a single word or short phrase.</td>
</tr>
<tr>
<td></td>
<td>In Vivo Coding</td>
<td>Codes are drawn from the participants’ own language.</td>
</tr>
<tr>
<td></td>
<td>Initial Coding</td>
<td>A first-cycle open-ended approach to coding the first</td>
</tr>
</tbody>
</table>
Theory-Based Coding

Fitting well with identifying the five tenets of the framework, this coding method applied a questions-based code that identified each of the theoretical tenets.

<table>
<thead>
<tr>
<th>Cross-Over Mixed Analyses</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Integrated data display</td>
<td>Involves visually presenting both quantitative and qualitative data in the same display (Onwuegbuzie et al., 2009)</td>
</tr>
<tr>
<td>Data comparison</td>
<td>Involves comparing both quantitative and qualitative data from different sources (Creswell &amp; Plano Clark, 2011)</td>
</tr>
<tr>
<td>Warranted assertion analysis</td>
<td>Involves deriving meta-inferences from reviewing all quantitative and qualitative data (Onwuegbuzie et al., 2009).</td>
</tr>
</tbody>
</table>


**Third Stage of Interface: Mixed Methods Analysis and Interpretation**

Onwuegbuzie and Combs (2010) defined the cross-over nature of analysis as involving the “integration of qualitative and quantitative analyses to a greater extent than do other types of mixed analyses” (p. 423). They differentiated the appropriate use between a cross-over versus a non-cross-over mixed analyses by the mixing of “qualitative- and quantitative-based paradigmatic assumptions and stances” (p. 423).

Table 15

**Cross-Over Mixed Analyses**

<table>
<thead>
<tr>
<th>Cross-Over Mixed Analyses</th>
<th>Description</th>
</tr>
</thead>
</table>
Accordingly, the transformative-emancipatory worldview employed in this study is best coupled with cross-over mixed analyses (Onwuegbuzie, Johnson, & Collins, 2009). Table 15 reports the three types of cross-over mixed analyses used in the study.

In order to accomplish the aforementioned transformational aims of the interpretation stage, I looked across the quantitative results and the qualitative findings to make “an assessment of how the information addresses the mixed methods questions in the study” (Creswell & Plano Clark, 2011, p. 212). As a means to answer the overarching research question from a postcolonial theoretical perspective, I employed Tenet 3 of the postcolonial theories in education by completing self-reflexive written and video journals that documented “an ongoing conversation with one’s whole self about what one is experiencing as one is experiencing it” (Nagata, 2004, p. 140). This exercise represented not only an attempt to bracket my bias as I interpreted the findings but also “the role of the qualitative researcher, who believes that research (and its interpretations) can never be separated from the researcher’s personal views” (Creswell & Plano Clark, 2011, p. 210).

**Trustworthiness: Validation and Reliability**

As outlined in Creswell (2007), there are many perspectives on qualitative validity and reliability. They range from

- using qualitative terms that are distinct from quantitative terms, employing postmodern and interpretive perspectives, considering validation as unimportant, combining or synthesizing many perspectives, or visualizing it metaphorically as a crystal. (p. 202)

For example, Lincoln and Guba (1985) contended that in order to attain trustworthiness, the researcher must establish credibility, authenticity, transferability, dependability, and
confirmability in the study. To operationalize these terms, Creswell (2007) pointed to such techniques as using triangulation among different data sources and writings, as discussed earlier, in addition to providing detailed descriptions that are relevant to the purpose of the study. Besides using triangulation to establish validation and reliability for the entire study, I also used peer review and conducted interrater reliability. Based on Merriam’s (1988) suggestion, I clarified my positionality and presuppositions, presented below, so that the reviewers will understand from the outset my cultural connection to Jamaica and the research topic at hand. As a form of the transformative paradigm (mentioned earlier in this chapter), I engaged in aspects of the participatory research in which I conducted member checking and solicited participant feedback on the study as I was collecting and analyzing the data. Specific to the case study, I completed rich and thick descriptions of the cases, thereby describing in detail the setting, the determinants of the case study, and the case itself. Lastly, I enrolled in a graduate course in which I used the design and analysis of the student focus groups as the primary coursework for the class. Through that process, I gained constant feedback from a qualitative expert as well as peer-debriefing on each aspect of the case study over a 10-week period.

**Positionality**

It is well recognized that positionality “frames social and professional relationships in the research field and also governs the tone of the research” (Sanghera & Thapar-Bjorkert, 2008, p. 553). Thus, it is of central importance that the researcher explicitly identifies his or her social identities, set of beliefs, and biases as to anticipate how these attributes might influence the researcher’s positionality.
As a Jamaican, living and studying in the United States, I am both an insider and outsider. As an insider, I am provided with a “degree of social proximity that, paradoxically, increases awareness amongst both researcher and participant of the social divisions that structure interaction between them” (Ganga & Scott, 2006, para. 2). I was thus able to gain access to key participants, government documents, and statistics; engage in the cultural ethos that garnered a sense of trust; and dialogue in patois and discuss sociopolitical histories that both bind us and divide us. This insider role, as Ganga and Scott (2006) argued, influenced my objectivity and more importantly, shaped my qualitative data collection processes. Paradoxically, there were times that I was possibly viewed as an outsider, because I had lived the better part of my adult life in the United States and am definitively differentiated as an intellectual elite. This positionality inhibited my social bargaining for information on Jamaica’s education system and more importantly, the underground market of extra lessons.

As so poignantly stated, “Positionality refers to the way in which others position the individual identity and affiliations he/she may have” (Sanghera & Thapar-Bjorkert, 2008, p. 553). Outwardly, I am light-skinned, highly educated, middle class, and a former recipient of extra lessons. These identities had both a negative and positive binary effect and were dependent on the individual, space, and time in which I was viewed. As such, my level of authenticity and transparency in the research was paramount to how I conducted this study and the manner in which I reported my findings. I believe the outsider/insider role provided richer dialogues and innately called for a heightened level of reflexivity when reporting biases. However, irrespective of the insider/outsider role
was my positionality as a postcolonial as well as the lens in which this study was grounded, by and for the Jamaican people. Thereby, my identity as a postcolonial Jamaican mapped an epistemological journey transitioning me from developing to developed. This postcolonial positionality allowed me to engage the research participant as not the object of research but the subject of knowledge construction (Smith, 2005). Towards this end, my research examined qualitatively and quantitatively the benefits of a critical-inclusive pedagogical framework to increase the equity and quality of Jamaican secondary schools as well as student academic achievement.

**Summary**

In this chapter, I provided an overview of the mixed methods approach along with the rationale for choosing to conduct a mixed methods study. Within the rationale, I situated the research questions of the study. Thereafter, I presented the constructs of a mixed methods design within the paradigmatic stance this study is positioned. Next, I described the research design, which envelops the quantitative and qualitative approaches employed in this study. Thereafter, I explained the dissertation setting, the transformative design and moved into the particulars of the quantitative portion of the study. Within the quantitative methods, I presented the sample, pilot study used to develop and measure the student questionnaire and the procedures for data collection and data analysis. Thereafter, I explained the rationale for the HLM analysis and the variables proposed and then used for the study. Next, I explained the qualitative approach, specifically focusing on a holistic case study design. After describing the varying components of a case study approach and design, I described the sample, the cases and
the procedures for data collection and analysis. Throughout the quantitative and qualitative approaches, I interwove descriptions of the mixed methods application and analysis. Thereafter, I presented initial case descriptions and mixed methods tabulated findings to better describe the cases. Lastly, I explained establishing trustworthiness for the qualitative data and concluded the chapter with my positionality.
CHAPTER 4. QUANTITATIVE RESULTS

This chapter presents the quantitative results, including descriptive statistics on extra lessons at the secondary level in Jamaica, assumption results for the hierarchical linear model (HLM), and the empirical data of the 2-level HLM. This chapter aims to answer the following sub-issue questions: (a) What is the relationship between extra lessons and students’ academic achievement at the secondary level; and (b) What are the scope and prevalence of the practice of extra lessons at the secondary level in Jamaica? In the first section, descriptive statistics of kept variables for HLM are reported, followed by the correlation coefficients of independent variables used in the empirical model. The following section discusses the school-level variables used in the HLM, collected from the Ministry of Education 2010-2011 School Profiles. The remaining sections describe extra lessons according to the four construct areas delineated in the student questionnaire: (a) prevalence and scope, (b) education outcomes, (c) critical-inclusive pedagogical framework tenets, and (d) socioeconomic status.

Descriptive Statistics and Correlations

Demographic results indicated that 93.7% \((n = 1496)\) of the participants were between the ages of 13 and 17, of which more than half reported being 16 years of age. There were more female participants than male participants in the study at 61.4% \((n = 1014)\) to 38.6% respectively. The largest number of student respondents reported going to school in Kingston, at 21% \((n = 347)\), whereas most of the respondents reported living in
St. Catherine, at 18.4% \((n = 303)\). A total of 1,681 questionnaires were administered, of which 1,654 (98.39%) were returned.

Response rates for the individual variables selected as level-1 variables are as follows: The outcome variables measuring academic achievement \((ACADACHV)\) had a 88% response rate; average number of hours per week spent in extra lessons \((EXTHRS)\) had a response rate of 82.3%; average household monthly income \((HHMTHINC)\) had a response rate of 76.3%; and the composite variable measuring the effectiveness of critical-inclusive pedagogical tenets \((CIPTENETS)\) had a response rate of 69.4%. Table 16 reports descriptive statistics of variables that were used in the empirical models.

Table 16

*Descriptive Statistics of Variables*

<table>
<thead>
<tr>
<th>Variables</th>
<th>N</th>
<th>Minimum</th>
<th>Maximum</th>
<th>Mean</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Student Level</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>ACADACHV</td>
<td>1455</td>
<td>3.0</td>
<td>10.0</td>
<td>6.926</td>
<td>1.1277</td>
</tr>
<tr>
<td>EXTHRS</td>
<td>1362</td>
<td>1.0</td>
<td>6.0</td>
<td>1.77</td>
<td>1.180</td>
</tr>
<tr>
<td>CIPTENETS</td>
<td>1148</td>
<td>12.0</td>
<td>60.0</td>
<td>43.6995</td>
<td></td>
</tr>
<tr>
<td>HHMTHINC</td>
<td>1262</td>
<td>1.0</td>
<td>17.0</td>
<td>6.33</td>
<td>4.046</td>
</tr>
<tr>
<td><strong>School Level</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>SCHLLOCAL</td>
<td>1654</td>
<td>0</td>
<td>1</td>
<td>.23</td>
<td>.421</td>
</tr>
<tr>
<td>SCHLSEX</td>
<td>1654</td>
<td>0</td>
<td>2</td>
<td>.35</td>
<td>.661</td>
</tr>
</tbody>
</table>

*Note.* The variables of ACADACHV = academic achievement, EXTHRS = extra hours, CIPTENETS = (effectiveness of) critical-inclusive pedagogical tenets, EFFEXTR = effects of extra lessons, HHMTHINC = household monthly income, SCHLLOCAL = school location, and SCHLSEX = school sex (gender binary of the school demographics).

In Table 16, the sample average for students’ academic achievement is 69.26, in which 71.2% of all respondents had an average between 30 and 70% on the overall end-
of-year grade average. Students taking extra lessons spent on average between 5 to 10 hours per week in extra lessons classes, resulting in a mean score of 1.77 ($SD = 1.180$). The aggregated mean score of the composite variable $CIP TENETS$ is 43.70 ($SD = 7.50$), which explains that the average number of respondents agreed more than they disagreed about the presence of critical-inclusive pedagogical tenets in math extra lessons. The mean score for average household monthly income is 6.33 ($SD = 4.05$), which represents $35,000$ to $59,000$ Jamaican dollars (JMD) per month.

**Omission of Variable**

As indicated in Chapter 3, the variables, cost per month for extra lessons ($COSTMTH$) and extra lessons effectiveness ($EXTLEFFE$), were omitted from the HLM analysis due to (a) the large number of responses indicating free or no pay for extra lessons, and (b) no significant correlation effect with academic achievement. The response rate for $COSTMTH$ was 39.9%, with an average cost per month for extra lessons as $6,192.95$ JMD; however, of the 60.1% of missing values, more than half of the students reported receiving free extra lessons. This represents a dimension of extra lessons not investigated, namely government subsidies and other costs related to free tutoring.

**School-Level Data**

The school level variables, school location ($SCHLLOCAL$) and school sex ($SCHLSEX$), were both categorical variables. $SCHLLOCAL$ represents the urban versus rural area where the school is located, in which urban = 0, rural = 1. $SCHLSEX$ represents the gender binary of the schools demographics, where co-educational schools were
categorically coded as 0, all-female schools were coded as 1, and all-male schools were coded as 2. School location (SCHLLOCAL) had a mean score of .23 (SD = .421), which indicates that on average, schools were located in urban areas. The mean score of SCHLSEX was .35 (SD = .661), which indicates that there was an average number of co-education schools in the study. Table 17 shows the frequency distribution of the school-level variables.

Table 17

*Frequency Distribution Statistics of School-Level Variables*

<table>
<thead>
<tr>
<th>SCHLLOCAL</th>
<th>F</th>
<th>%</th>
<th>SCHLSEX</th>
<th>F</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Urban</td>
<td>1273</td>
<td>77</td>
<td>CoEd</td>
<td>1246</td>
<td>75.3</td>
</tr>
<tr>
<td>Rural</td>
<td>381</td>
<td>23</td>
<td>Female</td>
<td>235</td>
<td>14.2</td>
</tr>
<tr>
<td>Total</td>
<td>1654</td>
<td>100</td>
<td>Male</td>
<td>173</td>
<td>10.5</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Total</td>
<td>1654</td>
<td>100.0</td>
</tr>
</tbody>
</table>

*Note.* The variables of SCHLLOCAL = school location, and SCHLSEX = school sex (gender binary of the school demographics).

Table 18 reports the correlation coefficients of the variables in the empirical analysis. In Table 18, critical-inclusive pedagogical tenets, extra lessons hours and household income per month all have a significant correlation at either the $p = .01$ or $p = .05$ level with academic achievement. However, the strength of the associations were small but all variables had positive relationships with academic achievement.
Table 18

Correlation Coefficients of Variables

<table>
<thead>
<tr>
<th></th>
<th>ACADACHV</th>
<th>CIPTENETS</th>
<th>EXTHRS</th>
<th>HHMTHINC</th>
</tr>
</thead>
<tbody>
<tr>
<td>ACADACHV</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pearson correlation</td>
<td>1</td>
<td>.112**</td>
<td>.041</td>
<td>.169**</td>
</tr>
<tr>
<td>Sig. (2-tailed)</td>
<td>.000</td>
<td>.145</td>
<td>.000</td>
<td></td>
</tr>
<tr>
<td>N</td>
<td>1455</td>
<td>1074</td>
<td>1284</td>
<td>1135</td>
</tr>
<tr>
<td>CIPTENETS</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pearson correlation</td>
<td>.112**</td>
<td>1</td>
<td>.071*</td>
<td>.047</td>
</tr>
<tr>
<td>Sig. (2-tailed)</td>
<td>.000</td>
<td>1148</td>
<td>.019</td>
<td>.156</td>
</tr>
<tr>
<td>N</td>
<td>1074</td>
<td>1148</td>
<td>1077</td>
<td>932</td>
</tr>
<tr>
<td>EXTHRS</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Spearman’s rho</td>
<td>.061*</td>
<td>.108**</td>
<td>1</td>
<td>.149**</td>
</tr>
<tr>
<td>Sig. (2-tailed)</td>
<td>.029</td>
<td>.000</td>
<td>.000</td>
<td></td>
</tr>
<tr>
<td>N</td>
<td>1284</td>
<td>1077</td>
<td>1362</td>
<td>1072</td>
</tr>
<tr>
<td>HHMTHINC</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Spearman’s rho</td>
<td>.167**</td>
<td>.053</td>
<td>.149**</td>
<td>1</td>
</tr>
<tr>
<td>Sig. (2-tailed)</td>
<td>.000</td>
<td>.107</td>
<td>.000</td>
<td></td>
</tr>
<tr>
<td>N</td>
<td>1135</td>
<td>932</td>
<td>1072</td>
<td>1262</td>
</tr>
</tbody>
</table>

Note. The variation above in sample size is based on the actual number of students who responded to each category/variable. ACADACHV = academic achievement; CIPTENETS = (effectiveness of) critical-inclusive pedagogical tenets; EXTHRS = extra hours; HHMTHINC = household monthly income.
* Correlation is significant at the 0.05 level (2-tailed).
** Correlation is significant at the 0.01 level (2-tailed).

Scope and Prevalence

In addition to the empirical model’s variables described above, below completes the frequencies describing the scope and prevalence of extra lessons. Of the 1,654 respondents, 90.3% reported taking extra lessons during high school (see Table 19), of which the majority of the students, at 81.1% of respondents, took extra lessons in an in-class group setting by a teacher or tutor, whether after school or before school.
Table 19

**Number of Students Taking Extra Lessons In High School**

<table>
<thead>
<tr>
<th></th>
<th>F</th>
<th>%</th>
<th>Cumulative %</th>
</tr>
</thead>
<tbody>
<tr>
<td>No</td>
<td>160</td>
<td>9.7</td>
<td>9.7</td>
</tr>
<tr>
<td>Yes</td>
<td>1494</td>
<td>90.3</td>
<td>100.0</td>
</tr>
<tr>
<td>Total</td>
<td>1654</td>
<td>100.0</td>
<td></td>
</tr>
</tbody>
</table>

*Note. N = 1654.*

Table 20 also reports that in addition to an in-class group setting, students reported peer-to-peer small groups (11.9%), one-on-one tutoring (5.7%), internet tutoring (n = 9), and lecture-style video format extra lessons (n = 10).

Table 20

**Forms of Extra Lessons**

<table>
<thead>
<tr>
<th></th>
<th>F</th>
<th>%</th>
<th>Valid %</th>
<th>Cumulative %</th>
</tr>
</thead>
<tbody>
<tr>
<td>One-on-one</td>
<td>84</td>
<td>5.1</td>
<td>5.7</td>
<td>5.7</td>
</tr>
<tr>
<td>Peer-to-peer</td>
<td>175</td>
<td>10.6</td>
<td>11.9</td>
<td>17.6</td>
</tr>
<tr>
<td>Internet tutoring</td>
<td>9</td>
<td>.5</td>
<td>.6</td>
<td>18.3</td>
</tr>
<tr>
<td>Classroom setting</td>
<td>1190</td>
<td>71.9</td>
<td>81.1</td>
<td>99.3</td>
</tr>
<tr>
<td>Lecture-style (video)</td>
<td>10</td>
<td>.6</td>
<td>.7</td>
<td>100.0</td>
</tr>
<tr>
<td>Sub-total</td>
<td>1468</td>
<td>88.8</td>
<td>100.0</td>
<td></td>
</tr>
<tr>
<td>Missing system</td>
<td>186</td>
<td>11.2</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>1654</td>
<td>100.0</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Table 21 reports that more than half of the students, 67.7% (n = 993) reported taking extra lessons because they wanted to improve their understanding of a subject. The second highest reason was to improve CSEC (Caribbean Secondary Education Certification) exam scores, at 27.3% (n = 401).
Table 21

Reasons for Taking Extra Lessons

<table>
<thead>
<tr>
<th>Reason</th>
<th>F</th>
<th>%</th>
<th>Valid %</th>
<th>Cumulative %</th>
</tr>
</thead>
<tbody>
<tr>
<td>Improve subject</td>
<td>993</td>
<td>60.0</td>
<td>67.7</td>
<td>67.7</td>
</tr>
<tr>
<td>Improve CSEC exam scores</td>
<td>401</td>
<td>24.2</td>
<td>27.3</td>
<td>95.0</td>
</tr>
<tr>
<td>Parents’ choice</td>
<td>13</td>
<td>.8</td>
<td>.9</td>
<td>95.9</td>
</tr>
<tr>
<td>Teacher’s recommendation</td>
<td>48</td>
<td>2.9</td>
<td>3.3</td>
<td>99.2</td>
</tr>
<tr>
<td>Smaller class size</td>
<td>12</td>
<td>.7</td>
<td>.8</td>
<td>100.0</td>
</tr>
<tr>
<td>Sub-total</td>
<td>1467</td>
<td>88.7</td>
<td>100.0</td>
<td></td>
</tr>
<tr>
<td>Missing system</td>
<td>187</td>
<td>11.3</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>1654</td>
<td>100.0</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Note. CSEC = Caribbean Secondary Education Certification

Figure 16 below shows the subjects that students reported taking in extra lessons. Mathematics was the subject most reported at \( n = 1197 \). The second highest subject was English Language, with \( n = 573 \). These data come as no surprise, because Math and English are the two mandatory CSEC subjects in Grade 11.

Table 22 shows the different types of activities that students report occurring in extra lessons classes. Mathematics represents the subject most frequently taken by students at \( n = 1197 \), of which 858 reported that the extra lessons teacher followed a similar curriculum to that taken in class, as well as 849 and 568 students, respectively, reported having homework and mock exams in extra lessons classes. Fewer students reported taking English Language and Literature classes; however, of those who reported taking English Language, more than half reported that they received homework, and the curriculum was similar to the curriculum offered in the regular school day.
Figure 16: Subjects taken in extra lessons.

Table 22

Activities Occurring in Extra Lessons Classes

<table>
<thead>
<tr>
<th>Subjects</th>
<th>$n$</th>
<th>Curriculum</th>
<th>Homework</th>
<th>Mock exams/tests</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mathematics</td>
<td>1197</td>
<td>858</td>
<td>849</td>
<td>568</td>
</tr>
<tr>
<td>English Language</td>
<td>573</td>
<td>430</td>
<td>411</td>
<td>270</td>
</tr>
<tr>
<td>English Literature</td>
<td>145</td>
<td>143</td>
<td>123</td>
<td>80</td>
</tr>
</tbody>
</table>

Education Outcomes

The following section presents self-reported reasons as well as descriptive statistics according to the variable academic achievement, specifically comparing group
means of gender, subjects taken, teacher, parents/guardians’ occupation, average monthly household income, and hours spent on homework and extra lessons. The sample average for students’ academic achievement is 69.26/100, in which 71.2% of all respondents reported an average between 30 and 70% on the overall end-of-year grade average. As presented in Table 23, female students outperform male students by about 1.2% in overall weighted grade average, with male students reporting an average of 68.74% and female students reporting 69.58%.

Table 23

*Average Academic Achievement by Gender*

<table>
<thead>
<tr>
<th>Sex</th>
<th>M</th>
<th>n</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>Male</td>
<td>6.874</td>
<td>557</td>
<td>1.1405</td>
</tr>
<tr>
<td>Female</td>
<td>6.958</td>
<td>895</td>
<td>1.1185</td>
</tr>
<tr>
<td>Total</td>
<td>6.926</td>
<td>1452</td>
<td>1.1273</td>
</tr>
</tbody>
</table>

Table 24 shows the reported impact of taking extra lessons on students’ grades, confidence levels, motivations, relationships with teachers, development of learning strategies, and level of participation in class. Of the 1,427 respondents, 92% agreed or strongly agreed that extra lessons improve in-school examination grades. Of the 1409 respondents, 84% agreed or strongly agreed that extra lessons improve their confidence level in school performance. Toward that end, 83% \((n = 1407)\) of the students either agreed or strongly agreed that extra lessons improved their motivation to learn. Although 61% \((n = 1382)\) of the respondents agreed or strongly agreed that extra lessons improved their identification of barriers to learning, 67% \((n = 1389)\) agreed or strongly agreed that extra lessons improved strategies to remove those identified barriers to learning.
Table 24

*Students Perception on Effects of Extra Lessons*

<table>
<thead>
<tr>
<th>Question</th>
<th>Strongly disagree</th>
<th>Disagree</th>
<th>Neither agree or disagree</th>
<th>Agree</th>
<th>Strongly agree</th>
<th>Total responses</th>
<th>M</th>
</tr>
</thead>
<tbody>
<tr>
<td>CSEC (CXC) examination grades</td>
<td>21</td>
<td>8</td>
<td>43</td>
<td>473</td>
<td>878</td>
<td>1,423</td>
<td>4.53</td>
</tr>
<tr>
<td>In-school examination grades</td>
<td>20</td>
<td>22</td>
<td>67</td>
<td>693</td>
<td>625</td>
<td>1,427</td>
<td>4.32</td>
</tr>
<tr>
<td>Confidence in examinations</td>
<td>24</td>
<td>48</td>
<td>169</td>
<td>666</td>
<td>508</td>
<td>1,415</td>
<td>4.12</td>
</tr>
<tr>
<td>Relationship with school teachers</td>
<td>72</td>
<td>240</td>
<td>427</td>
<td>461</td>
<td>208</td>
<td>1,408</td>
<td>3.35</td>
</tr>
<tr>
<td>Confidence in school performance</td>
<td>17</td>
<td>45</td>
<td>168</td>
<td>727</td>
<td>452</td>
<td>1,409</td>
<td>4.10</td>
</tr>
<tr>
<td>Learning strategies/study skills</td>
<td>16</td>
<td>78</td>
<td>167</td>
<td>705</td>
<td>441</td>
<td>1,407</td>
<td>4.05</td>
</tr>
<tr>
<td>My participation in extra lessons due to smaller class size</td>
<td>40</td>
<td>193</td>
<td>256</td>
<td>493</td>
<td>410</td>
<td>1,392</td>
<td>3.75</td>
</tr>
<tr>
<td>Motivation to learn</td>
<td>22</td>
<td>51</td>
<td>172</td>
<td>620</td>
<td>542</td>
<td>1,407</td>
<td>4.14</td>
</tr>
<tr>
<td>Identify barriers to learning</td>
<td>67</td>
<td>152</td>
<td>322</td>
<td>542</td>
<td>299</td>
<td>1,382</td>
<td>3.62</td>
</tr>
<tr>
<td>Strategies to remove barriers to learning</td>
<td>48</td>
<td>111</td>
<td>303</td>
<td>619</td>
<td>308</td>
<td>1,389</td>
<td>3.74</td>
</tr>
</tbody>
</table>

*Note. CSEC = Caribbean Secondary Education Certification; CXC = Caribbean Examinations Council.*

Table 25 reports an average weighted end-of-year grade by subject taken in extra lessons. Math is the most prevalent subject taken in extra lessons at 72.7% ($n = 1107$), with a reported overall academic achievement grade of 69.18%, which is lower than the reported sciences averages, ranging from 71.82% in biology to 73.01% in physics.
Table 25
*Average Academic Achievement Score by Subject Taken in Extra Lessons*

<table>
<thead>
<tr>
<th>Subject</th>
<th>$M$</th>
<th>$N$</th>
</tr>
</thead>
<tbody>
<tr>
<td>Math</td>
<td>6.918</td>
<td>1107</td>
</tr>
<tr>
<td>English Language</td>
<td>6.815</td>
<td>531</td>
</tr>
<tr>
<td>English Literature</td>
<td>7.083</td>
<td>132</td>
</tr>
<tr>
<td>Physics</td>
<td>7.301</td>
<td>266</td>
</tr>
<tr>
<td>Biology</td>
<td>7.182</td>
<td>297</td>
</tr>
<tr>
<td>Chemistry</td>
<td>7.235</td>
<td>315</td>
</tr>
<tr>
<td>Principles of Business</td>
<td>6.845</td>
<td>161</td>
</tr>
<tr>
<td>Principles of Accounts</td>
<td>7.078</td>
<td>244</td>
</tr>
<tr>
<td>History</td>
<td>6.900</td>
<td>80</td>
</tr>
<tr>
<td>Spanish</td>
<td>7.203</td>
<td>153</td>
</tr>
<tr>
<td>French</td>
<td>7.304</td>
<td>23</td>
</tr>
</tbody>
</table>

*Note. N represents the total number of respondents to each line item.*

Table 26 reports that students were more likely to take extra lessons with the same subject matter teacher who was in their regular school day than with outside extra lessons providers or teachers. The table further reports that students who took extra lessons with the same teacher had an overall lower mean average (68.27%) than students who did not (70.43%).
Table 26

*Average Academic Achievement Score by Same Teacher*

<table>
<thead>
<tr>
<th>Same teacher</th>
<th>$M$</th>
<th>$n$</th>
<th>$SD$</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes</td>
<td>6.827</td>
<td>711</td>
<td>.000</td>
</tr>
<tr>
<td>No</td>
<td>7.043</td>
<td>631</td>
<td>.094</td>
</tr>
<tr>
<td>Total</td>
<td>6.928</td>
<td>1342</td>
<td>.065</td>
</tr>
</tbody>
</table>

*Note.* $N = 1,342$ students responding to this question.

Table 27 reports that the higher the average monthly household income, the higher the reported end-of-year grade average. The data become conflicting between the household monthly income range of $251,000 to $350,000 (Jamaican dollars, JMD), and the corresponding end-of-year grade averages where students reported a lower grade average. However, the overall responses showed an increasing trend of higher-grade averages with higher household monthly income averages.

Table 28 reports end-of-year grade averages according to parents and/or guardians’ occupations. Students who reported having no parent or guardian in the household or unemployed parents had a lower reported end-of-year grade average than students who reported having a parent or guardian employed. Additionally, students who reported that their parents or guardians had a professional occupation, which included professions of engineering, law, or in the medical field, had an overall higher end-of-year grade average.
Table 27

*Average Academic Achievement Score by Average Household Monthly Income (JAD)*

<table>
<thead>
<tr>
<th>Household monthly income</th>
<th>M</th>
<th>n</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>&lt; $10,000</td>
<td>6.742</td>
<td>151</td>
<td>1.0861</td>
</tr>
<tr>
<td>$10,000 - $14,999</td>
<td>6.714</td>
<td>77</td>
<td>1.0985</td>
</tr>
<tr>
<td>$15,000 - $19,999</td>
<td>6.571</td>
<td>56</td>
<td>1.0065</td>
</tr>
<tr>
<td>$20,000 - $24,999</td>
<td>6.937</td>
<td>95</td>
<td>1.2012</td>
</tr>
<tr>
<td>$25,000 – $34,999</td>
<td>6.770</td>
<td>122</td>
<td>1.1044</td>
</tr>
<tr>
<td>$35,000 - $59,999</td>
<td>6.809</td>
<td>136</td>
<td>1.1896</td>
</tr>
<tr>
<td>$60,000 - $79,999</td>
<td>7.168</td>
<td>101</td>
<td>.9599</td>
</tr>
<tr>
<td>$80,000 - $99,999</td>
<td>6.924</td>
<td>92</td>
<td>1.0918</td>
</tr>
<tr>
<td>$100,000 - $150,000</td>
<td>7.081</td>
<td>111</td>
<td>1.1212</td>
</tr>
<tr>
<td>$151,000 - $200,000</td>
<td>7.444</td>
<td>45</td>
<td>.8675</td>
</tr>
<tr>
<td>$201,000 - $250,000</td>
<td>7.444</td>
<td>27</td>
<td>1.2810</td>
</tr>
<tr>
<td>$251,000 - $300,000</td>
<td>7.688</td>
<td>16</td>
<td>1.1383</td>
</tr>
<tr>
<td>$301,000 - $350,000</td>
<td>6.966</td>
<td>29</td>
<td>1.0171</td>
</tr>
<tr>
<td>$351,000 - $400,000</td>
<td>7.100</td>
<td>10</td>
<td>1.5239</td>
</tr>
<tr>
<td>$401,000 - $450,000</td>
<td>7.800</td>
<td>10</td>
<td>.7888</td>
</tr>
<tr>
<td>$451,000 - $500,000</td>
<td>7.273</td>
<td>22</td>
<td>1.2792</td>
</tr>
<tr>
<td>&gt; $501,000</td>
<td>7.229</td>
<td>35</td>
<td>1.1903</td>
</tr>
<tr>
<td>Total</td>
<td>6.946</td>
<td>1135</td>
<td>1.1275</td>
</tr>
</tbody>
</table>
Table 28

*Average Academic Achievement Score by Parents/Guardians’ Occupations*

<table>
<thead>
<tr>
<th>MotherOccup</th>
<th>M</th>
<th>n</th>
<th>FatherOccup</th>
<th>M</th>
<th>n</th>
</tr>
</thead>
<tbody>
<tr>
<td>Government employee</td>
<td>7.051</td>
<td>315</td>
<td>Government employee</td>
<td>7.004</td>
<td>237</td>
</tr>
<tr>
<td>Manager</td>
<td>6.843</td>
<td>89</td>
<td>Manager</td>
<td>7.067</td>
<td>90</td>
</tr>
<tr>
<td>Entrepreneur</td>
<td>6.953</td>
<td>211</td>
<td>Entrepreneur</td>
<td>7.020</td>
<td>246</td>
</tr>
<tr>
<td>Professional</td>
<td>7.160</td>
<td>94</td>
<td>Professional</td>
<td>7.210</td>
<td>81</td>
</tr>
<tr>
<td>Secretary/clerk</td>
<td>7.063</td>
<td>112</td>
<td>Clerk</td>
<td>6.556</td>
<td>9</td>
</tr>
<tr>
<td>Military/police</td>
<td>6.688</td>
<td>16</td>
<td>Military/police</td>
<td>7.015</td>
<td>66</td>
</tr>
<tr>
<td>Skilled laborer</td>
<td>6.854</td>
<td>96</td>
<td>Skilled laborer</td>
<td>6.785</td>
<td>326</td>
</tr>
<tr>
<td>Farmer</td>
<td>6.854</td>
<td>48</td>
<td>Farmer</td>
<td>6.760</td>
<td>121</td>
</tr>
<tr>
<td>Helper/maid</td>
<td>6.774</td>
<td>146</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Unemployed</td>
<td>6.829</td>
<td>211</td>
<td>Unemployed</td>
<td>6.792</td>
<td>53</td>
</tr>
<tr>
<td>No mother/female guardian</td>
<td>6.650</td>
<td>20</td>
<td>No father/male guardian</td>
<td>6.739</td>
<td>115</td>
</tr>
<tr>
<td>Total</td>
<td>6.935</td>
<td>1358</td>
<td>Total</td>
<td>6.916</td>
<td>1344</td>
</tr>
</tbody>
</table>

Table 29 shows that students who spent an average of 16 to 20 hours per week in extra lessons reported a 71.8% grade average, and correspondingly, students who spent 16 to 20 hours per week on homework reported an end-of-year average of 75.76%.

Important to note is that students who reported spending upwards of 25 to 30 hours per week in extra lessons had the same grade average (68.5%) as students who spent 1 to 4 hours per week in extra lessons (68.7%).
Table 29

*Average Academic Achievement Score by Hours Spent in Extra Lessons and on Homework*

<table>
<thead>
<tr>
<th>EXTHRS (Hours)</th>
<th>M</th>
<th>n</th>
<th>HWHRS (Hours)</th>
<th>M</th>
<th>n</th>
</tr>
</thead>
<tbody>
<tr>
<td>1-4</td>
<td>6.874</td>
<td>712</td>
<td>1-4</td>
<td>6.752</td>
<td>722</td>
</tr>
<tr>
<td>5-10</td>
<td>7.003</td>
<td>357</td>
<td>5-10</td>
<td>6.968</td>
<td>436</td>
</tr>
<tr>
<td>11-15</td>
<td>7.111</td>
<td>99</td>
<td>11-15</td>
<td>7.306</td>
<td>144</td>
</tr>
<tr>
<td>16-20</td>
<td>7.180</td>
<td>50</td>
<td>16-20</td>
<td>7.576</td>
<td>66</td>
</tr>
<tr>
<td>21-24</td>
<td>6.885</td>
<td>26</td>
<td>21-24</td>
<td>7.405</td>
<td>37</td>
</tr>
<tr>
<td>25-30</td>
<td>6.850</td>
<td>40</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>6.939</td>
<td>1284</td>
<td>Total</td>
<td>6.932</td>
<td>1405</td>
</tr>
</tbody>
</table>

*Note.* EXTHRS = extra hours variable; HWHRS = homework hours variable.

**Critical-Inclusive Pedagogical Framework**

The aggregated mean score of the composite variable *CIPTENETS* is 43.70 (SD = 7.50), which explains that the average number of respondents agreed more than they disagreed about the presence of critical-inclusive pedagogical tenets in math extra lessons (see Appendix S for description of CIP tenets). Table 30 reports a summative assessment of the 5-point Likert scale responses to items about *faculty-student interaction*. Close to 79% (n = 1015) of student respondents reported that they either agreed or strongly agreed that their extra lessons teacher engages with them inside the classroom. More than half the student respondents (51%) reported that they agreed or strongly agreed that their extra lessons teachers engage with them outside the classroom. Similarly, more than half of the students reported at 57.5% (n = 735) that their extra lessons teacher made an effort to know them inside the extra lessons class; however, only 38.8% of students reported that
their extra lessons teachers made an effort to know them outside of their extra lessons classes.

Table 30

**Likert Scale of Student Responses to CIP Tenet 1: Faculty-Student Interaction**

<table>
<thead>
<tr>
<th>Statement</th>
<th>Strongly disagree</th>
<th>Disagree</th>
<th>Neither agree nor disagree</th>
<th>Agree</th>
<th>Strongly agree</th>
<th>Total responses</th>
</tr>
</thead>
<tbody>
<tr>
<td>My extra lessons teacher engages with me inside the extra lesson classroom</td>
<td>48</td>
<td>89</td>
<td>133</td>
<td>638</td>
<td>377</td>
<td>1,285</td>
</tr>
<tr>
<td>My extra lessons teacher engages with me outside the extra lessons classroom</td>
<td>83</td>
<td>263</td>
<td>271</td>
<td>474</td>
<td>177</td>
<td>1,268</td>
</tr>
<tr>
<td>My extra lessons teacher makes an effort to know about me inside the extra lessons classroom</td>
<td>72</td>
<td>187</td>
<td>283</td>
<td>499</td>
<td>236</td>
<td>1,277</td>
</tr>
<tr>
<td>My extra lessons teacher makes an effort to know about me outside the extra lessons classroom</td>
<td>106</td>
<td>332</td>
<td>337</td>
<td>360</td>
<td>133</td>
<td>1,268</td>
</tr>
</tbody>
</table>

Table 31 reports the summative assessment of the 5-point Likert scale responses to items about *sharing power* and *dialogical professor-student interaction* (CIP tenets 2 and 3). These tenets are coupled together, because the statements overlap the description
of the two tenets. Accordingly, students responded overall very positively to the statements. In particular, 80% \((n = 1030)\) of the student respondents agreed or strongly agreed that their extra lessons teachers encourage them to show the class how they solve answers to problems and equations. More than half the respondents reported they were encouraged to teach their extra lessons teachers alternative ways of solving a problem, and close to 60% \((n = 744)\) of the student respondents agreed or strongly agreed that they were encouraged to respectfully challenge their extra lessons’ teacher style of teaching.

Table 31

*Likert Scale of Student Responses to CIP Tenets 2 & 3: Sharing Power and Dialogical Professor-Student Interaction*

<table>
<thead>
<tr>
<th>Statement</th>
<th>Strongly disagree</th>
<th>Disagree</th>
<th>Neither agree nor disagree</th>
<th>Agree</th>
<th>Strongly agree</th>
<th>Total responses</th>
</tr>
</thead>
<tbody>
<tr>
<td>My teachers encourage me to show the class how I solve answers to problems and equations</td>
<td>41</td>
<td>74</td>
<td>141</td>
<td>560</td>
<td>470</td>
<td>1,286</td>
</tr>
<tr>
<td>I am encouraged to explain and help tutor other peers in extra lessons</td>
<td>44</td>
<td>114</td>
<td>199</td>
<td>593</td>
<td>282</td>
<td>1,232</td>
</tr>
<tr>
<td>I am encouraged to teach my extra lessons teacher another way of answering the problem</td>
<td>80</td>
<td>202</td>
<td>268</td>
<td>488</td>
<td>215</td>
<td>1,253</td>
</tr>
<tr>
<td>I am encouraged to respectfully challenge my extra lessons style of teaching</td>
<td>62</td>
<td>147</td>
<td>296</td>
<td>498</td>
<td>246</td>
<td>1,249</td>
</tr>
</tbody>
</table>

Table 32 reports the summative assessment of the 5-point Likert scale responses to items about *activation of student voice* and *utilization of personal narratives* (CIP tenets 4 and 5). Of the student respondents, 71.3% \((n = 896)\) agreed or strongly agreed
that they were not afraid to ask questions in extra lessons. Toward that end, 86.1% of student respondents agreed or strongly agreed that they were expected to ask questions when they did not understand. Just under half of the respondents, at 47.9% of students, agreed or strongly agreed that they were encouraged to speak patois (Jamaican language) in extra lessons classes.

Table 32

*Likert Scale of Student Responses to CIP Tenets 4 & 5: Activation of Student Voice and Utilization of Personal Narratives*

<table>
<thead>
<tr>
<th>Statement</th>
<th>Strongly disagree</th>
<th>Disagree</th>
<th>Neither agree nor disagree</th>
<th>Agree</th>
<th>Strongly agree</th>
<th>Total responses</th>
</tr>
</thead>
<tbody>
<tr>
<td>I am encouraged to speak with my extra lessons teacher in the Jamaican language (Patois) inside the extra lessons classroom</td>
<td>148</td>
<td>286</td>
<td>235</td>
<td>365</td>
<td>249</td>
<td>1,283</td>
</tr>
<tr>
<td>I am not afraid to answer questions in class</td>
<td>72</td>
<td>121</td>
<td>167</td>
<td>455</td>
<td>441</td>
<td>1,256</td>
</tr>
<tr>
<td>I am expected to ask questions when I do not understand</td>
<td>37</td>
<td>44</td>
<td>93</td>
<td>721</td>
<td></td>
<td>1,259</td>
</tr>
<tr>
<td>My extra lessons teacher uses creative ways e.g., Reggae music, Jamaican language, and examples I could relate to in class</td>
<td>127</td>
<td>228</td>
<td>184</td>
<td>378</td>
<td>337</td>
<td>1,254</td>
</tr>
</tbody>
</table>

Lastly, 57% of student respondents agreed or strongly agreed that their extra lessons teacher used creative forms of pedagogy that were relevant to the cultural context of the student.
Socioeconomic Implications

The mean score for average household monthly income is 6.33 ($SD = 4.05$), which represents $35,000 to $59,000 JMD per month. In addition to the average household monthly income reported, I also collected data on parents and guardians’ employment status, occupation, and student’s perception of the financial impact of extra lessons. Table 33 reports the parents and guardian’s employment status wherein students reported that more than half of their mothers and fathers were employed full time ($n = 903$, $n = 952$, respectively, for mothers and fathers).

Table 33

Parents/Guardians’ Employment Status

<table>
<thead>
<tr>
<th></th>
<th>Mother $F$</th>
<th>%</th>
<th>Father $F$</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Full time</td>
<td>903</td>
<td>54.6</td>
<td>952</td>
<td>57.6</td>
</tr>
<tr>
<td>Part time</td>
<td>276</td>
<td>16.7</td>
<td>215</td>
<td>13.0</td>
</tr>
<tr>
<td>Seasonal</td>
<td>103</td>
<td>6.2</td>
<td>149</td>
<td>9.0</td>
</tr>
<tr>
<td>Unemployed</td>
<td>269</td>
<td>16.3</td>
<td>85</td>
<td>5.1</td>
</tr>
<tr>
<td>No parent/guardian in household</td>
<td>29</td>
<td>1.8</td>
<td>154</td>
<td>9.3</td>
</tr>
<tr>
<td>Total</td>
<td>1580</td>
<td>95.5</td>
<td>1555</td>
<td>94.0</td>
</tr>
<tr>
<td>Missing system</td>
<td>74</td>
<td>4.5</td>
<td>99</td>
<td>6.0</td>
</tr>
<tr>
<td>Total</td>
<td>1654</td>
<td>100.0</td>
<td>1654</td>
<td>100.0</td>
</tr>
</tbody>
</table>

Table 34 reports that mothers and/or female guardians were more likely to be employed as a government employee, whereas fathers or male guardians were more
likely to be employed as a skilled laborer. Coinciding with Table 33, mothers and female
guardians had a higher unemployment rate than fathers or male guardians.

Table 34

Parents/Guardians’ Occupations

<table>
<thead>
<tr>
<th>MotherOccup</th>
<th>F</th>
<th>%</th>
<th>FatherOccup</th>
<th>F</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Government employee</td>
<td>355</td>
<td>21.5</td>
<td>Government employee</td>
<td>262</td>
<td>15.8</td>
</tr>
<tr>
<td>Manager</td>
<td>100</td>
<td>6.0</td>
<td>Manager</td>
<td>96</td>
<td>5.8</td>
</tr>
<tr>
<td>Entrepreneur</td>
<td>236</td>
<td>14.3</td>
<td>Entrepreneur</td>
<td>270</td>
<td>16.3</td>
</tr>
<tr>
<td>Professional</td>
<td>102</td>
<td>6.2</td>
<td>Professional</td>
<td>90</td>
<td>5.4</td>
</tr>
<tr>
<td>Secretary/clerk</td>
<td>126</td>
<td>7.6</td>
<td>Clerk</td>
<td>11</td>
<td>.7</td>
</tr>
<tr>
<td>Military/police</td>
<td>17</td>
<td>1.0</td>
<td>Military/police</td>
<td>71</td>
<td>4.3</td>
</tr>
<tr>
<td>Skilled laborer</td>
<td>111</td>
<td>6.7</td>
<td>Skilled Laborer</td>
<td>372</td>
<td>22.5</td>
</tr>
<tr>
<td>Farmer</td>
<td>56</td>
<td>3.4</td>
<td>Farmer</td>
<td>135</td>
<td>8.2</td>
</tr>
<tr>
<td>Helper/maid</td>
<td>160</td>
<td>9.7</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Unemployed</td>
<td>239</td>
<td>14.4</td>
<td>Unemployed</td>
<td>62</td>
<td>3.7</td>
</tr>
<tr>
<td>No mother/female guardian</td>
<td>22</td>
<td>1.3</td>
<td>No father/male guardian</td>
<td>131</td>
<td>7.9</td>
</tr>
<tr>
<td>Total</td>
<td>152</td>
<td>92.1</td>
<td>Total</td>
<td>1500</td>
<td>90.7</td>
</tr>
</tbody>
</table>

Table 35 reports students’ self-reported belief as to the financial impact of extra
lessons. The majority of the students (n = 664) reported that extra lessons are valuable to
their education. Close to 25% (n = 411) of the students reported that extra lessons is
worth the cost.
Table 35

Students’ Reported Financial Impact of Extra Lessons

<table>
<thead>
<tr>
<th></th>
<th>F</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>It is a financial burden to my family</td>
<td>146</td>
<td>8.8</td>
</tr>
<tr>
<td>It is worth the cost</td>
<td>411</td>
<td>24.8</td>
</tr>
<tr>
<td>It is valuable to my education</td>
<td>664</td>
<td>40.1</td>
</tr>
<tr>
<td>It will help me to get into a university</td>
<td>99</td>
<td>6.0</td>
</tr>
<tr>
<td>Sub-total</td>
<td>1320</td>
<td>79.8</td>
</tr>
<tr>
<td>Missing</td>
<td>334</td>
<td>20.2</td>
</tr>
<tr>
<td>Total</td>
<td>1654</td>
<td>100.0</td>
</tr>
</tbody>
</table>

Results for Academic Achievement

Assumptions

Of the assumptions for HLM, the only one that could be examined prior to estimating the HLM models was linearity; however, the remaining assumptions were examined after all four models were examined.

Normality. Descriptive statistics were inspected in order to examine the normality of the data for all variables. Overall there was little evidence that the assumption of normality had been violated. After the fixed effects tables were generated from the random coefficients regression models, the academic achievement variable, ACADACHV, was seen to be normally distributed, and coefficients and the probability levels were identical between the two versions of the fixed effects tables. Table 36 presents descriptive statistics for academic achievement, extra lessons hours, household monthly income, extra lessons effects, and critical-inclusive pedagogical tenets.
Table 36

Descriptive Statistics for ACADACH, EXTHRS, EFFEXTR, CIPTENETS and HHMTHINC

<table>
<thead>
<tr>
<th></th>
<th>Statistic</th>
<th>SE</th>
</tr>
</thead>
<tbody>
<tr>
<td>ACADACHV Mean</td>
<td>6.999</td>
<td>.0405</td>
</tr>
<tr>
<td>5% Trimmed Mean</td>
<td>6.981</td>
<td></td>
</tr>
<tr>
<td>Median</td>
<td>7.000</td>
<td></td>
</tr>
<tr>
<td>Variance</td>
<td>1.258</td>
<td></td>
</tr>
<tr>
<td>Std. Deviation</td>
<td>1.1215</td>
<td></td>
</tr>
<tr>
<td>Minimum</td>
<td>4.0</td>
<td></td>
</tr>
<tr>
<td>Maximum</td>
<td>10.0</td>
<td></td>
</tr>
<tr>
<td>Range</td>
<td>6.0</td>
<td></td>
</tr>
<tr>
<td>Interquartile Range</td>
<td>2.0</td>
<td></td>
</tr>
<tr>
<td>Skewness</td>
<td>0.125</td>
<td>.088</td>
</tr>
<tr>
<td>Kurtosis</td>
<td>0.011</td>
<td>.177</td>
</tr>
<tr>
<td>HHMTHINC Mean</td>
<td>1.78</td>
<td>.040</td>
</tr>
<tr>
<td>5% Trimmed mean</td>
<td>1.63</td>
<td></td>
</tr>
<tr>
<td>Median</td>
<td>1.00</td>
<td></td>
</tr>
<tr>
<td>Variance</td>
<td>1.252</td>
<td></td>
</tr>
<tr>
<td>Std. deviation</td>
<td>1.119</td>
<td></td>
</tr>
<tr>
<td>Minimum</td>
<td>1.0</td>
<td></td>
</tr>
<tr>
<td>Maximum</td>
<td>6.0</td>
<td></td>
</tr>
<tr>
<td>Range</td>
<td>5.0</td>
<td></td>
</tr>
<tr>
<td>Interquartile range</td>
<td>1.0</td>
<td></td>
</tr>
<tr>
<td>Skewness</td>
<td>1.897</td>
<td>.088</td>
</tr>
<tr>
<td>Kurtosis</td>
<td>3.729</td>
<td>.177</td>
</tr>
<tr>
<td>HHMTHINC Mean</td>
<td>6.68</td>
<td>.148</td>
</tr>
<tr>
<td>95% Confidence interval for mean</td>
<td>Lower bound</td>
<td>6.39</td>
</tr>
<tr>
<td></td>
<td>Upper bound</td>
<td></td>
</tr>
<tr>
<td>----------------------</td>
<td>-------------</td>
<td>-------</td>
</tr>
<tr>
<td></td>
<td></td>
<td>6.98</td>
</tr>
<tr>
<td>5% Trimmed mean</td>
<td>6.44</td>
<td></td>
</tr>
<tr>
<td>Median</td>
<td>6.00</td>
<td></td>
</tr>
<tr>
<td>Variance</td>
<td>16.857</td>
<td></td>
</tr>
<tr>
<td>Std. deviation</td>
<td>4.106</td>
<td></td>
</tr>
<tr>
<td>Minimum</td>
<td>1.0</td>
<td></td>
</tr>
<tr>
<td>Maximum</td>
<td>17.0</td>
<td></td>
</tr>
<tr>
<td>Range</td>
<td>16.0</td>
<td></td>
</tr>
<tr>
<td>Interquartile range</td>
<td>5.0</td>
<td></td>
</tr>
<tr>
<td>Skewness</td>
<td>0.712</td>
<td>.088</td>
</tr>
<tr>
<td>Kurtosis</td>
<td>0.128</td>
<td>.177</td>
</tr>
<tr>
<td>Mean</td>
<td>40.0941</td>
<td>.18759</td>
</tr>
<tr>
<td>95% Confidence interval for mean</td>
<td>Lower bound</td>
<td>39.7259</td>
</tr>
<tr>
<td>5% Trimmed mean</td>
<td>40.3224</td>
<td></td>
</tr>
<tr>
<td>Median</td>
<td>40.0000</td>
<td></td>
</tr>
<tr>
<td>Variance</td>
<td>26.920</td>
<td></td>
</tr>
<tr>
<td>Std. deviation</td>
<td>5.18849</td>
<td></td>
</tr>
<tr>
<td>Minimum</td>
<td>10.00</td>
<td></td>
</tr>
<tr>
<td>Maximum</td>
<td>50.00</td>
<td></td>
</tr>
<tr>
<td>Range</td>
<td>40.00</td>
<td></td>
</tr>
<tr>
<td>Interquartile range</td>
<td>6.00</td>
<td></td>
</tr>
<tr>
<td>Skewness</td>
<td>-1.202</td>
<td>.088</td>
</tr>
<tr>
<td>Kurtosis</td>
<td>4.914</td>
<td>.177</td>
</tr>
<tr>
<td>Mean</td>
<td>44.0993</td>
<td>.27560</td>
</tr>
<tr>
<td>95% Confidence interval for mean</td>
<td>Lower bound</td>
<td>43.5583</td>
</tr>
<tr>
<td>5% Trimmed mean</td>
<td>44.4611</td>
<td></td>
</tr>
<tr>
<td>Median</td>
<td>45.0000</td>
<td></td>
</tr>
<tr>
<td>Variance</td>
<td>58.105</td>
<td></td>
</tr>
<tr>
<td>Std. deviation</td>
<td>7.62268</td>
<td></td>
</tr>
<tr>
<td>Minimum</td>
<td>12.00</td>
<td></td>
</tr>
<tr>
<td>Variables</td>
<td>Tolerance</td>
<td>VIF</td>
</tr>
<tr>
<td>---------------</td>
<td>-----------</td>
<td>-------</td>
</tr>
<tr>
<td>EXTHRS</td>
<td>.976</td>
<td>1.025</td>
</tr>
<tr>
<td>EFFEXTR</td>
<td>.807</td>
<td>1.239</td>
</tr>
<tr>
<td>CIPTENETS</td>
<td>.804</td>
<td>1.244</td>
</tr>
<tr>
<td>HHMTHINC</td>
<td>.979</td>
<td>1.022</td>
</tr>
</tbody>
</table>

**Note.** The variables of EXTHRS = extra hours; EFFEXTR = effects of extra lessons; CIPTENETS = (effectiveness of) critical-inclusive pedagogical tenets; HHMTHINC = household monthly income.
**Multicollinearity.** The assumption that there is not multicollinearity is made for HLM. Tolerance was greater than .10, and the variance inflation factor was less than 10, suggesting that multicollinearity is not an issue (see Table 37).

**Linearity.** Review of scatter plots for students’ academic achievement over time were examined. Overall the plots did not show evidence of non-linear or curvilinear trends. Therefore, there was no evidence that the assumption of linearity had been violated.

**Distribution of errors.** After the HLM analysis was conducted, it was possible to examine the assumption of homogeneity of variance of level-1 residuals. For all models, the $H$ statistic test was used, and statistically significant results were found (see Table 38).

Table 38

<table>
<thead>
<tr>
<th>Model</th>
<th>$H$ Statistic</th>
<th>$\chi^2$</th>
<th>df</th>
<th>$p$</th>
</tr>
</thead>
<tbody>
<tr>
<td>RC regression</td>
<td></td>
<td>209.64290</td>
<td>60</td>
<td>0.000</td>
</tr>
<tr>
<td>Model 1</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>RC regression</td>
<td></td>
<td>144.03911</td>
<td>55</td>
<td>0.000</td>
</tr>
<tr>
<td>Model 2</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Full model</td>
<td></td>
<td>158.10249</td>
<td>60</td>
<td>0.000</td>
</tr>
</tbody>
</table>

This test refers to the assumption that when the model is run for each of the 61 schools, the residual variances are heterogeneous. These findings of significance mean that residual variances differ significantly for these data across school-level variables.

Although Raudenbush and Bryk (2002) indicated that “a violation of the homogeneity assumption is not per se a serious problem for estimating either level-2 coefficients or
their standard errors” (p. 264), I attempted to correct for the violation by introducing another level-1 predictor to create a heterogeneous variance model. However the violation was not corrected for (see Limitations section to account for violation of assumption of homogeneity).

**Hierarchical Linear Modeling Analysis**

Hierarchical Linear Modeling (HLM) was used to test the following hypotheses

(a) The practice of extra lessons within schools is not related to higher academic achievement, and (b) critical-inclusive pedagogy in extra lessons is not related to academic achievement. In order to support these hypotheses, three conditions are presented. The hypotheses and conditions to be satisfied are summarized in Table 39.

Table 39

**Hypotheses and Conditions Summarized**

<table>
<thead>
<tr>
<th>Hypotheses</th>
<th>Conditions</th>
</tr>
</thead>
<tbody>
<tr>
<td>1: $H_{01}$</td>
<td>There is systematic within- and between-person variation in academic achievement</td>
</tr>
<tr>
<td>2: $H_{02}$</td>
<td>There is significant variance at the level-1 intercept</td>
</tr>
<tr>
<td></td>
<td>There is significant variance in the level-1 slope</td>
</tr>
</tbody>
</table>
Condition 1

Prior to estimating the full model, four models were estimated as part of the model-building process. The full results for these models are presented in Appendix U. The first model estimated is called the null model or the one-way ANOVA model with random effects. As seen in Table 40, the between-person variance component for the intercept (level-2 variance, $\gamma_{00}, 0.38754$) is significant, which means that the intercept of the outcome variable $ACADACHV$ is significantly affected by its predictors (school-level variables). Additionally, the school-level effects are smaller than the residual variance component or within-person variance (level-1 variance, $\sigma^2, 0.91499$), indicating that there is still considerable residual variation in $ACADACHV$ to be explained and that a model with additional predictors is needed. The intraclass correlation coefficient (ICC) indicates the proportion of total variation in academic achievement that lies between individuals. It was calculated as follows:

$$ICC = \frac{\tau_{00}}{\tau_{00} + \sigma^2} = \frac{0.38754}{0.38754 + 0.91499} = 0.29753$$

This statistic indicates that approximately 29.75% of the variation in academic achievement lies between individual students.

Table 40

*Final Estimation of Variance Components: First Model*

<table>
<thead>
<tr>
<th>Random Effect</th>
<th>$SD$</th>
<th>Variance component</th>
<th>$d$</th>
<th>$\chi^2$</th>
<th>$p$</th>
</tr>
</thead>
<tbody>
<tr>
<td>INTRCPT1, $u_0$</td>
<td>0.62253</td>
<td>0.38754</td>
<td>61</td>
<td>637.39743</td>
<td>&lt;0.001</td>
</tr>
<tr>
<td>level-1, $r$</td>
<td>0.95655</td>
<td>0.91499</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*Note.* Deviance = 4146.830404. Number of estimated parameters = 2.
Conditions 2 and 3

The second model estimated was the random coefficients regression model, with multiple level-1 predictors and no level-2 predictors. It builds upon the null model by adding two level-1 predictor variables, \(EXTHRS\) and \(HHMTHINC\). The mixed model equation is below:

\[
ACADACHV_{ij} = \gamma_{00} + \gamma_{10} * EXTHRS_{ij} + \gamma_{20} * HHMTHINC_{ij} + u_{0j} + r_{ij}
\]

At level 2, there were no predictor variables added. However, the level-1 intercept is predicted by the level-2 mean \(\gamma_{00}\) of \(ACADACHV\) plus a level-2 error term \(u_{0j}\). The level-2 error term represents the random effect of school-level variables of \(ACADACHV\) at level 1. A likelihood ratio test was also done to test if the random coefficients regression model was a significantly better fit than the null model. Using HLM7, the output below indicates that there was a drop in the deviance from 4146.83 to 2848.47, and this difference is significant at better than the .001 level.

**Statistics for current covariance components model**

Deviance = 2848.466910
Number of estimated parameters = 7

**Model comparison test**

\(\chi^2\) statistic = 1298.36309
Degrees of freedom = 5
\(p\)-value = <0.001

Table 41 indicates that all fixed effects \(\gamma_{00}, \gamma_{10}\), and \(\gamma_{20}\) were found to be statistically significant, which can conclude that \(EXTHRS\) and \(HHMTHINC\) are significant predictors of \(ACADACHV\). However, the variance components for \(EXTHRS\) and \(HHMTHINC\) were not statistically significant.
Table 41

*Final Estimation of Fixed Effects (With Robust Standard Errors): Second Model*

<table>
<thead>
<tr>
<th>Fixed effect</th>
<th>Coefficient</th>
<th>SE</th>
<th>t-ratio</th>
<th>Approx. df</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>For INTRCPT1, ( \beta_0 )</td>
<td>( INTRCPT2, \gamma )</td>
<td>6.669356</td>
<td>0.106723</td>
<td>62.492</td>
<td>60</td>
</tr>
<tr>
<td>For EXTHRS slope, ( \beta_1 )</td>
<td>( INTRCPT2, \gamma )</td>
<td>0.064283</td>
<td>0.030395</td>
<td>2.115</td>
<td>60</td>
</tr>
<tr>
<td>For HHMTHINC slope, ( \beta_2 )</td>
<td>( INTRCPT2, \gamma )</td>
<td>0.025098</td>
<td>0.008001</td>
<td>3.137</td>
<td>60</td>
</tr>
</tbody>
</table>

*Note.* The variables of EXTHRS = extra hours, and HHMTHINC = household monthly income.

Pseudo \( \sim R^2 \) (\( \sim R^2 \)) is a value that quantifies the amount of variation in the outcome that is explained by the predictors in a multilevel model. It compares the variance between the current model and the null model.

\[
\sim R^2 = \left( \sigma_{00}^2 \text{ (null model)} - \sigma_{00}^2 \text{ (RC regression model)} \right) / \sigma_{00}^2 \text{ (null model)}
\]

\[
= \left( 0.91499 - 0.82218 \right) / 0.91499 = 0.101
\]

This \( \sim R^2 \) indicates that about 10.1% of the within-person variance was explained by the two level-1 predictors, EXTHRS and HHMTHINC.

The third model estimated was another random coefficients regression model, including EXTHRS, HHMTHINC, and CIPTENETS. There were no level-2 predictor variables added. Using a likelihood ratio test, the output below indicates that there was a drop in the deviance from the previous Model 2 of 848.47 to 2337.53, and this difference is significant at better than the .001 level.

**Statistics for current covariance components model**
Deviance = 2337.526968
Number of estimated parameters = 11
Variance-Covariance components test
\[ \chi^2 \text{ statistic} = 510.94303 \]
Degrees of freedom = 4
\[ p\text{-value} = <0.001 \]

Table 42 indicates that all fixed effects \((\gamma_{00}, \gamma_{10}, \gamma_{20}, \gamma_{30})\) were found to be statistically significant, which can conclude that \(EXTHRS, HHMTHINC,\) and \(CIPTENETS\) are significant predictors of \(ACADACHV.\) However the variance components for \(EXTHRS, HHMTHINC,\) and \(CIPTENETS\) were not statistically significant.

Table 42

*Final Estimation of Fixed Effects (With Robust Standard Errors): Third Model*

<table>
<thead>
<tr>
<th>Fixed effect</th>
<th>Coefficient</th>
<th>SE</th>
<th>t-ratio</th>
<th>Approx. df</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>For INTRCPT1, (\beta_0)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>INTRCPT2, (\gamma_{00})</td>
<td>6.015131</td>
<td>0.264531</td>
<td>22.739</td>
<td>60</td>
<td>&lt;0.001</td>
</tr>
<tr>
<td>For EXTHRS slope, (\beta_1)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>INTRCPT2, (\gamma_{10})</td>
<td>0.070868</td>
<td>0.033640</td>
<td>2.107</td>
<td>60</td>
<td>0.039</td>
</tr>
<tr>
<td>For HHMTHINC slope, (\beta_2)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>INTRCPT2, (\gamma_{20})</td>
<td>0.023043</td>
<td>0.009862</td>
<td>2.337</td>
<td>60</td>
<td>0.023</td>
</tr>
<tr>
<td>For CIPTENET slope, (\beta_3)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>INTRCPT2, (\gamma_{30})</td>
<td>0.015473</td>
<td>0.005237</td>
<td>2.954</td>
<td>60</td>
<td>0.004</td>
</tr>
</tbody>
</table>

*Note.* The variables of \(EXTHRS = \) extra hours, and \(HHMTHINC = \) household monthly income, and \(CIPTENET = \) (effectiveness of) critical-inclusive pedagogical tenets.

The proportion of variance explained through the addition of \(CIPTENETS\) was estimated using the \(\sim R^2\) statistics. Based on the previous model, the \(\sim R^2\) indicated about 10.1% of the within-person variance. The addition of \(CIPTENETS\) to the level-1 model increased the within-person variance to 16.2%. 

166
\[ R^2 = \frac{\sigma_0^2 \text{(null model)} - \sigma_{00}\text{^2 (RC regression model)}}{\sigma_0^2 \text{(null model)}} \]

\[ = (0.91499 - 0.76676)/0.91499 = 0.162 \]

Table 43

*Final Estimation of Fixed Effects (With Robust Standard Errors): Fourth Model*

<table>
<thead>
<tr>
<th>Fixed effect</th>
<th>Coefficient</th>
<th>SE</th>
<th>t-ratio</th>
<th>Approx. df</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>For INTRCPT1, β₀</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>INTRCPT2, γ₀₀</td>
<td>5.724451</td>
<td>0.280423</td>
<td>20.414</td>
<td>58</td>
<td>&lt;0.00</td>
</tr>
<tr>
<td>SCHLLOCA, γ₀₁</td>
<td>-0.204158</td>
<td>0.503516</td>
<td>-0.405</td>
<td>58</td>
<td>0.687</td>
</tr>
<tr>
<td>SCHLSEX, γ₀₂</td>
<td>0.896403</td>
<td>0.354812</td>
<td>2.526</td>
<td>58</td>
<td>0.014</td>
</tr>
<tr>
<td>For EXTHRS slope, β₁</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>INTRCPT2, γ₁₀</td>
<td>0.080708</td>
<td>0.037917</td>
<td>2.129</td>
<td>58</td>
<td>0.038</td>
</tr>
<tr>
<td>SCHLLOCA, γ₁₁</td>
<td>-0.103824</td>
<td>0.060424</td>
<td>-1.718</td>
<td>58</td>
<td>0.091</td>
</tr>
<tr>
<td>SCHLSEX, γ₁₂</td>
<td>-0.023292</td>
<td>0.055454</td>
<td>-0.420</td>
<td>58</td>
<td>0.676</td>
</tr>
<tr>
<td>For HOUSEHOL slope, β₂</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>INTRCPT2, γ₂₀</td>
<td>0.024509</td>
<td>0.012232</td>
<td>2.004</td>
<td>58</td>
<td>0.050</td>
</tr>
<tr>
<td>SCHLLOCA, γ₂₁</td>
<td>0.020969</td>
<td>0.020224</td>
<td>1.037</td>
<td>58</td>
<td>0.304</td>
</tr>
<tr>
<td>SCHLSEX, γ₂₂</td>
<td>-0.004174</td>
<td>0.010870</td>
<td>-0.384</td>
<td>58</td>
<td>0.702</td>
</tr>
<tr>
<td>For CIPTENET slope, β₃</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>INTRCPT2, γ₃₀</td>
<td>0.019444</td>
<td>0.006054</td>
<td>3.212</td>
<td>58</td>
<td>0.002</td>
</tr>
<tr>
<td>SCHLLOCA, γ₃₁</td>
<td>0.008680</td>
<td>0.011148</td>
<td>0.779</td>
<td>58</td>
<td>0.439</td>
</tr>
<tr>
<td>SCHLSEX, γ₃₂</td>
<td>-0.012449</td>
<td>0.006403</td>
<td>-1.944</td>
<td>58</td>
<td>0.057</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Random Effect</th>
<th>SE</th>
<th>Variance component</th>
<th>df</th>
<th>χ²</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>INTRCPT1, u₀</td>
<td>1.14801</td>
<td>1.31794</td>
<td>53</td>
<td>71.04629</td>
<td>0.049</td>
</tr>
<tr>
<td>EXTHRS slope, u₁</td>
<td>0.11883</td>
<td>0.01412</td>
<td>53</td>
<td>61.68040</td>
<td>0.193</td>
</tr>
<tr>
<td>HOUSEHOL slope, u₂</td>
<td>0.04352</td>
<td>0.00189</td>
<td>53</td>
<td>68.69237</td>
<td>0.072</td>
</tr>
<tr>
<td>CIPTENET slope, u₃</td>
<td>0.02051</td>
<td>0.00042</td>
<td>53</td>
<td>63.86051</td>
<td>0.146</td>
</tr>
<tr>
<td>level-1, r</td>
<td>0.87794</td>
<td>0.77078</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
The final estimated model was the homogenous full-random coefficients model. The model included three level-1 predictor variables and two level-2 predictor variables to form the combined mixed model below:

\[
ACADACHV_{ij} = \gamma_{00} + \gamma_{01} \times SCHLLOCA_j + \gamma_{02} \times SCHLSEX_j + \gamma_{10} \times EXTHRS_{ij} + \gamma_{11} \times SCHLLOCA_j \times EXTHRS_{ij} + \gamma_{12} \times SCHLSEX_j \times EXTHRS_{ij} + \gamma_{20} \times HHMTHINC_{ij} + \gamma_{21} \times SCHLLOCA_j \times HHMTHINC_{ij} + \gamma_{22} \times SCHLSEX_j \times HHMTHINC_{ij} + \gamma_{30} \times CIPTENET_{ij} + \gamma_{31} \times SCHLLOCA_j \times CIPTENET_{ij} + \gamma_{32} \times SCHLSEX_j \times CIPTENET_{ij} + u_{0j} + r_{ij}
\]

The results of this model are presented in Table 43. Two of the level-1 predictor variables, \(EXTHRS\) and \(CIPTENETS\), were found to be significant at varying levels. However, using a likelihood ratio test, the output below indicates that there was not a drop in the deviance, meaning that the difference between the current model and the previous regression model is not significant. On parsimony grounds, I would prefer the previous regression model, because it had the lowest deviance of all the models.

Lastly, the proportion of variance explained through the addition of level-2 predictors was estimated using the \(\sim R^2\) statistics. Based on the previous model, the \(\sim R^2\) indicated about 16.2% of the within-person variance. The addition of level-2 variables to the level-1 model decreased the within-person variance to 15.8%,

\[
\sim R^2 = \left( \sigma_{00}^2 \text{ (null model)} - \sigma_{00}^2 \text{ (Full model)} / \sigma_{00}^2 \text{ (null model)} \right)
\]

\[
= (0.91499 - 0.77078) / 0.91499 = .1576
\]

**Interpretation**

In the full-mixed model, the deviance did not decline compared to the second random coefficients (RC) regression model, which also reflected a significantly better fit than the null model. Furthermore, the difference between the full-mixed model and the second RC regression model is not significant (\(p\)-value = >.500). That is, school-level
variables as a level-2 covariate in the full-mixed model did not reduce the deviance by a significant amount. On parsimonious grounds, I prefer the second random-coefficients regression model to interpret the findings. Furthermore, I would accept the first null hypothesis and conclude that the practice of extra lessons within schools is not related to higher academic achievement.

On parsimonious grounds, I would conclude that based on the second random-coefficients regression model, $EXTHRS$, $HHMTHINC$, and $CIPTENETS$ are significant predictors of $ACADACHV$. That is, the number of hours spent in extra lessons, along with average household monthly income and critical-inclusive pedagogical tenets can significantly predict academic achievement. The intercept of 6.01 or 60.1% gives the mean academic achievement score when all other variables in the model are controlled at zero. Lastly, I would reject the second null hypothesis and conclude that critical-inclusive pedagogical tenets in extra lessons is related to academic achievement.

**Limitations**

This study is considered as using a non-experimental associational approach. As such, there are potential threats to internal validity with regards to selection of the sample, HLM, and maturation of the sample. Students in Grade 11 were asked to recall their Grade 10 end-of-year grade average, which could result in some unreliable data due to memory and maturation of age. Regression to the mean is another threat to internal validity with measurement error. Using a stratified sampling frame allowed for better representation and random selection; however the majority of the sample attended or lived in the Kingston education region, which is cause for potential skewness to data.
Another limitation deals with the instrument’s construct validity. Because the instrument used for this study is an adaptation of a newly constructed instrument, it has not been tested for construct validity against other similarly related instruments. Accordingly, all surveys were to be conducted online; however due to the lack of Internet access in most of the education regions, all surveys were conducted by hand and then entered manually into a computer. As such, there could be data entry errors that were not corrected for. Other limitations were found in the level-2 school variables. Within the initial construction of the instrument, school level data were not a major part of the questionnaire. Arguably, there were not enough school-level variables to support the analysis. Future considerations would include variables, such as total number of students in school, total number of teachers who teach extra lessons in school, as well as student-teacher ratio and the like.

Violation of homogeneity was a limitation in the empirical analysis, because it was related to model misspecification, where one or more level-1 predictors were not used in the model. Additionally, the presence of heterogeneous residual variance could be due to the presence of outliers from data entry errors, because data were entered by hand for each of the surveys collected, as mentioned above. I attempted to correct for the violations by creating two separate heterogeneous variance models with variables not otherwise used in the model, HWHRS and Gender. HWHRS represented the number of reported hours spent on homework per week. Separately, I tested the variables by running a simple regression and looked at the differences between the residual sum of squares.
Both variables seemed to be good predictor candidates; however, when included in the heterogeneous variance model, the homogeneity $p$-value was significant.

**Summary**

The descriptive results reported above presented baseline data not previously available on extra lessons in Jamaica. In particular, the data revealed that a large proportion of students across Jamaica, whether in urban or rural areas, in coeducational or single-sex schools, attend extra lessons. This finding is consistent with regional colleagues in Trinidad and Tobago who reported in their study that 88.2% of students in Standard Five at the primary level participated in private tutoring (Barrow & Lochan, 2012). The data also showed that students spent on average between 5 to 10 hours per week in extra lessons classes, whether before the start of school or after school. As expected, due to the CSEC exam policy, most students take mathematics in extra lessons but also take anywhere from 1 to 10 additional subjects in extra lessons. The cost of extra lessons varied from region to region, with Region 1 (Kingston and St. Andrew) reporting the highest cost; however, important to note was that only 39.9% of students reported paying for extra lessons, whereas the majority of students reported receiving extra lessons for free. This implies that further research is needed on government subsidies as well as teachers’ perceptions on the effects of extra lessons.

In looking at the delivery of extra lessons, I assessed students using a 5-point Likert scale to see the degrees of agreement between participation in extra lessons and use of critical-inclusive pedagogy. Students reported favorably to the various uses of critical-inclusive pedagogy in extra lessons. Most notably were the presence of Tenets 1
and 4: *faculty-student interaction* and the *activation of student voice* (Tuitt, 2003), respectively. Essentially, students reported a higher level of engagement with their extra lessons math teachers as well as a heightened expectation to ask more questions in extra lessons classes. Lastly, socioeconomic factors were described according to the relationship between academic means and parents/guardians’ occupation and average household monthly income. Although contradictory at times, students in wealthier families with parents employed in professional positions had a tendency to have higher overall end-of-year grade averages. More importantly, students believed that extra lessons are important to their education and worth the cost. Empirically, the data revealed that the number of hours spent in extra lessons as well as the average household monthly income and critical-inclusive pedagogical tenets were significant predictors of academic achievement.
CHAPTER 5. QUALITATIVE AND MIXED METHODS FINDINGS

This chapter presents the results of the open-ended survey questions and the cross-case analysis to answer the following sub-issue questions: (a) What aspects of a critical-inclusive pedagogical framework can be aligned with the teaching and learning practices utilized in extra lessons? and (b) How do teachers, students, parents, and key government officials describe their experiences with and the impact of extra lessons on students’ overall educational outcomes in three of Jamaica’s six education regions? I present the data in two main contexts: (a) A postcolonial re-storying of my participants’ experiences undergirded by self-reflexive journaling, and (b) a traditional cross-case analysis presentation of findings, starting with a cross-over mixed analysis of the case descriptions. As mentioned in Chapter 2, I use aspects of the postcolonial theoretical framework to set the context and overarching constructs of the findings.

The postcolonial re-storying represents a composite narrative of the participants’ experiences from the viewpoint of a single protagonist. More specifically,

The composite first person narrative is a reflective story. It draws a composite picture of the phenomenon emerging from the informants. The composite is not a simple re-telling. It is interpretation by the researcher in several important ways: through her knowledge of the literature regarding the phenomenon under enquiry, through listening and hearing the stories told by the informants, and through her own reflexivity during the process. (Stanley Wertz, Nosek, McNeish, & Marlow, 2011, p. 2)

On the other hand, the traditional cross-case presentation details an emergent model for extra lessons, illustrating the external pushes and internal constructs of private tutoring in
Jamaica. Collectively both presentations of findings provide a more comprehensive
description of extra lessons in Jamaica.

**Extra Lessons First-Person Composite Narrative**

*At school, like I don’t know, class is big and you don’t get individual attention that you want, and I don’t know if it’s only my school, but they are just fasty and when you ask questions, it’s like why are you asking that question, it’s a big deal when you ask a question. And for us being at school, you see the teachers every day; they are tired of us, and they don’t want you to ask them a question. We’re tired of them, they’re tired of us. When you’re at extras class you only spend like 2 days a week for 2 hours. You know, they are not tired of us; they’re okay with seeing us and especially if you go to extras on a Saturday. You’re fresh; you don’t spend an entire day at school, 8 hours of work and do more work. You’re fresh, wake up—well I go to Spanish at 8 am on a Sunday, so I’m willing to learn. I’m not in my uniform; I don’t feel hot. I’m just ready to learn.*

The mountain caps peak against the eastern glow of the rising sun. The morning
breeze gently sings against the lush green leaves of the mahogany and cedar trees. Scents of searcy, mint, pimento, and salt water mix in jubilee. Dawn breaks yet another morning on this green and wooden island. The cock crows, and she knows it is time to wake up. She looks at the watch her mother sent from foreign and sees it is already 5:15 am. She didn’t iron her uniform from the night before. She will be late again! She jumps out of bed, quickly spreads the sheet, runs her hands across the top of the pillow case, and goes to bathe. Water gone again. She looks to the rear of the porcelain tub for the old familiar white bucket and runs to the stored water outside in the blue barrel. Seven-minutes later,
she rushes out the tub, grabs the iron, and re-irons yesterday’s-worn uniform. She dresses herself quickly, grabs the brown bobby socks from the drawer, puts them on, and then steps into the black loafers by the door. She sneaks into her daddy’s room, being sure not to wake him, and grabs the black shoe polish to clean off her shoes. With two spritz of water and a dab of pink lotion in her hair, she grabs the brush and dark blue bobby clips and runs out the door. It is 6:00 am; she will make it before the school gate closes.

Class is noisy; everybody has their own mini group. The persons at the front of the class are the only ones in the discussion with the teacher; the teacher is not paying anybody else any mind, you know, at the front. She’s not saying to the others they should be quiet; and if you’re not at the front, you’re being distracted by everyone else talking around you. Some teachers, like they just want to finish that subject. So if you don’t get it, they’ll move on—they’ll move on. So I’m saying, you as a student have to try to get it. Because like if some students now say, “Miss, I don't understand,” she'll say, “Well, you have to do that on your own.” And like because of that, now most students are afraid to tell the teacher they don’t understand. Sometimes when you read up for yourself, you don’t get the information. So you want the tutoring and someone to explain it. And also myself, because I don't want to fail my subjects, because that would be very embarrassing. Like I've been to school for 5 years and don't get anything from coming to school. No, I don’t want that!

The school bell rings; it is 3:00 pm. Time for afternoon extras; she walks through the brightly painted school gates, across the sunken, pot holes in the road, and waits for the bus. Quickly, she rummages through her school bag to look for her extra lessons
folder, making sure Sir’s homework is done. She breathes a sigh of relief. With two
blows of the horn, the mini bus roles up; she enters. She is heading to Sir’s class, where
his legendary teaching skills precede him. Similar to Arthurian legend, she compares him
to Merlin, mystical and capable of wizardry powers, for it is rumored that the most
challenged of students who attend his class will score distinctions in their CXC
(Caribbean Examinations Council) exams. Thirty-seven minutes later, she walks into his
class and sees the salt-and-pepper haired man, not more than five feet six inches. He
greets her with a smile.

*My math extras teacher, if he was Asian, I would call him like, my Sensei, because
he’s so wise and stuff. For instance, one time, I kind of diverted him from having class,
because I really didn’t want to do anything. So I kind of got on a topic that he’d talk
about, and then he was there talking about Momar Khadaf, and all those kind of people,
and I got a new perspective on world affairs and stuff. And he also explained stuff in a
different way.*

In every class, he challenges her to become a change agent and social activist,
reminding her that she represents the youth of the country and has a responsibility to
make changes. She is no longer afraid to ask questions. She is expected to challenge his
style of teaching and reassured that there are many styles; and she can debate each freely
without retribution.

He says to the class, *We need a spirit in the Ministry of Education that says, Our
children can achieve and they have to achieve. And it requires a lot more democracy at
the Ministry level, meaning that there's no individual, myself included, Miss included,*
that we can stay at the top and solve this mammoth of a problem. We have to get people who are involved; the teachers and we have to work with them. So I think it's going to be difficult if in the Ministry, you don’t have people (a) committed to the youth, (b) with the conviction that the youth can achieve, and (c) with the understanding that the conditions of learning have to change. And in that context, having a process where the teachers have a huge say. I'm not saying that every teacher is great. But the teachers must be included; they are the ones in the classroom every day.

It is 6:00 pm; school is done for the day. Tired, hungry, and exhausted, she catches a ride with the parent of another student, sits in traffic, and is home by 7:17 pm. She enters the door, kisses her daddy on the cheek, and drops her school bag in her room. Rolling her head from right to left, working out the cricks and cracks, she undresses and heads to the bathroom. Water is back; she quickly bathes and fills back the white plastic bucket at the back of the porcelain tub. She gets dressed for bed, eats her dinner and is too tired to watch tonight’s episode of Rising Star. Her father hands her the extra lessons tuition that her mother finally sent via Western Union. Her father reminds her, she has her SBA (school-based assessment) due tomorrow, so he will set the clock for 2:00 am to wake her. With a sigh, she looks at him begrudgingly, and then he reminds her that education is the only road to upward mobility. He reminds her that he did not have the same opportunities or a high school education, so she has to have one.

*My dad, he doesn’t understand anything in bio or chem.; but if I need anything, like if I have to wake up at 2 in the morning. Okay, I wake up at 2 am everyday, every*
morning. He’ll wake me up at 2:00 am. He’ll stay up with me. He doesn’t really interact with me but stays up with me to keep me company.

Interpretation

The composite narrative provided a snapshot in the day and life of a student who attends extra lessons in multiple regions. The italicized voices of my participants provided first-hand data from multiple perspectives about the attitudes towards and the experiences with extra lessons. As the researcher, I have undergirded the narrative with findings from the analytic memos and video journals conducted during data collection. The protagonist is assumed to belong to humble beginnings or reside within the lower social stratum of Jamaica. She, like many of my participants, lives in a single-parent household in which remittances are used to furnish her livelihood. Her 14-hour day is filled with school and transportation; she has no time for play or leisure.

There is a seemingly disturbing contrast between life at school and life at extra lessons. Life at school embodies multiple classes of distracting, noisy students, with little to no classroom management and lost curricular time spent on settling the class. On the other hand, at extra lessons, there is an urgency to complete the assignment and be on time. There is an expectation raised by the extra lessons teacher that class is for learning, not for distractions—not for the latest gossip, Facebook, Twitter, or text, but for deep learning to take place. There is however the backlash of a 14-hour day: fatigue, burnout, and exhaustion. Nevertheless, she is reminded by the tired mirrored image of her father and the humble surroundings of her home that this is the path to upward social mobility, so whatever the cost or level of fatigue, it must be done.
Case Descriptions

In selecting to present descriptive case studies, this section provides a rich illustration and deeper context about the selected sites and cross-over mixed analysis. As suggested by Creswell (2007), Stake (2005), and Yin (2009, 2012), a rich description of the cases often precedes the within- and cross-case analysis so as to set the stage for the presentation of the findings.

Case 1: Extra Lessons in Region A

I arrived early, nervous and excited to observe the mathematics extra-lessons class. I gathered all three audio-recorders, a manila envelope filled with photo-copied consent forms, swung the heavy laptop case across my right shoulder, and turned to face the entrance to the building. The glaring sun streamed sweat beads down my anxious forehead as I adjusted my frames to absorb all the details of the 80-year-old wooden building. The building was the original schoolhouse built in 1933, in an era of mounting unrest when Jamaica began talks of an independent age. The schoolhouse was a temporary housing post for AB Academy—the extra-lessons institute I would observe and in which I would conduct focus groups and individual interviews to represent Region A. I stepped into the white-washed aging building and made my way up the narrow, creaking staircase to the second-floor classrooms. Each step withered and tore away a little more as I stepped cautiously, trying not to disturb the other classes on the first floor. As I ascended the final step, I saw Mr. B in the doorway hugging and shaking hands with each of the students as they entered the classroom. He greeted me with a warm embrace and proceeded to explain my presence in the classroom. I had 5 minutes to set up my
recorders, laptop, and paperwork. I quickly found an inconspicuous seat against the right-
most tattered wall and sat in an old-familiar, grey iron seat with a wooden and iron desk
in front. As I was turning on all the technological gadgets, I couldn’t help but contrast the
setting of antique panes, open for cross-ventilation, and walls so thin you could hear the
lecture in the adjoining classroom. I glanced up for a minute and caught sight of the white
board, with the date and instructional goals for the evening written in green. As the final
students piled in the room, dressed in their uniforms and plain-clothes, they noticed a
stranger in their midst and quickly stared in bewilderment. The bewilderment would soon
turn to awe as I explained my reason for being there, and more importantly, my
positionality as a former classmate.

Region A represents two of the most urban parishes in the country, one parish of
which doubles as the capital city, with the largest population of inhabitants. Collectively,
Region A has the most secondary high schools in the country, with a total of 39,
comprising 28 coeducational schools and 11 same-sex schools.

The observations and focus groups were conducted at an external extra-lessons
institute. The institute has been in operation for over 25 years, with six full-time
teachers and 2 part-time teachers. Teaching experience ranged from 5 years to over 40
years. The core subjects offered at the institute are mathematics, advanced
mathematics, English Language, English Literature, biology, chemistry, and physics.
However, the institute offers subjects, such as principles of accounts, economics, and
elements of education psychology, such as teaching students how to learn. Over the past
25 years, more than 5,000 students have attended the external extra-lessons institute.
Table 44

Region A Cross-Over Mixed Analysis

<table>
<thead>
<tr>
<th>Forms of extra lessons</th>
<th>Quantitative data</th>
<th>Qualitative data</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Students’ responses</td>
<td>%</td>
</tr>
<tr>
<td>Private one-on-one</td>
<td>46</td>
<td>10.29</td>
</tr>
<tr>
<td>Small peer-to-peer</td>
<td>52</td>
<td>11.63</td>
</tr>
<tr>
<td>In-class group setting by teacher</td>
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<td>76.73</td>
</tr>
<tr>
<td>Internet</td>
<td>1</td>
<td>.22</td>
</tr>
<tr>
<td>Total responses</td>
<td><strong>442</strong></td>
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</table>

<table>
<thead>
<tr>
<th>Hours per week spent</th>
<th>Students’ responses</th>
<th>%</th>
<th>Students’ responses</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>1-4 hours</td>
<td>218</td>
<td>51.17</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>5-10 hours</td>
<td>133</td>
<td>31.22</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>11-15 hours</td>
<td>36</td>
<td>8.45</td>
<td>5</td>
<td>45.45</td>
</tr>
<tr>
<td>16-20 hours</td>
<td>20</td>
<td>4.69</td>
<td>6</td>
<td>54.54</td>
</tr>
<tr>
<td>21-24 hours</td>
<td>6</td>
<td>1.41</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>25-30 hours</td>
<td>9</td>
<td>2.11</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Total responses</td>
<td><strong>422</strong></td>
<td></td>
<td><strong>11</strong></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Subjects taken in extra lessons</th>
<th>Students’ responses</th>
<th>%</th>
<th>Students’ responses</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mathematics</td>
<td>353</td>
<td>81.90</td>
<td>11</td>
<td>100.00</td>
</tr>
<tr>
<td>English language</td>
<td>165</td>
<td>38.28</td>
<td>11</td>
<td>100.00</td>
</tr>
<tr>
<td>English literature</td>
<td>54</td>
<td>12.53</td>
<td>2</td>
<td>18.18</td>
</tr>
<tr>
<td>Physics</td>
<td>95</td>
<td>22.04</td>
<td>3</td>
<td>27.27</td>
</tr>
<tr>
<td>Biology</td>
<td>123</td>
<td>28.54</td>
<td>7</td>
<td>63.63</td>
</tr>
<tr>
<td>Chemistry</td>
<td>103</td>
<td>23.90</td>
<td>5</td>
<td>45.45</td>
</tr>
<tr>
<td>Principles of business</td>
<td>52</td>
<td>12.06</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Principles of accounting</td>
<td>97</td>
<td>22.51</td>
<td>1</td>
<td>9.09</td>
</tr>
<tr>
<td>History</td>
<td>32</td>
<td>7.42</td>
<td>1</td>
<td>9.09</td>
</tr>
<tr>
<td>Spanish</td>
<td>46</td>
<td>10.67</td>
<td>3</td>
<td>27.27</td>
</tr>
<tr>
<td>French</td>
<td>17</td>
<td>3.94</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Total responses</td>
<td><strong>431</strong></td>
<td></td>
<td><strong>11</strong></td>
<td></td>
</tr>
</tbody>
</table>

Note. Total responses = the total number of students who responded to each of the three categories. However, this total number of students who responded does not necessarily equal the total number of answers in a particular category, because in some cases, the students chose more than one item in the particular category (e.g., the category of Subjects taken in extra lessons).

The student focus group consisted of 11 participants, with 6 girls and 5 boys ranging in age from 14 to 17 years. The students reported attending nine different
traditional high schools: Five students attended all-boys schools, 4 students attended all-girls schools, and 2 students attended coeducational schools. Using two forms of crossover mixed analyses, namely integrated data display and data comparison (Creswell & Plano Clark, 201; Onwuegbuzie & Combs, 2010), Table 44 reports Region A’s corresponding quantitative and qualitative data. Specifically, Table 44 shows that extra lessons is primarily taken in the form of group-simulated class settings taught by a teacher, and that students reported taking mathematics the most. Lastly, Table 44 shows that students in the focus group spend more hours per week on extra lessons than do students in the sample population in Region A.

**Case 2: Extra Lessons in Region B**

I made a right turn off the highway on a questionably paved road, crossing over the decaying train tracks, built around 1845. I slowly drove over each pot hole, being careful not to land in a land-mine of broken cement, rocks, and dirt. Playing checkers with these potholes, I finally arrived at the site in Region B. I was greeted by a herd of students standing outside the bright yellow gates, waiting impatiently to get in. The security guard, recognizing the dusty lime-green car from the previous 2-day visits, opened the 10-foot wrought-iron, brightly yellow-painted gates. I entered into once again what seemed like a game of Jenga, where I needed the physical and mental skill to tightly maneuver my vehicle into conspicuous, tightly carved-out parking spaces. Somewhat tired from the 90-minute drive from the city center, I crawled out of the passenger seat, trying not to scratch the car parked next to mine. With the laptop case strapped across my right shoulder and car keys in the left hand, I walked towards the crowd of students,
waiting to get into the next shift of classes. I was escorted by the security guard through an automatic-locked second gate that you needed a code to enter. Waiting for me was the Vice Principal of the school, who had become somewhat of my gate-keeper for Region B. Expecting my visit, she led me to the school’s library, which was shaped like a rectangle and heavily decorated with books on the peripheries of the walls. As I looked around for a table to set up, I noticed students gathered at the computers typing, as well as the librarian watching my every move. Students began to stroll in wearing varying forms of uniforms, some in different colors as well as some in different styles. I asked one student why the difference, and she explained that some were to differentiate the lower-school grades (Grades 7 to 9) from the upper-school grade (Grades 10 and 11), and some uniforms identified students who were prefects of the school.

Region B includes two parishes, one of which was the former host of the capital of Jamaica in colonial times. Region B, although somewhat rural and known for sugar cane farming, also has an urban hub that is heavily populated and has recently become recognized for its increasing levels of violence. Region B has the second highest number of secondary schools in the country, with traditional schools, same-sex schools, new schools, and shift schools. Located in a garrison community, the research site for Region B was a new government school, built in the 1980s. The school is heavily guarded with security guards and an electronic security system. This school, which I found through some of the document analyses of past newspapers with CXC passes, is described as a pocket of excellence. As a school, it has produced outstanding students and CXC pass rates, despite its location and proximity to heavy violence.
Table 45

Region B Cross-Over Mixed Analysis

<table>
<thead>
<tr>
<th>Forms of extra lessons</th>
<th>Quantitative data</th>
<th>Qualitative data</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Students’ responses</td>
<td>%</td>
</tr>
<tr>
<td>Private one-on-one</td>
<td>12</td>
<td>3.97</td>
</tr>
<tr>
<td>Small group/ peer to peer (student led)</td>
<td>30</td>
<td>9.93</td>
</tr>
<tr>
<td>Internet tutoring (including Skype)</td>
<td>2</td>
<td>.67</td>
</tr>
<tr>
<td>In class by teacher (after school/ in-person)</td>
<td>258</td>
<td>85.43</td>
</tr>
<tr>
<td>Lecture style (video recording)</td>
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<td>0</td>
</tr>
<tr>
<td><strong>Total responses</strong></td>
<td><strong>302</strong></td>
<td><strong>100.00</strong></td>
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</table>

<table>
<thead>
<tr>
<th>Hours spent per week</th>
<th>Quantitative data</th>
<th>Qualitative data</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Students’ responses</td>
<td>%</td>
</tr>
<tr>
<td>1-4 hours</td>
<td>138</td>
<td>49.64</td>
</tr>
<tr>
<td>5-10 hours</td>
<td>82</td>
<td>29.50</td>
</tr>
<tr>
<td>11-15 hours</td>
<td>31</td>
<td>11.15</td>
</tr>
<tr>
<td>16-20 hours</td>
<td>12</td>
<td>4.31</td>
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<tr>
<td>21-24 hours</td>
<td>7</td>
<td>2.52</td>
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<tr>
<td>25-30 hours</td>
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<td>2.88</td>
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<td><strong>Total responses</strong></td>
<td><strong>278</strong></td>
<td><strong>100.00</strong></td>
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<table>
<thead>
<tr>
<th>Subjects taken in extra lessons</th>
<th>Quantitative data</th>
<th>Qualitative data</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Students’ responses</td>
<td>%</td>
</tr>
<tr>
<td>Mathematics</td>
<td>232</td>
<td>82.27</td>
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<tr>
<td>English language</td>
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<td>English literature</td>
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<td>15.60</td>
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<td>Physics</td>
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<td>18.79</td>
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<tr>
<td>Biology</td>
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<td>13.12</td>
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<td>Chemistry</td>
<td>75</td>
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</tr>
<tr>
<td>Principles of business</td>
<td>44</td>
<td>15.60</td>
</tr>
<tr>
<td>Principles of accounting</td>
<td>44</td>
<td>15.60</td>
</tr>
<tr>
<td>History</td>
<td>12</td>
<td>4.26</td>
</tr>
<tr>
<td>Spanish</td>
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<td>5.67</td>
</tr>
<tr>
<td>French</td>
<td>2</td>
<td>.71</td>
</tr>
<tr>
<td><strong>Total responses</strong></td>
<td><strong>282</strong></td>
<td></td>
</tr>
</tbody>
</table>

Note. Total responses = the total number of students who responded to each of the three categories. However, this total number of students who responded does not necessarily equal the total number of answers in a particular category, because in some cases, the students chose more than one item in the particular category (e.g., the category of Subjects taken in extra lessons).
Similar to Region A, students in Region B mostly attend extra lessons in the form of a group setting with a teacher (see Table 45). Concurrent with the survey findings of Region A, most students in Region B reported attending extra lessons between 1 to 4 hours. However unlike the findings in Region A, students in the focus groups attended extra lessons upwards of 5 to 10 hours per week. Lastly, students in the focus groups primarily took English language in extra lessons, but also had a higher attendance in chemistry extra-lessons classes than did the reported survey respondents in chemistry extra-lessons classes.

**Case 3: Extra Lessons in Region C**

To get to Region C, I drove through one of Jamaica’s many gorges via a narrow and steep one-lane mountainside-cliff road through the lush hills of Stony Hill, adjacent to the Blue Mountain terrains. The drive was met with much trepidation, as I winced every time I saw a trailer truck trying to climb the 20-foot incline and rolling back, knowing that the closest hospital was over 60 miles away. After clearing the gorge, I breathed a sigh of relief as I stumbled upon freshly paved roads, the new highway that had been funded with a loan to Jamaica from the Chinese government. With no potholes in sight, I pressed the gas onwards to my last data collection site, Region C. As I drove past the recently replanted banana groves, I saw farmers lining the streets, walking alongside the newly paved highway. The visual oxymoron was the merger of the old and new metaphorically walking side by side. The farmers, consisting of both men and women, were all elderly, and physically appeared weathered under the blazing hot Caribbean sun. With cutlasses in their hands and barrels of what seemed like cut sugar
cane grass over their shoulders, they walked alongside the freshly paved and newly painted highway.

I made a left turn off the highway and commenced the wobbly ascent up the hill and around the narrow corners of hill-top town. Making a sharp right turn by the overgrown mango-tree, I drove half a mile under shady mangroves. On my right was the entrance to the third case study site, a coeducational government school nestled at the bottom of the foothills of Region 2. The guard at the front gate was expecting my arrival and escorted me in through the unpainted, metal fence gate. Grabbing my belongings, I was led to the computer lab to observe a class, talk with some of the teachers, and then wait for my focus group to assemble.

Based on the cross-over mixed analysis (see Table 46), students in the focus group, similar to the larger regional sample, take extra lessons in the form of an in-class, simulated group setting. Regarding the number of hours spent per week, students in the focus group spent more hours in extra lessons than the larger survey sample. Lastly, in the focus group, most of the students take mathematics and the sciences, whereas the larger regional sample had a varying proportion of subjects taken in extra lessons.

Table 46

*Region C Cross-Over Mixed Analysis*

<table>
<thead>
<tr>
<th>Forms of extra lessons</th>
<th>Quantitative data</th>
<th>Qualitative data</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Students’ responses</td>
<td>%</td>
</tr>
<tr>
<td>Private one-on-one</td>
<td>9</td>
<td>5.14</td>
</tr>
<tr>
<td>Small group/peer to peer (student led)</td>
<td>26</td>
<td>14.86</td>
</tr>
<tr>
<td>Internet tutoring (including Skype)</td>
<td>2</td>
<td>1.14</td>
</tr>
<tr>
<td>In class by teacher (after school/in-person)</td>
<td>134</td>
<td>76.57</td>
</tr>
<tr>
<td>Lecture style (video recording)</td>
<td>4</td>
<td>2.29</td>
</tr>
<tr>
<td><strong>Total responses</strong></td>
<td><strong>175</strong></td>
<td><strong>100.00</strong></td>
</tr>
<tr>
<td><strong>Hours per week spent in extra lessons</strong></td>
<td>Students’ responses</td>
<td>%</td>
</tr>
<tr>
<td>1-4 hours</td>
<td>78</td>
<td>51.66</td>
</tr>
<tr>
<td>5-10 hours</td>
<td>48</td>
<td>31.79</td>
</tr>
<tr>
<td>11-15 hours</td>
<td>7</td>
<td>4.64</td>
</tr>
<tr>
<td>16-20 hours</td>
<td>2</td>
<td>1.32</td>
</tr>
<tr>
<td>21-24 hours</td>
<td>6</td>
<td>3.97</td>
</tr>
<tr>
<td>25-30 hours</td>
<td>10</td>
<td>6.62</td>
</tr>
<tr>
<td><strong>Total responses</strong></td>
<td><strong>151</strong></td>
<td><strong>100.00</strong></td>
</tr>
<tr>
<td><strong>Subjects taken in extra lessons</strong></td>
<td>Students’ responses</td>
<td>%</td>
</tr>
<tr>
<td>Mathematics</td>
<td>145</td>
<td>85.29</td>
</tr>
<tr>
<td>English language</td>
<td>61</td>
<td>35.88</td>
</tr>
<tr>
<td>English literature</td>
<td>8</td>
<td>4.71</td>
</tr>
<tr>
<td>Physics</td>
<td>34</td>
<td>20.00</td>
</tr>
<tr>
<td>Biology</td>
<td>33</td>
<td>19.41</td>
</tr>
<tr>
<td>Chemistry</td>
<td>39</td>
<td>22.94</td>
</tr>
<tr>
<td>Principles of business</td>
<td>16</td>
<td>9.41</td>
</tr>
<tr>
<td>Principles of accounting</td>
<td>25</td>
<td>14.71</td>
</tr>
<tr>
<td>History</td>
<td>8</td>
<td>4.71</td>
</tr>
<tr>
<td>Spanish</td>
<td>26</td>
<td>15.29</td>
</tr>
<tr>
<td>French</td>
<td>1</td>
<td>0.59</td>
</tr>
<tr>
<td>Other sciences</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Total responses</strong></td>
<td><strong>170</strong></td>
<td><strong>100.00</strong></td>
</tr>
</tbody>
</table>

*Note.* Total responses = the total number of students who responded to each of the three categories. However this total number of students who responded does not necessarily equal the total number of answers in a particular category, because in some cases, the students chose more than one item in the particular category (e.g., the category of Subjects taken in extra lessons).
Ecology of Extra Lessons

Holistically, the findings from the data illustrated an adapted version of Cremin’s (1976) *Ecologies of Education*, which I have termed *Ecology of Extra Lessons*. Figure 17 represents the model of *Ecology of Extra Lessons*. This theoretical construct is comparable to Cremin’s conceptualization in which he argued that education requires an understanding of the interrelationships of educational institutions with each other and their surrounding environment. Similarly, *Ecology of Extra Lessons* emerged through the process of data analysis, as the participants’ described their overwhelming views and descriptions of extra lessons as a constant interrelationship with and within education institutions and the larger society. Education institutions represent institutions in which extra lessons occur, including extra lessons in schools as well as external extra-lessons institutions.

Essentially, participants described a complex relationship between external drivers and internal constructs of extra lessons. The external drivers focus on the larger societal and colonial legacy factors as well as the business of extra lessons, whereas the internal constructs focus on the within-influences and conditions. The model’s macro-system encompasses two layers, inner and outer. Within the outer layer of the macro-system lie the external drivers of extra lessons, which are the colonial legacies of education. Within the inner layer of the macro-system is the emergent business model that governs the price/cost and services of extra lessons. The micro-system holds the inner constructs of extra lessons, which are the challenges, and at its core are the conditions for learning.
Colonial Drivers (Legacies) of Education

Essentially, the external constructs of extra lessons represent the core drivers and resulting need for extra lessons to exist. As a participant in the study, the Chief Education Officer at the Ministry of Education commented, “Because there are deficiencies within the system, then it [extra lessons] appears to be necessary.” She ended by stating the irony of the situation: “Now, it was never intended as a country in providing free education that all people should find it necessary to have to pay for additional support for them to be able to do well in their exams.”
What is not explicitly stated is that these drivers simulate the legacies of colonial education in Jamaica in which there is an overwhelming inherited exams-driven society due to the role of education at large and the need for social upward mobility. Additionally, the conditions of schools, both the physical and psychosocial, replicate a dichotomy of schools built in the colonial period and those built in the postcolonial era. With this dichotomy is a hierarchy of the traditional colonial schools over new, government schools.

**Role of education.** Patterns in the data suggested that the role of education simulated the gateway to social upward mobility. Parents often used this concept as a driver and justification to support extra lessons. One parent in Region A explained,

> Some observations that I have made and I understand some point, for both my parents, now deceased, were teachers. And for us growing up, the only way to upward social mobility was education. There were no other means to reach the stars that you wanted to achieve, other than education. And that has been inculcated by me into my children.

Similarly a single mother in Region A stated,

> I’ve always said that coming from my background. My parents were not educated, but they said that education was the only way out, right and they wanted all their children at least a university education.

This want for assumed upward mobility arguably results in the parents’ sacrifices to work additional jobs and pay higher extra lessons fees for their children. A single father in Region B spoke about the opportunity cost to ensure his child’s education:
To me the opportunity cost is not a real quote-on-quote putting a dollar towards the education. Education is the key to success, so therefore from a tender age, no matter what the cost, we're going to get education. It’s the foundation for what the cost, and not just looking at today, what they can buy it with, but looking at tomorrow what they can gain.

Parents’ inculcated view of education represented an undergirding mantra that “education is a must,” using phrases, such as “by all means,” “whatever the cost,” and “the only way to success.” Students and teachers alike shared in this mantra as they described varying levels of sacrifice or commitment to education.

**Exams-driven society.** With such an emphasis on education, society as a whole has bought into the belief that increased education leads to upward social mobility. As a result, “our system is very exam driven, so we have a national assessment program that starts from grade one right through to end of grade six,” according to the CEO at the Ministry of Education. Toward this end, a representative of the Ministry of Education stated, “The curriculum is largely dictated by the exam requirements.” As explained in Chapter 2, this exams program was first inherited from the British and then adapted to simulate Jamaican standards. More so, the directly inherited British exams were not designed to provide equitable education to all but rather used as a stratification tool with which to differentiate social classes, for example, the use of the British Common Entrance Examinations. With this increased examinations push, issues of curriculum alignment, remediation, and need for subject reinforcement have become evident.
From all participants, patterns in the data suggested there was a need for enhanced reinforcement of subject matter, and consequently, students and parents turned to extra lessons for such reinforcement. For example, in Region B, an extra lessons teacher stated, “If they [students] don’t understand, they get a better understanding in the evening.” A parent in Region A also said, “I think extra lessons, especially outside of school, gives you a better reinforcement of the subject.” Another parent in Region B described reinforcement as resembling a rehearsal, stating, “In [extra] class, it’s like a rehearsal, rehearsing the thing you learnt in school, and you pick up on new ways of doing the same thing.” Similar to the parents and teachers in Regions A and B, students in Region C explained reinforcement as repetitious practice. For example, one student in Region C stated, “And like if I’m doing a certain thing, and then we’re probably doing something more than one time, you can learn different way.” Another student in the same region also stated, “You nah go get it in regular class, and you get to learn it again in extra class.”

Similar but slightly different from reinforcement was the evidence of remediation. In fact, extra lessons was viewed as a form of remediation facility in which students who do not understand a subject or never learned the topic, can learn it in extra lessons. A representative from the Ministry of Education stated,

The government heavily supports remedial education, extra lessons. The government partners for example with USAID, with Camp Summer Plus, which is a very useful remediation for deficiencies in grade school. The government spends in excess of a billion dollars, well in excess on what is called the A-step
program, a Cap program which are effectively a remedial program. Can you imagine, Sara Stewart, the announcement in the press this week which you must have seen, that the University has to be setting up what are effectively remedial courses in language for people who have reached the tertiary level. The government is hugely and, in my view, wastefully invested in remediation.

The participant quoted above viewed extra lessons as a direct form of remediation, stating their being one and the same. I found this to be unique, however supported by some students, parents, and teachers who explained extra lessons as a result of doing poorly in a subject, getting failing or low grades, or never seeing the topic introduced in class. A student in Region B explained,

For me in Grade 9, I didn’t grab so much on chemistry. But since I started the chemistry class, the extra class, I’ve grasped more. And what I didn’t get from Grade 9, I’m getting to understand more now.

Students often described levels of remediation and reinforcement needed, especially in Grade 11 as they prepared to take the CSEC (Caribbean Secondary Education Certification) exams. Interestingly, the participants used the terms remediation and reinforcement to describe the role of extra lessons within an exams-driven society.

Conditions of schools. Based on the above findings, one argument would question why schools are not producing an acceptable level of academic achievement or embodying the role of education at large. From the garrisons of Trench Town to the uptown alcoves of Hope Road, the conditions of schools varied greatly. The conditions of schools were aggressively referenced by every participant interviewed, as they described
the external drive of extra lessons. Patterns in the data suggest that due to the poor
conditions of schools, ranging from lack of resources to the poor performance of
teachers, extra lessons is the primary alternative for learning.

In addition to the voices of my participants, I have coded for this theme, using
data from the observations and analytic memos taken while conducting surveys across the
61 high schools. The analytical memos referenced the invisible borders between uptown
and downtown schools, and the urban and rural schools. Most if not all schools had a
designated area for a computer lab; however, depending on the school, there were either
no computers, no Internet, and/or in some cases, no phone services. It can be argued that
technology is a luxury in some developing countries; nevertheless, teachers constantly
complained about the lack of resources available, such as simple textbooks, writing
materials, and the like.

In classrooms where there were upwards of 35 or more students, often times,
metal chairs were welded together in columns of six chairs. When I asked teachers why
the need for welded chairs, their response was, to prevent students from stealing them.
However, arguably there is the psychosocial implication that schools in the uptown areas
I visited did not have welded chairs, but schools in the garrison communities did. Toward
this end, the impressions of holding down students in the poorer communities were
evident, with jail-like cell gates used to close in students in a classroom or library. In
these cases, classrooms were locked with a padlock in which the teacher had the keys,
and students remained in the class locked up.
When the physical space of the school was not being attacked, the teachers’ lack of interest, care, training, and qualifications were constantly questioned. Students, parents, and representatives from the Ministry of Education explained the need and importance of extra lessons due to the lack of qualified teachers in the system.

Figure 18. Diagrammatic thematic structure of the conditions of schools.

Figure 18 illustrates the thematic structure of the theme, *conditions of schools*. The theme is further sub-divided into two supporting themes: *under-performing and uninterested teachers* and *barriers to learning*.

*Under-performing and uninterested teachers.* I asked each of the groups why they believed extra lessons was important, with the exception of teachers who taught both extra lessons and in the school. All participants described some aspect of poor-performing teachers. The Ministry of Education was in agreement, with a member of the government providing this explanation:
We are not cultured to provide targeted attention and support for our students. And how we, let's say for example how we compensate our teachers and how we support them, it doesn't allow for them to one, give 100 percent because of all the other social challenges and concerns that they have as individuals. So when you compare the kind of emphasis that is placed on making teachers competent in some other countries, like money, it's very different in Jamaica.

This representative from the Ministry went on to explain how students get left behind on a constant basis in the Jamaican education system:

And so, if you have a class of 40 and they're doing mathematics and their learning styles are different, then it becomes very difficult for the teacher to handle. And because the teacher has a curriculum that is followed, the teacher has a tendency to move on even if it is just one or two students who are following.

I also asked the focus groups and interviewees about their idea of teaching philosophy. A representative from the Ministry stated,

The general teaching philosophy? I presume a high measure of goodwill towards the kinda hope that it’s meant to fulfill and improve in the cognitive and social skills of the students, but for many it is a job of frustration and for—through no fault of their own. There’s a fair portion of them seeking what they can best get out of it. And this is where the difficulties arise in lieu of performance and the prevalence to want to, to remediate that space or so they, teachers are the proponents of organizing promotion, and to me that is a recipe for destruction.
Parents described mostly the lack of training and qualifications necessary to identify both students who need special education and those who need gifted education.

One parent in Region A stated,

A further observation from Peter, which is the other side of the coin that Foxy has brought up, relates to in regular school, they are oftentimes not equipped to see children with learning problems and to assist them with it. The other side of the coin that I want to mention, that is what Foxy had mentioned, is that in regular school, they are not able many times to identify children who have capacities beyond the regular school, and to motivate them and stimulate them into, my expression, going to higher heights.

He went on to decry the lack of resources that teachers combat on a daily basis that are coupled with large class size and limited time. He stated,

I have a realization that the constraints that exist at school in the regular school day are such that teachers are not able, do not have the equipment, do not have the class size, the limit of class size to be able to cover the material that is perhaps required for them to cover at school. And in the absence of the teacher being able to do that at school, it becomes incumbent on me as a parent to seek to have that covered other than at school.

Hence, the responsibilities of the parents to guarantee optimal education for their children seemed to be a direct response to the conditions of poorly resourced schools that result in barriers to learning.
**Barriers to learning.** This emergent theme represents some of the physical and spatial barriers as well as some of the social barriers to learning. The *physical barriers* refer mainly to the large class size as well as the lack of resources. The *social barriers* refer to the consequences of large class size, such as indiscipline among students and the constant reference to not enough time to teach. The supporting themes explained below may overlap, because most are interrelated.

*Large class-size.* As described below in detail within the *small class size* section, schools visited for this study had upwards of 50 students in a classroom. A student in Region C explained the implications regarding time when there are so many students in the classroom:

In my history class it’s big and for extra lessons its just 7 of us doing history for CXC, and the general class there was 50 students there. So the teacher wouldn’t have the adequate amount of time to get to everybody– I mean they don't have time.

Parents and teachers complained in the focus group that the class size was too big, and as a result, “there’s absolutely no way you can prepare for the students” (teacher in Region A). The *larger class size* was also shown to be interrelated with increased *indiscipline*, not enough resources to share with every student, and not enough time to complete the topic or syllabus.

*Indiscipline.* As mentioned earlier, I asked the students to describe a typical class and compare it to an extra lessons class. The quote below, part of which was cited earlier
in the narrative of a female student, is included again here, because it is powerful in describing the scene from the perspective of this student in Region A:

Class is noisy; everybody has their own mini group. The persons at the front of the class are the only ones in the discussion with the teacher, the teacher is not paying anybody else any mine, you know at the front, so and he’s not saying to the others they should be quiet and if you’re not at the front you’re being distracted by everyone else talking around you. And then when you come here, if you’re late the class is silent, and when you’re early the class is silent, you are settled as soon as class should start and everybody is listening, and sir is up there talking, and you can say its about, it depend on how many of us come late, 17 probably smaller sometimes. And at schools, it took all like one session to settle down the class. If I had a two-session class, you waste one session, and we getting less work; and at class, you getting a lot more in the 2 hours than at school.

Her description provides a rich context in which to understand the interrelationship between the barriers to learning at school, which also represent larger societal drivers for an alternative solution, such as extra lessons.

*Lack of resources.* Extra lessons teachers who also taught in schools recognized the limited resources due to large class sizes and the feeling of frustration to still perform under those conditions. One teacher stated, “I think at times we don’t have enough resources to share among students in regular classes, but the extra classes are much smaller, so they can share.” She went on to describe her frustration in the classroom setup as limiting: “The classroom setup limits me because there are not enough plugs, or you
have to be transferring equipment that can be damaged back and forth for different classes, so it can be frustrating.”

Parents, especially in Region B, compared the level of resources between schools in Region A and Region B. One parent explained,

We have too few resources, and the school doesn't have the resources. If you go like to Excellence Academics, they have all resources. If you go [to] Trident High, they have all the resources. And if a computer breakdown today, come tomorrow it is back up.

The discussion quickly turned from lack of resources to lack of time. In this instance, parents reinforced an emergent equation that the larger the classes, the less discipline and time used to produce success.

*Not enough time.* Time, and more so, the *lack of time*, was an unexpected emergent theme from the data. Essentially, I had students oratorically paint me a picture of class time and extra lessons time. The contrasts were most striking in their descriptions of time needed to settle a class. Without having asked parents for this same description, they also provided examples of wasted time due to improper classroom management. A father in Region A stated,

One other problem is that in the regular school, the teacher is spending more time trying to get the class under control. So by the time the class is now quiet and the teacher is able to teach, they are given so many minutes so they don’t have the time to go over the topic as they would like to.
Teachers also acknowledged the lack of time to complete the given curriculum. One teacher simply stated, “The time that is spent in the day time is just not sufficient; they [students] are doing too many subjects.” In Region C, a student explained that “sometimes you don’t get the time to learn bout certain things, and you get to learn bout it in evening class.”

The Business Model

As the first inner ring of the model displayed above in Figure 18, the emergent demand and supply for better education follows the external and larger societal drivers of education. Essentially, the business model of extra lessons (see Figure 20) evolved out of a real or perceived need for more individualized student attention, more control over the conditions of schools, and increased academic achievement for exams such as the CSEC. Depending on the industry and the market, a business model has varying components, however common characteristics of a business model include consumers, producers, product, resources, and revenue (Morris, Schindehutte, & Allen, 2005).
Figure 19. Diagrammatic thematic structure of the business model.

Essentially, the data illustrated a form of cost/benefit analysis in which sub-themes, such as the price/cost factor, include aspects of the cost analysis, and the sub-theme values for money include the benefits analysis of participating in extra lessons. Important to note is that some aspects of the benefit analysis would fit best with the theme *conditions for learning*. However the benefits mentioned here are more tangibly intended deliverables of the extra-lessons service, whereas the deliverables and/or outcomes, described later on, can be described as the unintended deliverables of participating in extra lessons. Accordingly, patterns in the data suggest that extra lessons is treated like a business in Jamaica. One parent in Region B explained the business model as follows:

It’s a business. One, money, because you have to pay for the extra lessons. And two, quality of the teachers, right, because for your money, you want value. So
therefore, the institution that want that money they have to try to keep that standard, because the more passes they get, that will advertise their extra lesson classes; so therefore they'll get more profit coming, more resources for them, more students for them.

This assumed business model seems to be governed by Adam Smith’s (1776) invisible hand of the market in which price is regulated by the market economy. Price as explained below becomes questioned, however, because some of the participants reported receiving free extra lessons.

**Price/cost factors.** As a sub-theme, *price* refers to the cost for service exchanged between tutor and student. Depending on the region, the price for extra lessons varied, as explained above. All participants were asked to relay the cost of extra lessons. The reported cost in Region A for a term was more than the school tuition and fees for the entire year. However, in that region, extra lessons varied by the number of subjects, the extra lessons teacher, and the length of time (i.e. per month, per week, and per terms costs). The participants stated that extra lessons ranged between JMD$12,000 to JMD$60,000 per term, whereas in Region B, the price and cost for extra lessons ranged from JMD$4,000 to JMD$12,000 per term. Lastly, in Region C, the cost or price of extra lessons ranged from JMD$0 to $2,000 per term.

There were a number of incidences where participants reported that extra lessons were offered for free, often times by the same day-school teacher. In those cases, teachers explained that students were not interested in attending extra lessons. Students who reported receiving extra lessons for free expressed a sense of gratitude and described
those teachers as very caring. In the cases where students, parents, or guardians paid for extra lessons, students explained that the price of extra lessons was another motivator to do well in exams, because as one student stated, “You are constantly reminded about the cost.” This constant reminder was attributed to the parents and guardians. Another example of price and cost factors emerged from a father in Region A:

The issues as to cost I have never really addressed my mind to it for the reason that whatever it costs, it would have been found. And I will tell you of a recent bumper sticker that I found: “If you think education is expensive, try ignorance.”

The use of humor above should not misguide the message embedded in the parent’s statement that ignorance is much more expensive than education. Therefore, the reference to value for money became a salient finding, as participants described the worth of extra lessons.

Value for money. Even though participants described the price as expensive, most participants also explained the value for money well spent, as illustrated above. One parent in Region A stated, “The cost certainly is worth it for me, because I am getting what I want.” Another parent in Region B stated, “There is a difference when you are paying your money….I believe when you have paid your money, your children get more, and the teacher is more motivated.” Another parent simply stated, “I get value for money at extra lessons. And whatever it costs, I am prepared to find.” These repetitious examples suggested that extra lessons is value-laden, that as a product, it has worth, importance, and added benefits to students’ education.
**More advanced curriculum.** Along with value for money, there were the repetitious examples of a more advanced curriculum in extra lessons. One parent explained, “But the material that is given in the extras is so like—there’s so much at a level that is superior.” Students both in the survey responses as well as in the focus groups commented that in extra lessons they learn more. Interestingly, in Region A, a stream of consciousness emerged amongst the students, who without any prompts, relayed how extra lessons were not only advanced but also served as preparation for university. Below is an excerpt of that stream of consciousness:

Jasmine: I think for extras, they [teachers] kind of understand the pressure to go to a university; you have your school work plus you have extras work, so if somebody gets used to doing all this work, so when they go to university, I guess it’s common.

Balotelli: Well like at classes here, like the math’s class Mr. B gives you, it's much more advance than the math that you get at school, and plus I want to become an Engineer; so like math is needed.

Leyla: At school for those who don’t do extras, they are not exposed to the level of rigor that we go through.

Kyla: At extras, you have more of what colleges are like and what universities are like. You have more information, cause your teachers are going to tell you about it, and probably you have an idea what school you want to go to; and the other persons, they’re not thinking about school. They are thinking to work as they finish
high school instead of furthering their education. And yuh know?

With extras class, you think about university, and the teachers they try to help you, meaning like research papers, stuff like that.

**Academic achievement.** As a supporting theme, *academic achievement* represents a deliverable good or measurable outcome that successful extra lessons guarantees as part of its business model. At the extra lessons institution in Region A, students are prepared to take the CSEC exams in Grade 10, and in some cases, in Grade 9. The veteran teacher in Region A explained why he prepared students in Grade 9 to take the exam:

The thing about the third formers, ahm, if I remember correctly, the point we really wanted to make was that the students were capable, and CXC was easy, and we said, well, okay, let’s just take some third formers to show you. Because they were acting as if this thing was really beyond the students’ competence and so on. Accordingly, of the students in Region A’s focus groups, all had successful passes between two and three CXC exams, with pass levels of distinctions and merits. This finding was not just unique to Region A. In Region B, two students shared with the group that they had taken CXC exams in Grade 10 as a result of extra-lessons preparation and successfully passed with a merit or grade II.

**Challenges to Extra Lessons**

Within the micro-system of the model are challenges that influence the core. Data from the multi-case study and open-ended survey questions (frequency codes) provided a more in-depth understanding of the internal construct theme: *challenges to extra lessons.*
Figure 20 illustrates the thematic structure derived from the frequency codes, with a resulting sub-theme, *disadvantages of extra lessons*, and the multi-case study data, which includes three supporting sub-themes: *cost factor/unaffordable, student fatigue, and no leisure time*. Themes in the model are discussed below.

*Figure 20. Diagrammatical coding structure of the theme, *challenges to extra lessons*.*

Extra lessons is not a stand-alone perfect system; there are inherent challenges within the internal structure of extra lessons. Using triangulation to corroborate the data from the open-ended survey questions as well as the multi-case study data sources, *cost factors, student fatigue, and no leisure time* were salient themes across all data points. Cost factors related to extra lessons became a salient barrier to access to extra lessons as well as reflected the daily sacrifices parents had to make to afford for their child to attend extra lessons. Additionally, participants in the study mostly described extra lessons as
occurring after school, on the weekend, and in some cases, before the start of school. The additional hours per week of schooling resulted in student exhaustion as well as significantly less leisure time for students.

See Appendix T, which reports the frequency codes for the theme, *disadvantages of extra lessons*, as derived from the open-ended survey question and disaggregated for Regions A, B, and C. Students reported that because of extra lessons, they had no leisure time, and in one case, a student responded that, “it [extra lessons] is a burden because you want to do other things.” In Region B, one student reported cost as a barrier to access by writing, “I would love to attend extra lessons but my parents are not financially stable, and they struggle to keep me in school.” In addition to the selected quotes in Appendix T, some students in Region A described extra lessons teachers as unreliable and uninterested in teaching students. There were also reports of large extra lessons classes. For example, a student in Region C found a main challenge to extra lessons being the large and distracting classes, which replicated the regular school classes.

**Cost factor/unaffordable.** In addition to the selected quotes in Appendix T from the open-ended survey question, one student in Region A said, “Extra lessons costs more per term than my school costs per year.” This finding was salient across Region A participants, as well as the notion of parents’ sacrifice garnered from paying for extra lessons. A student in Region A explained her mother’s sacrifice to the group: “Well, for me, my mom sometimes she have to find it somewhere else, if that means she have to get another job, or she’ll have to work late hours.”
A grandmother in Region B explained to the group that she needed to buy a pair of shoes, because the soles of her only pair had torn away. However, her grandson also needed a new uniform, because he had outgrown his old uniform. Instead of buying the shoes or uniform, she paid for his extra lessons classes and had him borrow an older cousin’s old uniform. A father in Region A explained to the group that instead of taking his son to the barber shop, he bought his own clippers to cut his son’s hair so that he could afford the additional extra lessons classes.

**Student fatigue.** Patterns in the data suggested that students experienced feelings of exhaustion after attending school all day and then attending extra lessons for another 2 to 4 hours. One student in Region A stated, “Some days when I reach home I’m extremely tired and not going to study, so I just go to my bed.” Teachers also acknowledged this level of student fatigue, as explained by a teacher in Region A:

> One of the drawbacks, I find, is that I can’t get enough time to spend with them and you always have to be squeezing into this after school hour, and then when they come to you, they come to you tired.

Students and parents also spoke about students’ waking up in the middle of the night to finish extra-lessons homework or attend extra lessons at 6:00 am. These strenuous hours resulted in students’ descriptions of exhaustion and constant fatigue.

**No leisure time.** With the additional time spent at extra lessons, participants spoke about having no leisure time. For students, the emergent data showed that instead of spending time going out or watching television, they were at extra lessons. One student in Region C stated, “We don’t have time to idle.” Another student in Region B
complained about having to alternate extra lessons classes on a Sunday with going to church. A student expanded on the previous comment by stating,

I agree with Elizabeth, because the physics class is on a Sunday, and going to school 7 days a week straight and no time for myself, Saturday chemistry, Sunday physics. And through the week, it's not like I have a option; it’s just school, school, school, and I want a day for myself to sit down and watch television or something, but I have to be there.

Teachers also reported having no leisure time due to extra lessons, especially those who provided extra lessons at no cost. These teachers complained about the additional time spent at school with no added pay. Parents, on the other hand, saw extra lessons as another means to occupy their children’s time but also saw extra lessons as another time-consuming activity. A single mother explained: “Every morning I have to pick him up, take him to extra lessons, pick him up from extra lessons at noon, and then drop him to the next one”.

**Conditions for Learning**

At the core of the model are the *conditions for learning*, which exemplify the functionality of how extra lessons operate and produces outcome. As such, conditions for learning serves as the primary internal ring within the overarching model, *Ecology of Extra Lessons*. Conditions for learning as a theme represents a controlled environment that facilitates active and engaged levels of critical thinking between student and teacher. A veteran extra-lessons teacher in Region A described how extra lessons facilitate the conditions for learning:
Extra lessons kind of allow you, okay class size not more than 25, a balance between boys and girls and disruptive and non-disruptive students. The ability to just say, this student can’t be in this class for whatever. I mean, there is not a long process to go through to resolve certain types of problems. That's one. Two, I think there are some kind of philosophical and ideological issues. I think that a lot of people believe that the poor performance in Jamaica and elsewhere is as a result of quote, unquote, the belief of the students are dunce. They are slow learners or whatever. And when you can get the same students and they perform, then that's a very clear message that the conditions of learning or something else….I'm trying to send a message to society that their education can be better if the conditions are changed.

Essentially, the conditions for learning present a formula for success, including the described inputs and outputs of extra lessons. More specifically, the theoretical construct denotes that facilitators for learning as a given, plus environment of learning, plus critical-inclusive pedagogy, plus parental roles will together equal student efficacy outcomes. At the core of *Ecology of Extra Lessons* is the production of and control for the development of conditions for learning.
Figure 21. Diagrammatical coding structure of the theme, conditions of learning.

Conditions for learning as a theme is further supported by sub-themes derived from the multi-case study data (see Figure 21) as well as from the opened-ended survey questions. Figure 21 illustrates the supporting sub-themes of conditions for learning: (a) facilitators for learning; (b) the environment of learning, which addresses class size, individualized attention, levels of discipline, and more time; (c) pedagogy, which is undergirded by the CIP tenets described in Chapter 2; (d) the roles of parents; and (e) student efficacy outcomes, which include motivation, increased confidence, and social development between boys and girls.

See Appendix S for the frequency codes of the theme, facilitators of learning, derived from the open-ended survey questions, disaggregated for Regions A, B, and C.
This theme supports and corroborates findings from the multiple cases, because some of the supporting codes were motivation, confidence builder, conducive environment for learning, and the like, which were also found as sub-themes of conditions of learning.

**Facilitator of learning.** Overall, students in Regions A, B, and C described extra lessons as a facilitator of learning, using symbolic words, such as helpful, confidence builder, important, improve grades, conducive environment of learning, and the like. Students described extra lessons as helpful in two ways: (a) to better understand a subject and (b) to improve grades in a subject or an exam. In addition to the selected quotes in Appendix S, one student described extra lessons as “very helpful in better understanding concepts taught in school, as well as they fast track learning for topics on the CXC syllabus.” Lastly, students described extra lessons as fun and enjoyable, where teachers perform better and the environment of extra lessons is welcoming. One student responded, “The extra lesson teacher is more patient and understanding.”

Students also described extra lessons as vital to learning and as a confidence builder. In Region B, a student described extra lessons as a confidence builder, stating, “It [extra lessons] really helps build my confidence going into an examination and more likely helps me to understand a topic more.” Additionally, students described how extra lessons built their self-esteem and made them feel more comfortable in answering questions. The primary difference in Region C occurred with the emergent code of *smaller classes* in which students attributed increased learning in extra lessons to reduced class size.
Environment of learning. In the examination of the cross-case analysis, the environment of learning is well described by a parent in Region A: “Through the environment of extra lessons class, it’s such a friendly, entertaining, motivating, and ready-to-learn environment than in a regular school.” Toward this end, patterns in the data illustrated a deeper context as to why extra lessons produced an environment of learning. The vivid comparisons of smaller classroom size in extra lessons when compared to the regular school classroom highlighted stark contrasts between schools and extra lessons. From the observations, analytic memos, and the voices of participants, regular classes ranged in size from 32 to 54 students, whereas extra lessons classes were as small as 6 and as large as 27 students. In the focus groups, I asked the students to comparatively describe a typical class at their school and compare it to the same subject matter class in extra lessons. One student in a focus group in Region A responded,

Okay, in my bio [class] at school, it’s like about 45 kids in there. The only people who get attention are the ones who sit at the front, so I make sure I’m at the front. Anybody beyond that, they won’t get the attention they need….While in my extras [class] it’s about what 20 or less? 15, about that. And even if you sit at the back, Sir is going to pick on you; you have to interact with the class, so everybody is getting the attention they need.

Within the sub-theme, smaller class size, there was an overarching salient code, individualized attention, in which participants described teachers’ providing more attention to individual students. Toward this end, a member of the Ministry of Education stated, “What I have found is that the extra lessons seem to be more customized, where
the teachers will give extra direct attention to those students who are not following.”

Teachers in both Regions A and B agreed that within extra lessons, they are able to provide more one-on-one tutoring to their students who need individualized attention. A teacher in Region B explained,

Okay, with the extra lessons, the advantage is that the students who need the assistance and are struggling in the regular classes, and it leads to frustration, both for the teacher as well as the student. When you are able to deal with that person one-on-one with the extra lessons, then you see improvement, and there’s less frustration on both sides.

Coupled with smaller class size was the emergent sub-theme, discipline. With classes smaller than 20, students, teachers, and parents described the increased level of discipline in the extra-lessons classes. One parent in a focus group in Region B explained,

When yuh have a class that has at least 45 children, remember seh yuh nuh is not 45-A class children, you have miggle, bottom, yuh understand? Everybody mix up. And what I realize is that you have groups, you have groups in the class. A group that is going somewhere, a group weh nah move, a group weh a try, a group weh may reach. So for the poor teacher fi a teach all of these, it’s stressing on her. But yuh si when wi get to di extra lessons time now, di one dem dat nah guh nuh weh, nah guh deh deh; a di one dem weh wi a try and wi a push, yuh understand? So she is able to relate, reach those. So this big hell of a class, dem not dere and the troublemakers, dem not in the extra lesson, cause dem don’t have time for it.
When you have a class that has at least 45 children, remember that say you know, it is not 45-A class children, you have those that are in the middle, bottom, do you understand? Everybody is mixed up. And what I realize is that you have groups, you have groups in the class. A group that is going somewhere, a group that is not moving, a group that is trying, a group that may reach. So for the poor teacher to have to teach all of these [students], it is stressful for her. But you see, when we get to the extra lessons time now, the ones that are not going anywhere will not be there; it’s the ones that are trying and those we [parents] are pushing, do you understand? So she [teacher] is able to relate, reach those. So this large class is not there and the troublemakers is not in extra lessons, because they don’t have time for it.

From the students’ perspective, extra lessons provides a more disciplined and focused environment that is more conducive to learning. One student in a focus group in Region A described her experiences:

I just think the difference at school when they’re [students] at school, they just want to give trouble. They just want to give trouble; there’s no real focus. At extras now, you want to make a difference and try to behave yourself. Everybody there is just, they are about work, whoever is at extras. Everybody there has the same mindset that, hey, I’m here to do work. At school now, some people texting, some people chatting, some people doing this, everybody’s mindset is all over the place. So extras help you focus better.
Time, as a within construct of extra lessons, emerged as a salient sub-theme. Participants spoke about the increased time within extra lessons that facilitated more time for learning. In addition to the selected quotes in Appendix AA, a parent in Region B said, “Giving them extra lessons would be an added time for them to grasp an added subject, for them to get their required pass mark.” A student in the same region explained,

For me is that for like some schools, like my school, we don't like ahm, actually finish the syllabus on time. So extra lessons may actually help us to finish the syllabus and get extra notes. And so, you can be ahead of the class, and we have exams coming up.

Lastly, in the same group, another student stated, “Sometimes the teacher doesn't have the time to explain everything to me in class. So at extra lessons, the teacher can go over and go in-depth so I can understand.”

A parent in Region A elaborated on the differences in students’ attitudes between schools and extra lessons due to more focused peer socialization:

I need for my child to be in the—a group that has the right attitude, right? When he's at school, you have a cross-section of kids, right? And so, I find that those, they waste time, and in addition to that, the classes are too big. In the private session, the kids tend to be more motivated, right? And they…they are among the peers who are at the top of the class.

Alongside this parent from Region A, participants described the environment in extra lessons as being made up of more focused and hard-working peers that enhanced the conditions for learning.
**Pedagogy.** Following the environment for learning, the mode and style of delivery is a salient theme to conditions for learning. As such, pedagogy was coded for in two separate ways, as explained in Chapter 3: (a) using structural and descriptive coding methods, and (b) using a theme-based coding method. From the structural and descriptive codes, students from both the open-ended survey responses as well as the interviews illustrated a form of creative and student-centered pedagogy that was used to better explain concepts, subjects matter, and topics. A teacher in Region B explained,

My teaching styles, I like to use technology, I like new things, I like novelty. So I take the literacy background that I have and use it with my general other subjects. I like to use the internet, I like to use electronic books, I like to use my projector, and so on.

That same teacher went on to explain how she uses movies to help students learn dialogue in English Language classes and introduce the art of story writing. Another teacher in Region A explained how he brings in mirrors to his class when he is teaching the geometry topic of reflection.

The use of *creative ways of teaching* emerged throughout all three focus groups in which students described teachers’ using sports examples to teach math topics or personal stories to guide students’ understanding. These examples of creative pedagogy are exemplified below:

So I learn more in those three hours than in my regular classes, because the teacher come up with some creative ways of teaching us and it just adds up to that
same time. And sometimes, she'll get a little personal and try to compare some things. And it lets us each remember what she said. (Male student, Region C)

I remember the day we were sitting in class here for a Sunday class and he was teaching vectors using a football. (Male student, Region A)

The observations of extra lessons classes painted vivid images and contrasts of younger extra lessons teachers using this concept of *edutainment*, where education meets entertainment. In edutainment, 21st-century music genres are introduced into biology concepts of atoms, osmosis, and molecular and cellular biology. Students were introduced to the topic of reproduction with lyrics from popular music icons in the country. This art of student-context pedagogy allowed for an easier synergy of foreign concepts to be localized to students’ experiences.

Similar to the variable *CIP TENETS* used in Chapter 4 and the corresponding descriptive statistics and HLM analysis, I coded for critical-inclusive pedagogical tenets, which yielded the following theory-based themes and sub-themes. The main difference between the quantitative findings and the findings below are that the qualitative themes embed the ideal of critical pedagogy. More specifically, the themes reveal a “mode of dialogue and critique that unmask[s] the dominant school culture’s attempt to escape from history and that interrogates the assumptions and practices that inform the lived experiences of day to day schooling” (Giroux, 1988, p. 7).

Using the five tenets of critical-inclusive pedagogy as a grounding framework, students from Regions A and B reported the varying levels of teacher-student interactions
they experienced in extra lessons classes. From the data, three sub-themes emerged:

*access and availability, caring/inspiring, and feeling involved.*

**Access and availability.** Patterns in the data showed how students described the accessibility and availability of their extra lessons teachers, not only inside the class but outside as well. Below is a representative quote from a male student in Region A:

To me, the true sign of a good teacher is when you can call them at 11 o’clock [at night] and he gives you help. My biology and chem. teacher I called him cause I had a test in the morning; he helped me. But when I came back to class, he cuss mi still [laughter].

The reassurance that the extra lessons teacher was accessible for stressful test preparation moments further assured the student that the teacher was accountable to him. The student went on to explain an increased bond shared between the teacher and himself.

**Caring/inspiring.** The second sub-theme that resonated well with the principle of *faculty-student interaction* represented patterns of caring and inspiring interactions. Students described how their extra-lessons teachers made efforts to show how they cared and used inferences of inspiration to encourage them to succeed. Below is a representative quote from a male student in Region A:

The other thing with them is like with Mr. B [he] goes out of his way just to—I think part of us learning so well from him is that he cares about you as an individual. Like, he’s the only teacher I can think of that sends the students Merry Christmas notes, [laughter] and then randomly will be like, here’s a quote from
Michael Jordan, or Bob Marley or Michael Jackson or Prince, about something inspirational you’ll be like—Jah know, I going to work hard for dis bredda.

Alongside this sub-theme of caring/inspiring is Mr. B’s philosophy that the foundation for teaching is love. He went on to express this form of love as follows:

So I think that when the students come in the classroom physically, there is a warmth between me and the student immediately because I really want to help this yute. And somehow, I going to convey that to them; I’ll be really honest. I'm not so sure exactly how I do it, but I know it's going to be conveyed that there’s a warmth.

The importance to convey that love is at the center of his teaching and is instrumental to Mr. B’s building a rapport of trust, understanding, and empowerment between himself and his students. I found that there was a reverence paid to him by all the students in the focus group, who described a mutual reciprocity of warmth.

*Feeling involved.* Patterns in the data revealed the third sub-theme as *feeling involved* in which students described an increased level of involvement with the class and the extra lessons teachers. Below, a female student in Region B describes her involvement in extra lessons:

I believe without my chemistry extra lessons I wouldn’t be able to pass [CSEC exam], because [extra lessons] are more hands on. We can go more in-depth, and because she involves you in there….You get involved and [I] get to remember what I did.
Thereafter, patterns in the data showed how students described the power dynamic between students and teachers and between students and students. The data presented two sub-themes: peer-to-peer tutoring and student-teacher power that fit well within the overarching second principle of critical-inclusive pedagogy (Tuitt, 2003): sharing power. The idea of sharing power manifested within these two sub-themes distributes power between the students as well as exchanges power between teacher and student. Essentially, the peer-to-peer tutoring actively empowered both students in the dyad, providing them with a sense of ownership in co-constructing knowledge. Moreover, the back-and-forth sharing of power between teacher and student provided a necessary exchange to disrupt traditional forms of schooling.

**Peer-to-peer tutoring.** Peer-to-peer tutoring was evident mostly in Regions A and B wherein students described the use of small-group or one-on-one tutoring with other students within the extra lessons classes. Students described how this peer-to-peer tutoring helped in preparation for exams and empowered them to learn from each other. Below is a representative quote from a male student in Region A describing peer-to-peer tutoring:

Him [Mr. B] seh “Ubi you can do this stuff.” So I went home and told myself that I can and came back a new person. I started doing much better. So he recommended me to help Jasmine. And for 2 weeks straight, leading up [to] the exam, I’m helping Jasmine, and helping myself—helping Jasmine help myself also, because sometimes she gets the questions that I don’t understand myself.
The idea behind the peer-to-peer tutoring was to empower students to help co-construct knowledge amongst their peers as well as engage in the exchange of student-teacher power.

**Student-teacher power.** The sub-theme, *student-teacher power*, shows how teachers exchange the teaching power with their students: Students are no longer repositories of knowledge but rather are encouraged to teach or demonstrate their understanding of a topic in extra lessons class. For example, a female student in Case 2 stated,

Now in my extra lesson class, it's like I will go on the board. I get called up a lot to write equations and answer questions. And in [regular] classroom, it's like I'm just there, sitting down. And I just write I don't really interact in chemistry class like how I do in extra lesson class.

The quote provided above represents the contrasts between the old teacher-centered model and a new empowering one that challenges traditional schooling—as explained in Giroux’s (1988) quote, cited earlier. Essentially, the student contrasts her active and expected role as a co-constructor of knowledge with her role as a repository of banking concepts of education in the dominant school (Freire, 1993).

**Challenging and respectful discourse.** Following the ideals of power exchange in the classroom, patterns in the data showed two resulting sub-themes that represent the level of *challenging* and *respectful discourse* between teacher and student, as needed to dismantle the colonial banking concept of education (Freire, 1973).
Students described how teachers engaged with them by stimulating their minds with various topics in class. A female student in Region A provided one such description:

Well, for me in bio and chem., the teacher when he wants every student to be quiet, he said that Pythogarus never talk for 20 years and I’m like Pythogarus never talk for 20 years and look how smart that man is, then let me shut up now.

Similarly, a male student described how Mr. B challenged him to give up his cell phone for a week, explaining ultimately that it was a distraction and more so, an inhibitor to learning:

He [Mr. B.] was talking about how a phone is basically a distraction and he gave a football example again, and he’s like, can you imagine you’re watching your team in football and someone calls you up during a match. It’s not going to happen. You’re working! You’re working! So he’s like, anyone who wants to volunteer their phone up for a week, and I was mezzing it, and I was like, okay, let me try.

So I gave him my phone and it wasn’t that bad.

With examples such as these, the teachers either challenged or provided challenging concepts for their students to understand the larger rationale or macro-reason behind the challenge.

*Activating the student voice.* The data showed patterns from students describing increased levels of confidence in speaking and answering questions in extra lessons. Students were less afraid of saying the wrong thing or getting the answer wrong. One student stated, “When you go to extra lesson, you learn more, and you can express onto the teacher your problem.” These increased levels of *student voice* resulted in students’
increased confidence levels and a sense of fearlessness that was not found in the regular school day.

*Using the lived experience.* Students described how their extra lessons teachers used personal attributes in their *lived experiences*, such as extracurricular activities as well as future goals to motivate students and prepare them for the CSEC exams. These levels of engagement ranged from boosting confidence to the use of personal ways of teaching topics in class. Students in Region A described how their math extra-lessons teacher used personal experiences and activities to engage with them:

*Female speaker:* Like for me, Mr. B, he knows I play netball and basketball, and one time I was like, “Sir, I have a match this time, and him seh mek sure yuh win,” and I was like probably him not going to remember, and he was like, “How was match? How much you score?” I’m like “Sir, you remember that long time when I told you.”

*Female speaker:* And you get gifts if you do well [in sports].

*Male speaker:* And if you play sports and yuh do good and when yuh come class, him will big you up [praise you].

**Parental roles.** Whether in the urban settings of Region A or the rural areas of Region C, parents played an instrumental role in the conditions for learning and the larger theoretical construct, ecology of extra lessons. Essentially, *parental roles* represent the level of support and accountability that (a) parents provide and (b) is needed for students to succeed. One such parent in Region B described how she supports her son:
Mi pack him bag ... no mi pack him bag! Mi pack him bag! Mi clean him shoes, mi wash him clothes, him under pants, him tings dem, suh mi a tell him seh listen, yuh si all a di chores dem weh him shudda a do, mi dweet because wah, mi nuh waan nuh excuse when it come to exams.

*English translation:* I pack his bag, yes, I pack his bag! I pack his bag! I clean his shoes, I wash his clothes, his underwear and his other things, because I am telling him that listen, you see all of the chores that he should be doing, I am doing it, because I don’t want any excuse when it comes to exam time.

Similar to other parents in the study, this parent, a single mother, with increasing enthusiasm shared with the group that she completed her son’s chores so that he could focus on his exams and preparation for exams. The varying forms of parental roles provide support for *conditions for learning* that exists within the internal constructs of the extra lessons system. Besides parents, such as the one above who described the physical support she provided to her son, teachers spoke about the importance of their having parent support:

Another advantage is the fact that somehow the parents develop a connection, a closeness, so you can always call the parent and say who so-and-so or the child is doing so and so or I want to do so and so. It's a connection, a process. It's a sort of family, and parents become part of it, and they are involved and interested.

(Female teacher, Region A)

Students in Region A further cemented this supporting theme by explaining that they are held accountable at extra lessons, because the teachers have their parent’s cell
phone number and will use it at every chance. Parents also spoke about the importance of extra lessons to their child’s education. For example, a father in Region C stated,

It's a sacrifice you have to make for the child, you know, because eventually you want him to achieve. Because I want him to come up in society and to be a good citizen in the country or whether they go to foreign lands or whatever, to achieve good. And I can't say my dad or my mum did come through for me.

Toward this end, another father in Region A explained,

Education is far more than academics. It was an English philosopher, Spencer, who said “to prepare us for the company of the living is the function of which education has to discharge.” The making a person into a whole person, mind, body, soul, and the role of a parent, as far as I am concerned, is to be the major pillar upon which the child rests for advancement in mind, body, and soul. And that is what a parent is about.

Parents within the study described the pivotal role they played in securing successful education outcomes for their children. The combination of having accountable and accessible parents with a strong environment of learning and differentiated, creative and critical pedagogical delivery resulted in much more than grades and CSEC passes, but an empowered youth.

**Student efficacy outcomes.** Thus far, the conditions for learning have illustrated the environments for learning, the delivery method, and supporting contexts. At this point, an analysis of the data revealed the outcomes of this process: *the student efficacy outcomes*. More specifically, student efficacy represents self-determination and
development in more than just intellectual development but also in the whole self. Additionally, the resulting outcomes include reported findings of motivation, increased levels of confidence, and social development, especially for boys.

Besides the high frequency count of the word *motivation* and/or a derivative of the word, such as *motivate* \((n = 449)\) in the transcripts, participants described extra lessons as a form of motivation to do better in school, in exams, and with future goals. Students described how their extra lessons teachers would push them and encourage them to do well, whether using forms of humor or modes of technology. One such student in Region A remarked,

Yes. Well those who do chemistry and biology with me, we know that we’re compared to a rat every day. [laughter] For the people that I talk to, they’re able to get it positively, but not everybody can respond to that. I respond to that positively, and it pushes me. It’s like, wow, I don’t hear that every day from my parents. I hear that every day from my extras—I get messages from my extras [teachers], I get emails from Mr. B, and it’s motivating. I’m surrounded by motivation when I’m at [extras] class.

Another use of motivation emerged in the form of self-motivation to learn or to improve one’s grades. A student in Region C said, “Well I always feel motivated because I just want to learn, learn, learn how to do things.” Similarly, another student in Region B commented, “Well, I was self-motivated. I decided myself to do it [extra lessons]. And the reason why I did it because I want[ed] to improve my grade.” Another student from Region B described the relationship between motivation and passing exams: “I believe it
[extra lessons] motivates you more, you get more notes and more information on top of my regular classes, so I believe you are able to do well in the exam”.

Parents also described their children as being more motivated in extra lessons than at school and more motivated to succeed. For example, a parent in Region A said, “My son is more motivated in the private lessons…he is motivated to do the work for the extras more than school.”

Lastly, teachers described the use of motivation as a pedagogical tool used in the classroom to help students succeed. One teacher in Region A said,

I also think that motivation is really important in the classroom. And for example, now with the fifth formers that I have, there is a particular youth. Bwoy I never see nuh youth face mek up so when I go class. Cito use to teach him, and Cito told me about him, and I eventually had to take him out of the class. There's things like where he sits, and you change it, bringing him right beside you. You just pay attention to him, big him up--you just have to find a way, keep trying to find a way rather than leave him to feel lost, because he has already said, for example, that…math gives negative energy. So if you don’t contend with that, when you in the classroom, to me the math is just easy, teaching the math is never a problem. It's really just engaging them and making them believe in themselves.

Although related to motivation, I separately identified the sub-theme confidence due to the varying uses of the term and anecdotal descriptions. In the students’ focus groups, I asked the students to rate their confidence levels in subjects prior to starting extra lessons between 1 and 10, with 1 being the lowest and 10 the highest. On average,
students responded with -1 as their starting rating, which coincided with their reasons for taking extra lessons (to be described below). I then asked them to explain why and to describe where they were to date as a result of taking extras. One female student in Region A responded,

Okay, before I start taking math extras, before when I saw like a math question, instantly I got a migraine. I couldn’t do it. I felt like—you know, you feel so stupid, like, it’s weird to me after coming to Math now, and when Mr. B told us we could do it [CSEC math exam] in 4th form, Mummy said that’s a good idea, because maybe it can boost my level of confidence. So I decided I was going to do it. And after, everything done and I got my grade and whatever, I went back to school, whenever I see a math question, like I want to try, I feel so much comfortable, like math is easy to me now, I don’t have to think about doing math anymore. It [extra lessons] has helped me a lot.

Last year, in Grade 10, this student received a distinction (highest pass) in the CSEC mathematic exam. Similar to her peers, she attributed her increased level of confidence to extra lessons. Parents also viewed extra lessons as a mechanism to boost their child’s confidence level. One parent in Region B said,

My daughter, she was scared of the English. She doesn't like it, but from she’s going to this extra lessons class, what I have seen is, the extra lesson teacher is telling her that also; so she’s excited about English and want to write more stories. So it brings up her confidence in that way.
Teachers recognized the value of building the students’ confidence in extra lessons, explaining that students might be shy and afraid to speak in the larger classes but speak more in extra lessons. A teacher in Region B explained,

And sometimes some students are very shy within the larger group, the classroom, but then within the private sessions or the extra classes, they tend to give out more to speak up and build confidence levels and all of that.

Another teacher in the same focus group went on to describe the satisfaction of helping a student boost his or her confidence:

When you take a child from the frustrated level to mastering a task, it has its own rewards for both the teacher and the student. The student learns to be confident, you bond with the child, there’s a certain level of respect.

The sub-theme socialization represents how participants described an increased level of social development as well as self-esteem as a result of participating in extra lessons.

According to one student in Region A,

For me before I went to extras, for me, I have a little self-esteem, and I don’t really talk to persons; and when I come to extras you know, everybody is so friendly and so you going to want to talk to everybody and meet everybody, and then you not talking to anybody that is bad for you and, meaning like they encourage you when you not understanding something, and you can go to them and explain stuff. It’s good.
Another interesting sub-theme that emerged from an in-vivo code was a man amongst di man dem (translation: A man amongst men). This code was actually said by a parent in Region A about his son who attended an all boys’ school. The father stated,

My son goes to a same-sex boys’ school—all boys’ school. I am tending to see that at school he has to be a man amongst di man dem. At extra lessons, he has to perform so that the girls will know he can perform. So there is a difference in the environment of school, where amongst his peers and colleagues at school—is just man and man. In extra lessons, there is a motivator to perform so that the girls will know that this boy is a bright boy.

This in-vivo code emerged as a theme, because participants, especially the male students, commented and described the contrasting levels of socialization between same-sex schools and extra lessons. Boys attending same-sex schools constantly mentioned the need to be strong and follow along with their male peers, as well as the pressure assumed to be a man amongst men. However, in extra lessons where they were in coeducational classes, the pressure of an all-male assembly was not present. In fact, the opposite became salient in the findings, where boys described the need to impress the female students and focus more on their studies. Students described this theme below:

For example, when I pass my GSAT for Mayor’s Boys school, every day is a bag a man. Dem have teachers there, dem sometimes look good. Extras now, they [female students] give you motivation [laughter] If you see a female, it gives you motivation to do better. (Male student, Region A)
They [female students] give you more motivation, cause at school like, what Ubi say, strictly males, and you probably see a female at extras that you like and give you more motivation. (Male student, Region A)

I selected the following quote by a parent in Region A, because it illustrates the parents’ recognition of the importance of social development to academic success:

And for me as well, for my child to attend extra lessons, it affords my child greater and varied social interaction. So at extra lessons, there is another group of persons with whom the child interacts and develops bonds, develops relationships, and that too becomes important for my child to attend extra lessons.

Interesting to note is that the student quoted above, who talked about the female students’ motivating him, is the son of the parent in the quote most recently cited above. Unknowingly both of them touched on varying elements of socialization and the importance that extra lessons plays in social development. In sum, the student efficacy outcomes provided a more holistic description of the educational outcomes, in addition to exam grades and CSEC pass rates, that extra lessons produces.

**Summary**

This chapter provided a bifocal look at extra lessons (a) through a first-person composite narrative and (b) a cross-case analysis. Both displayed similar supporting findings that illustrated the interrelationships between the external environments and the internal conditions. From the composite narrative emerged the voices of the participants that foreground the most telling attributes and challenges of extra lessons, given the socioeconomic drivers. Conversely, the cross-case analysis provided a deeper, contextual
representation of the macro- and micro-level impacts of and within extra lessons. Both representations of data conceptually showed the larger societal issues of education that impacted the conditions of schools and within classrooms. More specifically, the colonial drivers pointed to specific legacies of education inculcated during British rule that divided the social classes and used education as a bargaining tool to straddle between social classes. Additionally, the data honed in on the elements of extra lessons that produced educational outcomes as well as the systemic challenges that were problematic and questionable to students’ well-being. Overall, the data provided a comprehensive model and roadmap to guide the discussion in Chapter 6 to answer, from a postcolonial perspective, how extra lessons improves educational outcomes for students at the secondary level in Jamaica. Lastly, the data allude to varying policy, pedagogy, and research implications for future consideration.
CHAPTER 6. DISCUSSION, IMPLICATIONS, AND CONCLUSION

The overarching purpose of this dissertation study was to examine from the postcolonial theoretical perspective the macro- and micro-level impact of extra lessons as it pertains to scope, prevalence, student academic achievement, and overall perception of extra lessons at the secondary level. Moreover, I sought to investigate a possible form of educational transformation that might be of benefit to marginalized students in Jamaica. Methodologically, the study utilizes a transformative-emancipatory paradigm to better understand extra lessons’ impact on educational outcomes of students within a postcolonial context. As stated in Chapter 3, the interactive level of integration undergirds the research study in the design and use of the four construct areas that ground both the quantitative and qualitative protocols. More specifically, by designing the student questionnaire, interviews, focus groups, and observation protocols into four main construct areas, I was able to derive levels of triangulation and corroboration between
both methods of analysis prior to the interpretation stage below. The following section presents the postcolonial perspective grounded by the data collected, including the video journals and rich analytic memos of all schools visited across the island. Accordingly, this final chapter discusses the overarching research question: *From a postcolonial perspective, how if at all can extra lessons improve educational outcomes for secondary-level students in Jamaica?* Thereafter, the limitations of the study are presented, followed by the goals for future research, and closing with the implications and conclusion.

**Discussion From the Postcolonial Perspective**

In Chapter 2, I presented 350 years of the social history of Jamaica’s education system, using colonial discourse analysis and an anti-colonial discursive framework to problem-pose the primary and archival sources of British education legacies. Essentially, the postcolonial perspective is the re-narrativization and centering of the periphery stories of the subaltern; those who have historically been marginalized and unrepresented in history. There is a level of continuity that postcolonial theories allow for in which histories of struggle and resistance are constantly re-countered in neocolonial and globalized environments. From the perspective of the people, this chapter discusses the results of my dissertation study on extra lessons as it relates to today’s evolving history of an expansive and arguably *parallel education system* that evolved from the 350 years of social history. Accordingly, the findings for extra lessons’ educational outcomes not only reported grade and exam scores but focused on students’ efficacy: increased levels of motivation, confidence, and social development. As seen in the qualitative data, I make
the case that the macro-level impact of extra lessons evolved out of the colonial drivers and legacies of education.

**Macro-Level Impact**

A member from the Ministry of Education said it well: “It is not the intention of the government to provide free tuition for parents to pay for private lessons so their children can pass the exams.” The reality is that there are not enough qualified schools and teachers to serve the children of Jamaica. This problem is nothing new to Jamaica; in fact it is a reiterated problem since the pre-independence era. Yet policy seems to reflect solutions for a short-term fix rather than the long-term gains. In recent policies, the push for better infrastructure and resources into the early childhood sector has shown much promise for a 15- to 20-year, long-term outlook (MoE, 2012). However, “we ‘graduate’ close to 25,000 of our students each year unprepared to even enter the workforce” (CEO Interview, Ministry of Education). Jamaica’s policies continue to ignore the presence and potential of the extra-lessons system due to the overwhelming mammoth of a problem the current education system poses.

In an effort to provide a postcolonial perspective to the analysis, I have contextualized the findings from the social history and document analysis that is most applicable to the quantitative and qualitative data. As such, by 1962, there were a reported 723 primary-level grammar schools and 60 secondary schools established throughout Jamaica (MoE, 2010). In 2012, there were a total of 923 primary-level schools and 148 secondary schools, in which more than 70% of the secondary-level students who took the mathematics CSEC exams failed. Although Jamaica has made
significant strides in increasing the capacity of existing schools and access to secondary schools, students are competing for not only quality of education but also access to education. There are simply not enough spaces in secondary schools to accommodate all graduating primary-level students. As such, the inherited exams-driven society developed a stratified hierarchical education system in which students from the upper social class were granted increased access to the better schools. With policies, such as the Education Act of 1965 and the 70:30 system referenced in Chapter 2, students from the lower social stratum were not granted equal opportunity to secondary education. When these policies were first established by the upper echelons of society, they were designed to prevent the masses from ascending to upward social mobility. The policies were made to replicate the status quo of the colonial powers that left the country in the hands of the upper, White social classes of Jamaica that refrained from educating the lower social class until close to a decade post-independence. Accordingly, the British Common Entrance Examinations continued to represent a neo-colonialist stratifier well into the 1990s, until it was replaced with the GSAT exams in 1998. Arguably, the GSAT is an adapted stratified sample of its predecessor, which has failed to curtail the inequities of the current education system. The resulting increased exams-driven society revealed a heightened need for competition and differentiation to gain acceptance into the limited number of school spaces and even more limited number of quality schools. Accordingly, the emergence or prominence of extra lessons is a direct response to guarantee a place in secondary schools as well as successful matriculation and completion of high school. Furthermore, the results of my study confirmed that extra lessons is a direct solution to poor conditions of schools, lack
of resources, untrained and unmotivated teachers, high occurrences of indiscipline in schools, overcrowded classrooms, poor classroom management, limited time allotted to complete the given syllabus, and inadequate preparation for CSEC exams. As such, extra lessons have become a postcolonial prescription to Jamaica’s colonial affliction.

The cyclical repeat of history found in the data represented much of the challenges mentioned in 2004 by the Ministry of Education: (a) access to full secondary education, (b) equity and quality of schools, (c) poor performance rates, and (d) increasing gender disparities in which girls are outperforming boys in schools. Accordingly, these legacies have yet to be corrected and are still present today, stimulating the extra lessons market. From a postcolonial perspective, the spatial and metacognitive barriers to learning within schools inhibit conditions for learning. As described in Chapter 5, the psychosocial representation of welded chairs, fastened to each other, as well as the grilled, locked gates to prevent unwanted students and persons from entering the room, reflects spaces of confinement similar to prisons. The physical grounding of chairs to each other in scarcely resourced and garrison schools inculcates a message of subservience and belittlement. Conversely, within the extra lessons classes, students reported and expressed spaces of empowerment. These spaces, I have found, were unintended outcomes of the business model of extra lessons.

Within the inner layer of the macro-level system is the emergent business of extra lessons in which the quantitative data provides descriptive analysis of the expansive nature of extra lessons across the country. Not previously available, the data have provided baseline statistics on the scope and prevalence of extra lessons and self-reported
educational outcomes. Using an adapted survey instrument, which has now been comparatively tested in Hong Kong, Dubai, Iran, and Malaysia (M. Bray, personal communication, June 24, 2013), to name a few, allowed for the first means of reliable empirical testing in Jamaica on extra-lessons impact. Therefore, this dissertation study adds to the scarcity of studies in this regional field of literature and adds to the amalgamation of critical studies in the field of shadow education and private supplementary tutoring.

The descriptive statistics revealed 90.3% of the sample participated in extra lessons in the primary form of an in-class group setting for the main reason of improving in a subject matter. Interestingly, the data further revealed that students who attended extra lessons between 16 to 20 hours per week as well as spent 16 to 20 hours doing homework reported higher academic achievement rates than their counterparts. Furthermore, the quantitative data reported that extra lessons had a mean cost per month of JMD$6,192, whereas parents and students in the qualitative focus groups reported paying upwards of JMD$60,000 per term. The interesting finding from the quantitative data was that most of the students in the sample received extra lessons for free or at no cost. This data was unexpected, because the literature in the field typically uses a cost analysis to predict for academic achievement (Dang & Rogers, 2008; Zhang, 2011). Therefore my findings call for further research not intended for in this study. However, I found that even with free extra lessons, there is an opportunity cost associated with it that cannot be quantified, because students give up other activities to be in extra lessons. Additionally, students and teachers alike contended with the lack of motivation and lack
of quality in free extra lessons. Teachers complained that students were not motivated to attend free extra lessons, and students complained that the quality was not worth their time. However, in the cases where there was a payment for service, there was acknowledgment, supported by reported academic achievement outcomes of value for money.

Accordingly, extra lessons are offered by both the students’ subject teachers as well as outside institutions, primarily in the form of small classroom settings. Although extra lessons can take the form of one-on-one tutoring, Internet, or video tutoring, it is most prevalent as small-group classes. Additionally, extra lessons represent a system that is heavily supported by students, teachers, and school administrators across the country. Holistically, the data show that extra lessons exemplify a pervasive, parallel education system that is driven by students’ need to improve in a weak subject area and prepare for the CSEC exams. Extra lessons are arguably filling a gap within the regular school day, in which a space for students has been provided to allow extended time to learn and understand a subject, where teachers can provide more one-on-one attention due to reduced class size.

In assessing the relationships between extra lessons and academic achievement, students who reported attending extra lessons with an outside teacher also reported having a higher end-of-year grade average than students who attended extra lessons with the same teacher. Additionally, students reported having higher levels of motivation, confidence, and a willingness to answer questions as a result of participating in extra lessons. Interestingly, more time spent in extra lessons was not associated with higher
levels of academic achievement, which raises the question of what is being done in extra lessons. This finding implies that the length of time was not as important as the activities and arguably the delivery of the content areas in extra lessons.

Empirically, on parsimonious grounds, the two-level HLM analysis revealed that the following variables, EXTHRS, HHMTHINC, and CIPTENETS, were the best predictors for academic achievement (ACADACHV); however the variance component was not significant, yielding no explanation of significance. Furthermore, there were no significant effects between the school-level variables and the student-level variables, which may be a limitation of the sample as well as the instrument. The data showed that most students who reported taking extra lessons with the same schoolteacher did not perform as well academically as students who reported taking extra lessons with a different teacher. This implies that the school-level data may not have been sufficient to support the analysis, looking at school-level data influences.

In sum, the data showed that there is no relationship between the practice of extra lessons in schools and academic achievement per se; however the second hypothesis was found to be significant, that critical-inclusive pedagogy in extra lessons is related to academic achievement. The significance of the abovementioned variables partially answers the research question, that extra lessons can improve educational outcomes for students in extra lessons. However the question of how was not answered in the quantitative analysis but further examined in the qualitative and mixed-methods analysis.

**Micro-Level Impact**
By conducting a holistic multi-case study, the significant variables were not only more deeply explored but also more contextually grounded within a transformative paradigm. To provide rich and descriptive data to each case within a postcolonial context, my role as the researcher became inextricably linked to the participants and the data. I became a vessel in which to transcribe and re-present information that was respectful and accountable to my participants. Unexpectedly, out of the data emerged a model representing the ecology of extra lessons. The model, as explained in Chapter 5, illustrated the macro- and micro-level systems that interact within and with each other to produce educational outcomes at the core of the model. Fundamental to that core, the answer to the research question and transcendent between the quantitative and qualitative data is the occurrence of conditions for learning in which lies the critical-inclusive pedagogical framework. Toward this end, within pockets of excellence, where extra lessons teachers provide conditions for learning and engage in critical discourse and critical-inclusive pedagogy, extra lessons can improve educational outcomes.

At the core, the model identified that students experience extra lessons through a general student-centered focus in which they engage meaningfully with their teachers and are at the core of the environment of learning. The environment for learning coupled with the delivery method of achievement and accountability of parents produced significant student-efficacy outcomes. The environment was one in which students felt safe—safe from bullying peers, safe from the garrison communities, safe from answering incorrectly. Teachers and students described this environment as controlled and instantly settled, where those in the room were of similar mindset: focused to work. The vivid
descriptions of teachers going above and beyond, who taught both within schools and strictly as extra-lessons teachers, conveyed with meaningfulness the time it takes to prepare for the class, and to engage and keep an active rapport, where each student is known. That exchange of self-worth often directly translated into descriptions of confidence and increased motivation. The “value” of extra lessons, as referenced in selected quotes in Chapter 5, did not have a set quote-on-quote price tag but represented reports of increased levels of students’ efficacy and exams grades. These increased levels of student efficacy were further corroborated in the reporting of the quantitative Likert scales, where students reported their levels of agreement to the effectiveness of extra lessons. Most notably, students agreed that extra lessons improved their CSEC exam grades, exams in schools, confidence, and motivation levels, to name a few.

Parents without exception possessed an innate need to have their children succeed. Whether that meant buying clippers to do a son’s hair or waking up a child at 2 am to study, parents’ reports of commitment and sacrifice went hand-in-hand in describing the levels of accountability needed to produce success.

Holistically the data showed that students had more access to their extra-lessons teachers and felt cared for and inspired by them. In this instance, extra lessons combats the normative banking system of education in which extra lessons represent a form of Freire’s (1973) problem-posing education. Students in this context described the shared-power relations not found in regular school but exemplified in extra lessons, where students were empowered to teach and share their knowledge with the class. Dialogical discourse and power-sharing were not feared but highly encouraged. Additionally,
through the use of creative methods of teaching, students felt that they were more involved and participated more actively in extra-lessons classes. Teachers expressed the need to diversify the delivery of lessons, because students learn differently. As such, teachers described the need to include technology and reference popular culture that were contextually student-centered. I found teachers engaging with students using edutainment, a hybrid of education and entertainment, where music and popular culture were interwoven into the lessons. Additionally, students engaged in Patois without feeling shameful or illiterate. The reinforcement of cultural fables as well as proverbs in lessons centered the ideals of the postcolonial era and effectively provided cultural relevance to education.

Furthermore, students described both the use of peer-to-peer tutoring, which helped them better understand the subject matter, as well as being called upon to teach the class and explain topics in class. This level of role reversal in which students and teachers transferred assumed pedagogical power resulted in increased levels of confidence and motivation. Students from all three regions described that they were less afraid to answer questions and more comfortable with speaking up in extra-lessons class. This activation of student voice arguably empowered students to believe more in their ability to succeed in exams. Also, students reported the constant dialogical exchange between teachers and students in which teachers used varying modes of differentiated teaching as well as engaging examples to stimulate students’ minds to think outside the box and relate current issues to subject-matter topics and concepts. Lastly, students described how teachers knew about them outside the classroom and how they used this
knowledge of their personal lives to better engage with them. The increased level of engagement represented incidences of personal narratives being used to increase relationships between student and teacher.

Overall, to answer the research question, extra lessons can represent a postcolonial space in which students and people on the periphery of history and at the receiving end of policy are now in the center, controlling the conditions for learning and co-construction of knowledge. It may be the case that due to the regulatory nature of extra lessons, government does not have a hand in it. Nevertheless, those who are grounded in transformational pedagogy with the aim of providing empowering spaces for students are able to do so without policy guidelines. However, the lack of regulation can arguably allow for unmonitored means of corruption and exploitation, where some schoolteachers can teach the same subject topics to their same students in extra lessons at a cost. Lastly, the data shows that extra lessons can improve educational outcomes for students at the secondary level if the conditions for learning described in Chapter 5 and above are met.

In summary, conditions for learning at the core of the micro-level system of the model, Ecologies of Extra Lessons, provide concrete examples and potential outcomes for students at the secondary level to succeed. Both strands of data collection and analysis between the quantitative and qualitative data corroborated and reinforced the findings and overarching discussion. Most notably are the findings from the colonial discourse analysis in Chapter 2 and the qualitative data denoting the colonial drivers and legacies of the education system. Additional corroborated results were found between the
quantitative Likert scales and qualitative themes, especially in the cases of the student-efficacy outcomes looking at increased motivation and confidence levels. Lastly, the quantitizing of the qualitative theory (critical-inclusive pedagogy framework), followed by the re-qualitizing of the theory in the design of the qualitative protocol reinforced some of the salient pedagogical findings and educational outcomes.

**Limitations**

Although this study employs a mixed-methods approach and draws on both a robust qualitative approach and a rigorous quantitative study, there are limitations to the study. In addition to the limitations explained in Chapter 4, there were unexpected drawbacks to the data collection and analysis process. Initially, within the proposal of this study, I planned first to conduct an econometric design using data obtained from the Jamaica Survey on Living Conditions (JSLC); however due to lack of preparation, I refrained from doing that type of analysis until I underwent further training. Additionally, still wanting to use portions of the JSLC for the proposed parish-level data, I designed and piloted the student survey based on that assumption. As such, the HLM analysis did not have as many school-level-variables as may have been needed to properly test the hypotheses.

As a result of unexpected accrued costs, lack of time, and unanticipated resource limitations, such as transportation to and from regional locations, I was unable to conduct observations and the proposed number of focus groups in Region C. Toward this end, the sample of extra-lessons classrooms to be observed was not an adequate representation of
the population; therefore no inferences or generalizations have been drawn from these findings. However, indicative statements will be have been made.

An application of the study’s findings, based on both the quantitative and qualitative data gathered from the student questionnaires, one-on-one and focus-group interviews, direct observations, and documentation, has its limitations in spite of the protocols that have been put in place. For example, these data collection methods can compromise the trustworthiness of the findings due to inherent weaknesses, such as my positionality, preconceptions, and the way I interpreted the findings based on a postcolonial theoretical perspective. Furthermore, the use of a mixed-methods approach was difficult to fully interpret and integrate at times.

**Goals for Future Research**

Purposefully left out but implied were the role of the state and the omission of a neo-liberal lens (Harvey, 2005). My purpose as previously stated and interwoven throughout the study was to preface the voices and experiences of the marginalized, and hear from the perspective of the postcolonial citizen. I believe that the next phase of this study will seamlessly integrate the neo-liberal perspective, because my reason to include the members of the Ministry of Education was to provide an understanding from the state. However, in this study, I did not want to overshadow the experiences of the students and the people, on the whole. For those participants who described the replicated banking system of education in extra lessons, there was a blurred line between corruption and exploitation that needs to be further addressed. Incidences where extra-lessons teachers spoke about hosting classes of up to 50 students and teaching the same subject
matter to the same students during the regular school day and then at extra lessons raised many questions about equity and quality. These questions I could not address in the study but plan to do so in future research. Accordingly, a comparative analysis between internal school and external school extra lessons teachers might provide empirical data to better align with policy implications as well as deeper insight into best practices among teachers. Additionally, I would like to test the instrument for construct validity and edit where necessary to include for reports of free extra lessons. The lack of construct validity in the quantitative section can be aligned to erroneous variances in the data. Furthermore, the unexpected sample bias between students who reported taking extras and those who did not arguably resulted in skewed data responses that have to be addressed in the future. To correct for this in the future, I would consider running a controlled experimental design. The occurrence of free extra lessons suggests further research on possible government subsidies as well as teacher altruism and/or school policies that have increased private tutoring for remedial purposes.

Emergent from the qualitative data was the model of the Ecologies of Extra Lessons, and at its core, the Conditions for Learning. In looking at future outcomes, I would revisit the unit of analysis and possibly change it from extra lessons to conditions for learning. Extra lessons proved to be a vague and individualized concept to unpack. Accordingly, within the larger field of shadow education, the literature is relatively new and evolving, whereas the emergent data for the theme, Conditions For Learning, provided more tangible outcomes and examples to examine. Some of the larger questions that emerged from the data but could not be fully answered within the scope of this study.
include (a) What can schools learn from effective forms of extra lessons? (b) How can the quality of extra lessons be improved for the benefit of all students? and (c) Are boys performing proportionately better than girls in extra lessons than in schools? The gender inequity question really lends to some of the experiences observed in the field during the data collection phases. As such, there were unexplored observations of the gender dynamics that played a part in the role of teachers as well as the role of a female researcher in a traditionally patriarchal society. These roles for example were the disproportionate representation of female teachers versus male teachers in the education sector as well as my ability to collect and comprehend statistical data as a woman. These questions would benefit the next level of deeper analysis to target policy implications. Lastly, the school observations of violence and indiscipline proved to be a reoccurring finding across the country that has significant implications for academic achievement. Additionally, I would like to use this data as a baseline to compare other regional studies using the same instrument within the Anglophone Caribbean region.

Implications

If Jamaica wants to attain developed-country status by 2030, then the education system must reflect one of 2030 today. The didactic lecturing habits of the colonial era must give way to collaborative, differentiated modes of co-constructing knowledge. The main challenges that emerged from students, parents, and teachers surrounded the lack of time to complete the set curriculum, misalignment between curriculum and academic achievement, overcrowded classrooms, and the resulting high occurrences of indiscipline. The challenges found from the data allude to the need for policy implications; pedagogy
implications; implications for students, teachers, and parents; implications for postcolonial education; and implications for conducting research in Jamaica.

Furthermore, I argue that Jamaica cannot afford to ignore extra lessons any longer and should develop policies to stimulate extra-lessons conditions for learning in the public school domain.

Policy

Spencer-Rowe (2000), at the conclusion of her investigation of extra lessons at the primary level, stated that the practice is neither sanctioned nor endorsed by the Ministry of Education, but at the same time, has become standard and acceptable. She continued by stating,

The absence of a management structure governing the provision of extra lessons at the primary level, speaks volume to the apparent “hands off” approach adopted by the MOEC [Ministry of Education and Culture]. (p. 63)

There should be a regulatory board developed that is comprised of members of the Ministry of Education as well as key players in the extra-lessons system, including teachers, parents, and school administrators. By allowing for the initial development of a regulatory board to be co-shared and co-led by political and a-political members aims for a more democratic leadership. The board would essentially serve as a key advisory board for policy development that affects the practice, price, and business acumen, and monitors the potential for corruption and exploitation.

In addressing the challenge of time as a recurrent issue within the data, one policy would look at increasing the school year and/or school hours in a day, whereby dedicating more hours to core classes needed. Additionally, as proven in some extra-
lessons institutions, students can successfully be prepared to take the CSEC exam in Grade 10 and pass with distinctions. As such, policy should move towards students’ taking a maximum of four CSEC subject exams in Grade 10 and the remaining CSEC subject exams in Grade 11. The division of exams would provide more preparation time on a smaller number of subjects, similar to what is being done with the Caribbean Advanced Proficiency Exams (CAPE) in Grades 12 and 13.

Ideally, there should be policy in place to reduce classroom size. However, the reduction of classroom size would generate need for additional funding to cover increased capacity for trained teachers. In the interim, the number of teachers should be increased per classroom, meaning for every 20 students, there should be one teacher. Therefore, classrooms with 30 to 40 students would have two teachers, and classrooms up to 50 students would have three teachers. In classrooms with multiple teachers, small learning groups would take precedence over lecture-style teaching.

Another policy implication would address equity and quality through cost. There are similar policy approaches found in former British postcolonial countries around the world, such as Tanzania, South Africa, and Singapore, where the governments believe in and highly encourage private tutoring (Bray, 2006; Silova & Bray; 2006). These countries’ governments believe that “private tutoring contributes to human capital development and that private tutoring is an effective means of tailoring education to the needs of students” (Dang & Rogers, 2008, p. 185). As such, my proposed implications for policies would “explore financing tutoring programs as a flexible means of educating disadvantaged children” (Dang & Rogers, 2008, p. 189). One possible avenue to explore
is a cost-sharing scheme in which the newly developed regulatory board implements guidelines for parents of students who can afford, as well as who are performing at satisfactory level, to pay slightly higher extra-lessons fees. These fees would be coupled with government subsidies to expand extra lessons throughout the entire academic year for students most at-risk of failing and who cannot afford extra lessons.

**Pedagogy**

Implications for pedagogical improvement would include aspects of the critical-inclusive framework to better align professional development initiatives for teachers. Educators should receive incentive-based professional development on differentiated instruction using a critical-inclusive pedagogical framework. The proposed incentive would be forms of continuing-education credits that lead to graduate and/or postgraduate certification. This professional development would center on applied critical discourse to students’ curriculum, pedagogy, and texts used in class. This would allow educators to adapt to the diversity of students’ learning within their classes and have their educational materials “reflect the diverse knowledges, experiences, and accounts of history, ideas, and lived experiences and struggles” (Dei & Doyle-Wood, 2006, p. 164). Thereafter, content, curricular aims, and methods of delivery would be developed based on the environment in which the students and teachers live, not by outsiders who are foreign to the complexities of the cultural context. These implications align well with teacher preparation programs and the need to address synergy between theory and praxis. As such, teacher preparation programs would incorporate elements of the critical-inclusive pedagogical framework that would fit best within a postcolonial education curriculum.
Additionally, the incorporation and use of patois in curriculum would be celebrated as a creative and differentiated pedagogical tool. Lastly, teaching to the CSEC curriculum for the purposes of passing the exam should be reassessed, and better alignment into tertiary education should be examined.

**Students, Teachers, and Parents**

Students are at the epicenter of the learning process; however, they are too often omitted from curricular aims, the learning objectives, and pedagogical styles. The inherited power dynamics practiced in classrooms that stratify the roles between student and teacher inhibits deep learning from occurring. As such, classrooms become inhibitors rather than receptors of learning, and teachers become dictators of information rather than facilitators of knowledge. Accordingly, implications for students would include the development of a national student-ambassador program. Students would be intricately included in the education-transformation process in which they would be selected by schools to partake in regional and national board meetings. The students would not only attend but also be active participants with voting privileges in decisions affecting students. Lastly, the ambassadors would stand to gain allotted scholarships for advancement into tertiary education.

Implications for teachers would mainly be grounded on increasing active participation and development of teachers. I found that teachers in schools were not valued, and as such, the motivation and interest of teachers were lacking. Given the lack of resources and the conditions of classrooms, some teachers failed before they began the day. As suggested by one of the veteran teachers in the study, teachers needed to be given
a voice in the process of educational transformation in which they were included, from the bottom-up and top-down approaches. More so, teachers should be continually assessed on a quarterly basis, provided with mentorship from Master teachers, and given opportunities for professional growth and development throughout the education sector. Lastly, teachers who desire to teach extra lessons to at-risk students should be required to complete specialized teacher training, and only the best (Master) teacher in that subject area should teach the extra lessons at the individual school. Furthermore, as mandated in some schools throughout the country, teachers should not charge their students a fee for extra lessons or be allowed to teach their students in extra lessons.

Parents represented in the data were essential to the success of students in extra lessons. I would further argue that parents played an essential role in the accountability of teachers and the larger education system. As such, one implication for parents would include increased accountability and rapport between subject teachers and parents. For example, parents described the increased occurrences of accountability when there was an established relationship between parent and teacher. In these cases, parents expected a call or text if students were late for class, failed to turn in homework, or did poorly on an exam. This level of increased accountability and access should be replicated across all parents. Mechanisms to facilitate this relationship should be a core focus at PTA meetings and parent-teacher conferences, as well as outside of those events, and become constant throughout the year.

**Postcolonial Education**
To address the curriculum misalignment, an implication for postcolonial education would suggest that the Ministry of Education’s Core Curriculum Unit take a holistic approach to the curriculum from early childhood education to tertiary education, and design curriculum that overlaps each educational stage. The curriculum should transcend beyond the CSEC exams to prepare students beyond secondary education. Accordingly, to achieve developed-country status, Jamaican teachers should move beyond teaching to the test, and instead, prepare students to read the world and not just the word (Macedo, 1993). Therefore, the role of postcolonial education would be to facilitate education that is emancipatory in nature. As part of the postcolonial education framework, critical-inclusive pedagogy would serve as a guiding emancipatory framework to undergird co-constructive and dialectical delivery of knowledge. Postcolonial education would not replace but better enhance a nationalistic curriculum that foregrounds Jamaican authors and scholars.

**Conducting Research in Jamaica**

An important implication for conducting research in Jamaica is to be culturally and contextually respectful and competent, realizing the assumed privileges of a knowledge elite. I found that even as a Jamaican, my study was met with much distrust in the initial sense. I was not personally deterred, because the term “research” carried negative connotations. As such, I had to develop trust and rapport with gatekeepers of data who would better facilitate the process. This translated into numerous visits to site locations and many pre- and post-conversations with participants. Additionally, the constant need to bracket my biases, prejudgments, and an outsider-savior mentality proved to be
challenging. The research from start to finish revealed many psychosocial re-imagining of a “foreign” homeland, one that I had never read or learned about in school textbooks. As such, my unlearning of the normative narrative had to begin with my unlearning of my utopic predispositions of “home.” This meant I wrote and video-documented the journey as well as engaged more meaningfully with my participants through teaching and workshop opportunities. Conducting research in a developing-country context is both resource- and physically draining, because such better planning and preparation for unallocated funding and resources are necessary in this context. In high-violent or garrison communities, I traveled with a research assistant who knew the area better. This facilitated increased assurances of safety, which is critical as a female researcher. Lastly, being able to communicate the research to my participants in a manner that was empowering and not belittling was crucial in achieving the level of meaningful discussions.

**Conclusion**

Arguably to arrive at the conclusion of this dissertation, I conducted three research studies: (a) the first included a discourse analysis undergirded by a postcolonial theoretical framework, (b) the second was comprised of a two-part quantitative analysis—the development and reliable use of an adapted survey instrument and inferential statistics of empirical data, and (c) a qualitative approach to the development of an evidence-based model. When I first set out to do this study, it was not my intention to re-narrativize the social history of education in Jamaica, nor develop a working model of the *Ecologies of Extra Lessons*. I simply wanted to examine the phenomenon of extra lessons so as to
better look at one transformational approach to Jamaica’s education system. I strongly believe that to understand the system today, I had to examine the inherited colonial system of the past. Thereafter, I could begin to look at the resulting, expansive extra-lessons system. Accordingly, the research provides helpful first measures to examine the impact of extra lessons on students’ educational outcomes at the secondary level in Jamaica. The data arguably revealed new ways of knowledge construction and critical pedagogical approaches to galvanize systemic, transformative change in secondary education for marginalized students. As such, extra lessons represents an extensive practice and far-reaching phenomenon in Jamaica’s education system that impacts students’ educational outcomes both on a scholastic scale as well as on a self-efficacy level. One argument for transformational change can be constructed within the delivery and measurable outcomes of extra lessons; however extra lessons is not a one-size-fits-all recommendation for all students. Students who can benefit from extra lessons within the appropriate conditions for learning may not be able to afford it. As such, implications for government subsidies as well as cost-sharing schemes are presented as a means to better allocate funding for remedial forms of private supplementary tutoring. For students who seek more advanced and challenging levels of education, extra lessons can be formatted for gifted learners and university preparation. Lastly, whereas this study provides baseline data, there is further need for research and empirical analysis that can provide substantive implications for policy and transformational change.
CHAPTER 7. AFTERWORD

Dedication

I dedicate this dissertation to my father, Carvel Stewart. He first believed in me when I told him at 15 that I would become a doctor. Not knowing what type of doctor, I committed myself to fulfilling that promise. Furthermore, he first taught me the importance of education and how that could benefit the people in our country. For as long as I have known him, he has fought for our people, whether by transforming communities through recreational activities, such as football, or the creation of employment. I hope this shows you, Daddy, that your unwavering belief in me was paramount to my success.

Acknowledgements
When I started this journey in September 2010, I promised the inner core of my family that I would start and finish this journey with them and include them every step of the way. To my best friend, my partner in love, life and parenting, David Kennedy, thank you for your unwavering support and kindness throughout this journey. For all the additional Daddy care hours, wake up calls, and accompanying travels across the globe, I could not have done this without you. It is because of you, Sekai has never had to feel emptiness or wanting. Sekai, although you cannot read this now, by the time you can, I want you to know I made a promise to you, that I would finish, and I would forever be your mommy first, and scholar thereafter. I can only hope that the sacrifices will bloom increased opportunities for you, and you will know the power of hard work and the satisfaction of attaining goals.

To my outer core family, starting with my parents and my step-mom whom I favourably call “Mums”: You have all been to every graduation and often struggled with me contemplating my path in life. Thank you for always keeping me grounded, providing direction, leadership, and a simple listening ear when I needed to speak. As the youngest of six children, I have had the privilege of learning by and from the examples of the kindest, most talented, intellectually elite and loving siblings a sister could ever have. Thank you for keeping me not only grounded but reminding me daily about the strength of family. To my nieces and nephews, I love you more than you will ever know. Although you already know from my siblings, I hope this shall also show you the inexplicable potential of what you can achieve. Asha-Boo, thank you for being my pseudo-research assistant whenever I needed one.
Mr. Bell, I salute you for not only being a temporal radical, but the epitome of an educator, mentor, and social revolutionary. Thank you for your unwavering support from start to finish, providing critical cultural insight to my study and breathing consciousness and depth to the layered meaning and potential impact of this work.

To my committee, Dr. Frank Tuitt, Dr. Antonio Olmos, Dr. Gregory Anderson, and Dr. Lisa Martinez, thank you for believing in me and my abilities to conduct the type and level of research. Dr. Tuitt, I have said it before and I will forever say it, I started this program because you took a chance on me. Thank you for all the moments of uncomfortable learning, but more importantly, helping me to activate my voice and realize education as the practice of freedom.

Dr. Mark Bray, I want to acknowledge your mentorship and guidance in the field of shadow education and the support you provided throughout this journey. Dr. Jennifer Lavia, you showed me the depth of the postcolonial theorist and the need to develop “our” own Caribbean identity.

To my DU family and the Divine Nine, especially Dr. Chayla Haynes, we weathered much more than the doctoral storm, health, finances, and family, every step holding true to who we were and keeping each other grounded. Thank you for challenging me, writing with me, and reading and editing my work throughout the years.

To my friends who are more like family, who stood by me knowing that emails would give way to phone calls, and birthdays and other important events would be missed, I acknowledge you for staying true to form and knowing that our friendship would outlast these days. To Chris Brown and the entire Crossings Office in Kingston, I
could not have collected the magnitude of data and visited every inch of my beloved country without your help.

Lastly and most importantly, to my participants and gatekeepers, I am forever indebted to you, because without you, this dissertation would not exist. Thank you for giving me purpose in what I do, holding me accountable and transparent to you. I can only hope that my work benefits you, your kin, and the great country that we love, Jamaica.

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State and Condition of the West India Islands, and the Means of improving the same; and for the Lords to be summoned; and for the Agents of the West India Colonies to be heard by their Counsel at the Bar of the House, in Support of their Petition against the Abolition of the Slave Trade, Great Britain (1792) (testimony of John Grant, Esq.).

Minutes of the Evidence taken before the Select Committee of the House of Lords appointed to inquire into the Laws and Usages of the general West India Colonies in relation to the Slave Population, the actual Condition and Treatment of the slaves, their Habits and Dispositions, the Means which are adopted in the several Colonies for the progressive Improvement and Civilization, and the Degree of Improvement and Civilizations which they have at present attained; and also to inquire into the decreased conditions of those Colonies. Great Britain (1832) (testimony of J. Baillie, Esq.).


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**Artifacts/Photographs**

[Artifact of Slave court ruling in the parish of Hanover, signed by Justices of the Peace]. (1824). Manuscript in the Department of Special Collection, MS729. Adapted from National Library of Jamaica.
[Artifact of The Narrative of a Son of a Negro Woman]. (n.d.) Manuscript in the Department of Special Collection, MS193. Adapted from the National Library of Jamaica

[Artifact of Cover page of the Album of the Society for the Relief of the Negro Slaves]. (n.d.). Manuscript in the Department of Special Collection, MS193. Adapted from the National Library of Jamaica

[Artifact of Letter inquiring about the extension of religious education to the Negro population]. (1825). Manuscript in the Department of Special Collection, MS733 p. 3. Adapted from National Library of Jamaica

[Artifact of Working of the Apprenticeship System in the British Colonies]. (1836). Johnston & Barrett, Printers, Manuscript in the Department of Special Collection MS1887. Adapted from National Library of Jamaica


[Photograph of school children in front of school house holding up slates for writing]. (ca. 1900). Adapted from National Libray of Jamaica, Special Collections Department.


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APPENDIX A

Conceptual Illustration of the Hybridization of the Critical-Inclusive Pedagogical Framework
APPENDIX B

Diagram of Transformative Design.
APPENDIX C

Complete Student Questionnaire for Pilot Study

Purpose: The purpose of this pilot study is to assess and gain a better understanding of the characteristics and outcomes of extra lessons in Jamaica. All responses will be kept anonymous. Your participation is important so that I can better understand the usefulness and effectiveness of extra lessons in Jamaica. Definition: Extra Lessons or Private tutoring is receiving additional teaching instruction for CSEC (CXC)-level academic subjects (English Language, English Literature, Mathematics, Sciences, Business) in exchange for payment. It does not include extra-curricular activities such as track and field or dance.

What is your sex?
- Male
- Female

How old are you?

What parish do you live in?
- Kingston
- St. Andrew
- St. Thomas
- Portland
- St. Mary
- St. Ann
- Trelawny
- St. James
- Hanover
- Westmoreland
- St. Elizabeth
- Manchester
- Clarendon
- St. Catherine
What parish do you go to school in?
- Kingston
- St. Andrew
- St. Thomas
- Portland
- St. Mary
- St. Ann
- Trelawny
- St. James
- Hanover
- Westmoreland
- St. Elizabeth
- Manchester
- Clarendon
- St. Catherine

Where is your school located?
- Urban Area
- Rural Area

Have you ever received academic extra lessons during fourth and/ or fifth form?
- Yes
- No

Have you ever received any of the following types of extra lessons or private tutoring during fourth and/ or fifth form? (you can tick more than one answer)
- Private one-on-one
- Small group/ peer to peer (student lead)
- Internet tutoring (including Skype)
- In class by teacher (after school/ in-person)
- Lecture style (video recording)
- Others (please state below) ____________________
- None of the above

Why did you attend extra lessons or private tutoring in fourth and/ or fifth form? (you can tick more than one answer)
- I wanted to improve my understanding of a subject
- I wanted to improve my CSEC exam scores
- I was attracted by the tutoring advertisement
- My parents chose it for me
- Many of my friends are doing it
- My teachers recommended it
- The extra lessons class size is smaller than my school class size
- Other reason (please state below) ____________________
Why didn't you attend extra lessons or private tutoring in fourth and/or fifth form? (you can tick more than one answer)

- I was already doing well enough in school
- None of the extra lessons or private tutoring was available to suit my needs
- Not many of my friends were doing it
- I did not have time
- I did not have the money/ Could not afford it
- My school teachers were knowledgeable enough
- My parents did not want me to do it
- Extra lessons was not offered in my town or city
- My school teachers said it was not useful or necessary
- The extra lessons class was too large and distracting
- Other reasons (please state ____________________

FOR STUDENTS WHO HAVE RECEIVED EXTRA LESSONS OR PRIVATE TUTORING, PLEASE ANSWER THE FOLLOWING: How many hours per week did you receive extra lessons or private tutoring in the following subjects? (If you did not receive any tutoring in the subjects below, please write "0"[zero]).

<table>
<thead>
<tr>
<th>Subject</th>
<th>During the ordinary term-time per week (hours)</th>
<th>During test/ exam periods per week (hours)</th>
<th>During holidays/ vacation periods per week (hours)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mathematics</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>English Language</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>English Literature</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Which of the following activities occurs in your extra lesson classe(s)? (please write/ type "yes" or "no")

<table>
<thead>
<tr>
<th>Subject</th>
<th>My extra lessons classe(s) follow the school curriculum</th>
<th>I have homework from my extra lessons teacher(s).</th>
<th>I take test or mock exam(s) in my extra lessons.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mathematics</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>English Language</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>English Literature</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Did you attend extra lessons or private tutoring with a teacher or with someone outside of your public high school?

- Yes
- No
Did you attend extra lessons or private tutoring with a teacher who teaches in your public high school?
- Yes
- No

If you attended extra lessons or private tutoring with a teacher who teaches at your high school, does he or she teach you the same subject in school as well as in extra lessons? (Are you taking extra lessons with the same teacher as in your regular classes) - change to
- Yes
- No

Did you take the CSEC Mathematics exam in fourth form? (change to overall grade average) Follow up with Math grade average
- Yes: What was your CSEC Mathematics grade? ________________
- No
Did you take the CSEC Mathematics exam in fifth form?
- Yes: What was your CSEC Mathematics grade? ____________________
- No

To what extent do you agree or disagree that extra lessons or private tutoring has improved the following: (please tick ONE box per statement)

<table>
<thead>
<tr>
<th>Statement</th>
<th>Strongly Disagree</th>
<th>Disagree</th>
<th>Neither Agree or Disagree</th>
<th>Agree</th>
<th>Strongly Agree</th>
</tr>
</thead>
<tbody>
<tr>
<td>CSEC (CXC) examination grades</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>In-school examination grades</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>Confidence in examinations</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>Relationship with school teachers</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>Confidence in school performance</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>Learning strategies/study skills</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>My participation in extra lessons due to smaller class size</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>Motivation to learn</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>Identify barriers to learning (absence, tardiness, distractions in school and at home, lack of concentration,)</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>etc.) Strategies to remove barriers to learning</td>
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<td>------------------------------------------------</td>
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</tr>
</tbody>
</table>
Where did you get the information about extra lessons and/ or private tutoring classes? (you can tick more than one) - descriptives
- Family and relatives
- Friends and classmates
- Teachers in my school
- Internet
- Advertisement on TV, in newspaper or in telephone directory
- Advertisement on buildings, supermarkets or buses
- Other (please state) ____________________

How would you respond to the following statements about your Mathematics extra lessons teacher(s) or mathematics private tutors? (Tick ONE box per statement) (code CIP tenet 1-4)

<table>
<thead>
<tr>
<th></th>
<th>Strongly Disagree</th>
<th>Disagree</th>
<th>Neither Agree nor Disagree</th>
<th>Agree</th>
<th>Strongly Agree</th>
</tr>
</thead>
<tbody>
<tr>
<td>My extra lessons teacher engaged with me inside the extra lesson classroom</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>My extra lessons teacher engaged with me outside the extra lessons classroom</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>My extra lessons teacher made an effort to know about me inside the extra lessons classroom</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>My extra</td>
<td></td>
<td></td>
<td></td>
<td></td>
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</tr>
</tbody>
</table>

296
<p>| lessons teacher made an effort to know about me outside the extra lessons classroom |
| I was encouraged to speak with my extra lessons teacher in the Jamaica language (patois) inside the extra lessons classroom |
| My teachers encourage me to show the class how I found answers to problems and equations |
| I was encouraged to explain and help tutor other peers in extra lessons |
| I was encouraged to teach my |</p>
<table>
<thead>
<tr>
<th>Statements</th>
<th></th>
<th></th>
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</tr>
</thead>
<tbody>
<tr>
<td>extra lessons teacher another way of answering the problem I was encouraged to respectfully challenge my extra lessons style of teaching. My extra lessons teacher used creative ways e.g. Reggae music, Jamaican language and examples I could relate to in class I was not afraid to answer questions in class I was expected to ask questions when I did not understand My extra lessons teacher</td>
<td>〇</td>
<td>〇</td>
<td>〇</td>
<td>〇</td>
</tr>
</tbody>
</table>
made
mathematics
fun and
entertaining

How would you respond to the following comparative statements about your mathematics school teachers and your extra lessons math teachers or private tutors? (Tick ONE box per statement)

<table>
<thead>
<tr>
<th></th>
<th>Strongly Disagree</th>
<th>Disagree</th>
<th>Neither Agree nor Disagree</th>
<th>Agree</th>
<th>Strongly Agree</th>
</tr>
</thead>
<tbody>
<tr>
<td>My extra lessons teachers were more knowledgeable than my school teachers</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>My extra lessons teachers were less inspiring in their teaching styles than my school teachers</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>I had more interaction with my extra lessons teachers than my school teachers</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
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<tr>
<td>My extra lessons teachers were more supportive than my school teachers</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>Statement</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
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<td>--------------------------------------------------------------------------</td>
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<tr>
<td>My school teachers were more patient with me than my extra lessons teachers</td>
<td></td>
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<tr>
<td>My school teachers provided more guidance and counseling about my life than my extra lessons teachers</td>
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<tr>
<td>My school teachers helped me to learn knowledge and skills other than what is needed for the exam</td>
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<tr>
<td>My school teachers advised me more on improving my behaviour</td>
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<td>My extra lessons teachers were more likely than my school teachers to make me confident in my studying</td>
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<tr>
<td>My school teachers encouraged</td>
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</table>
me more to challenge their style of teaching
My school teachers were more likely to help me after school

<table>
<thead>
<tr>
<th></th>
<th>No Effect</th>
<th>Small Effect</th>
<th>Medium Effect</th>
<th>Large Effect</th>
<th>No opinion</th>
</tr>
</thead>
<tbody>
<tr>
<td>Private one-on-one</td>
<td></td>
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<tr>
<td>Small group (peer/</td>
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<tr>
<td>student lead)</td>
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<tr>
<td>Internet tutoring</td>
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<tr>
<td>In-class by (extra</td>
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<tr>
<td>lessons) teacher</td>
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<td></td>
<td></td>
<td></td>
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<tr>
<td>(after school)</td>
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<tr>
<td>Lecture style (video</td>
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</tbody>
</table>

What is the amount of money you/ your parent(s)/ your guardian(s) spend on extra lessons or private tutoring on average per month in JAS

In your opinion, what is the financial impact of extra lessons in your family’s budget? (you can tick more than one) (1=burden; 2=value)

- [ ] It is a financial burden to my family
- [ ] It is worth the cost
- [ ] It is valuable to my education
- [ ] Other opinions (please state) ____________________

How would you rate the effectiveness of the following types of extra lessons or private tutoring? (Tick ONE box per statement)
FOR ALL RESPONDENTS, PLEASE ANSWER THE FOLLOWING: What are your father's and mother's (or equivalent male or female guardian's) highest level of education? (one option)

<table>
<thead>
<tr>
<th>Education Level</th>
<th>Father (or male guardian)</th>
<th>Mother (or female guardian)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Completed primary/preparatory school or lower</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>Completed high school</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>Completed community college or vocational training school</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>Completed University (BA, BS, other bachelors level, first degree)</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>Postgraduate studies (Master's degree, MD, PhD, LLB, J.D., etc)</td>
<td>☐</td>
<td>☐</td>
</tr>
</tbody>
</table>

Does your mother or female guardian work? (tick one) (no female in the house)
- ☐ Full time
- ☐ Part time
- ☐ Seasonal (eg. agricultural (farm work), construction, higgler)
- ☐ Does not work

Does your father or male guardian work? (tick one) (no male option)
- ☐ Full time
- ☐ Part time
- ☐ Seasonal (eg. agricultural (farm work), construction, higgler)
- ☐ Does not work
What is your mother's or female guardian's occupation? (tick one)
- Government employee
- Manager in private company
- Entrepreneurs (Owns business)
- Professional or technical personnel (engineer, lawyer, doctor, electrician etc.)
- Secretary, Clerk, Administrative Assistant
- Military personnel or police
- Skilled labourer (e.g. seamstress, dressmaker)
- Farmer, agricultural labour, gardener
- Domestic worker, helper, maid
- Unemployed
- Other, please state ____________________

What is your father's or male guardian's occupation? (tick one)
- Government employee
- Manager in private company
- Entrepreneur (Owns individual business)
- Professional or technical personnel (engineer, lawyer, doctor, etc)
- Clerk
- Military personnel or police
- Skilled labourer (handyman, carpenter, construction worker)
- Farmer, agricultural labour, gardener
- Unemployed
- Other, please state ____________________

What is your household's most recent average gross monthly income in JA$?
- $10,000 - $14,999
- $15,000 - $19,999
- $20,000 - $24,999
- $25,000 - $34,999
- $35,000 - $59,999
- $60,000 - $79,999
- $80,000 - $99,999
- > $100,000 (Please state, an estimate is ok) ________________

FOR QUESTIONS BELOW, IF THE ANSWER IS "NO" OR "ZERO", PLEASE WRITE OR TYPE "0"Please state the numbers of the following rooms in your home.
- Living room ____________________
- Dining room ____________________
- Bedroom ____________________
- Bathroom ____________________
- Other rooms, please state ____________________
Please state the number of domestic worker(s), helper(s) or maid(s) that your household has:

Please state the number of car(s) that your family owns (please include company cars):

How many children live in your household (whether brother, sister, or cousins)?

Do you receive pocket money or monetary allowance from your parent(s) or guardians? If so, on average how much do you receive per month in JA$? (Tick one)

- None or zero
- $1 - $500
- $501 - $2000
- $2001 - $5000
- >$5000 (please state) ____________________

Would you like a summary of the results of this study? If so, please provide an email address or mailing address below.
APPENDIX D
Description of Data Collection Procedures

<table>
<thead>
<tr>
<th><strong>Quantitative Data Collection</strong></th>
<th><strong>Phases in the Process of Research</strong></th>
<th><strong>Qualitative Data Collection</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>• A letter of consent in support of the study issued by the Ministry of Education (MOE); principals notified to participate</td>
<td>Phase 1: Obtaining permissions</td>
<td>• A letter of consent in support of the study issued by the Ministry of Education (MOE)</td>
</tr>
<tr>
<td>• IRB approval obtained from the University of Denver</td>
<td></td>
<td>• IRB approval obtained from the University of Denver</td>
</tr>
<tr>
<td>• Access to site obtained from individual high school principals</td>
<td></td>
<td>• Access to site obtained from individual high school principals</td>
</tr>
<tr>
<td>• Consent form signatures waived by IRB, however each participant received copies before collecting data</td>
<td></td>
<td>• Consent forms obtained from students over 18, and students under 18 with parent consent</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Individuals consent forms obtained from teachers and parents</td>
</tr>
<tr>
<td>• Six education regions in Jamaica</td>
<td>Phase 2: Sampling</td>
<td>• Use of confirming/disconfirming cases in three of the six regions.</td>
</tr>
<tr>
<td>• Multi-stage stratified sampling of 1654 students in Grade 11 in 62 schools across all 14 parishes</td>
<td></td>
<td>• Cluster random sampling strategies will be used to form three sets of samples: Case 1, Region A – students recruited from student questionnaire sample; Parents of students recruited</td>
</tr>
<tr>
<td>• Adequate size to reduce sampling error and provide sufficient power</td>
<td></td>
<td></td>
</tr>
<tr>
<td>• Assistance from Ministry of Education with notifying principals and</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

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<table>
<thead>
<tr>
<th>Activity</th>
<th>Phase 3: Collecting information/data sources</th>
<th>Phase 4: Recording the data</th>
<th>Phase 5: Administering data collection</th>
</tr>
</thead>
<tbody>
<tr>
<td>Extra Lessons Student Questionnaire</td>
<td>• Open-ended interviews</td>
<td>• Interview protocols</td>
<td>• Attend to field issues (employ bracketing/ bias)</td>
</tr>
<tr>
<td></td>
<td>• Focus groups</td>
<td>• Focus group protocols</td>
<td>• Attend to ethical issues (employ bracketing/ bias)</td>
</tr>
<tr>
<td></td>
<td>• Open-ended observations</td>
<td>• Observational protocols</td>
<td>• Audio Recording</td>
</tr>
<tr>
<td></td>
<td>• Self-reflexive Journals</td>
<td>• Self-reflexive journal protocols</td>
<td>• Analytical memos</td>
</tr>
<tr>
<td></td>
<td>• Documents (curriculum, syllabi)</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Audiovisual materials</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Use Qualtrics software to record student questionnaire responses</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Standardize procedures (use SPSS to standardize data)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Attend to ethical issues</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>in first sample; last sample – purposive sampling of students’ extra lessons teachers. Replication logic implemented for both Cases 2 and 3.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>• Study site determined after preliminary quantitative data analysis and convenience for participants</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
# APPENDIX E

Description of Data Analysis Procedures

<table>
<thead>
<tr>
<th><strong>Quantitative Data Analysis</strong></th>
<th><strong>Phases in the Data Analysis Process</strong></th>
<th><strong>Qualitative Data Analysis</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>Clean the database</td>
<td>Phase 1: Prepare the data for analysis</td>
<td>Listen to all audio-recorded data</td>
</tr>
<tr>
<td>Re-code data where necessary</td>
<td>Phase 2: Exploring the data</td>
<td>Transcribe audio-recordings</td>
</tr>
<tr>
<td>Import collected student</td>
<td></td>
<td>Organize documents and visual data (journals)</td>
</tr>
<tr>
<td>questionnaire data from</td>
<td></td>
<td>Input data into ATLAS.ti</td>
</tr>
<tr>
<td>Qualtrics software to SPSS</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Code data by assigning numeric</td>
<td>Phase 3: Analyzing the data</td>
<td></td>
</tr>
<tr>
<td>values</td>
<td></td>
<td>Code data following first and second-cycle coding methods detailed in Chapter 3</td>
</tr>
<tr>
<td>Clean the database</td>
<td></td>
<td>Assign labels to codes</td>
</tr>
<tr>
<td>Establish codebook for</td>
<td></td>
<td></td>
</tr>
<tr>
<td>database</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Conduct descriptive analyses</td>
<td>Phase 3: Analyzing the data</td>
<td></td>
</tr>
<tr>
<td>using SPSS</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Conduct multiple regression</td>
<td></td>
<td></td>
</tr>
<tr>
<td>analyses, correlation</td>
<td></td>
<td></td>
</tr>
<tr>
<td>analyses</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Check for trends and</td>
<td></td>
<td></td>
</tr>
<tr>
<td>distributions</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Input instrumental variables</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Use HLM.7 for all</td>
<td>Phase 3: Analyzing the data</td>
<td></td>
</tr>
<tr>
<td>empirical analyses</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Complete 2-level HLM</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Analyze data to test</td>
<td></td>
<td></td>
</tr>
<tr>
<td>hypotheses</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Report inferential</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Tests, effect sizes, and confidence intervals</td>
<td>• Check that statistical assumptions are not violated (if they are, correct for them or explain violations)</td>
<td></td>
</tr>
<tr>
<td>---------------------------------------------</td>
<td>------------------------------------------------------------------------------------------------------------------</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>• Represent results in statements, tables, and figures</th>
<th>Phase 4: Representing the data analysis</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>• Conduct a postcolonial theoretical analysis of how the results address the research questions and hypotheses</th>
<th>Phase 5: Interpreting the results</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>• Establish validity and reliability of data</th>
<th>Phase 6: Validating the data and results</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>• Group codes into categories or themes</th>
<th>• Use Atlas.ti to corroborate manual analysis</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>• Provide rich and thick descriptions of cases, themes, and categories</th>
<th>• Use figures, tables, and models</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>• Build the argument to address the research questions</th>
<th>• Ground the interpretation in a postcolonial theoretical framework related to the educational tenets</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>• Reflect on personal meaning of findings</th>
<th>• Use validation strategies (explained in Chapter 3), such as inter-rater reliability, triangulation, external audit, member checking, and peer review</th>
</tr>
</thead>
</table>

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APPENDIX F

Diagram of Power Analysis
## APPENDIX G

Questionnaire Change Document After Pilot Study

<table>
<thead>
<tr>
<th>Questionnaire Question</th>
<th>Dissertation Proposal</th>
<th>Reason</th>
</tr>
</thead>
<tbody>
<tr>
<td>Q6: Have you ever received academic extra lessons during fourth and/or fifth form?</td>
<td>Change to: Q6: Have you ever received academic extra lessons during fifth form?</td>
<td>Better clarity of question. Expert in the field recommended reducing recollection of experiences to only fifth form for better reliability of data.</td>
</tr>
<tr>
<td>Q7: Have you even received any of the following types of extra lessons or private tutoring during fourth and/or fifth form?</td>
<td>Q7: What was the primary type of extra lessons that you received in fifth form?</td>
<td></td>
</tr>
<tr>
<td>Q8: Why did you attend extra lessons or private tutoring in fourth and/or fifth form?</td>
<td>Q8: Why did you attend extra lessons or private tutoring in fifth form?</td>
<td></td>
</tr>
<tr>
<td>Q9: Why didn’t you attend extra lessons or private tutoring in fourth and/or fifth form?</td>
<td>Q9: Why didn’t you attend extra lessons or private tutoring in fifth form?</td>
<td></td>
</tr>
<tr>
<td>Q12: Did you attend extra lessons or private tutoring with a teacher or with someone outside of your public high school?</td>
<td>Change to Q12: Are you taking extra lessons or private tutoring with the same teacher as in your regular classes?</td>
<td>Replace Q12, Q13, Q 14 with new Q12 due to low response rate of Q13 – 22% and confusing responses.</td>
</tr>
<tr>
<td>Q13: Did you take extra lessons or private tutoring with a teacher who teaches in your public high school?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Q14: If you attended extra lessons or private tutoring with a teacher who teaches at your high school, do you or she teach you the same subject in school as well as in extra lessons?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Q15: Did you take the Mathematics exam in fourth form?</td>
<td>Completely remove form dissertation proposal questionnaire.</td>
<td>Recommended by expert in the field to reduce “memory gap” between students in grades 12 and 13 trying to recall experiences in grade 10.</td>
</tr>
<tr>
<td>Q19: How would you respond to the following statements about your Mathematics extra lessons teacher(s) or mathematics private tutors? My extra lessons teacher made mathematics fun and entertaining</td>
<td>Completely remove single item.</td>
<td>Does not fit with variables listed in HLM model.</td>
</tr>
<tr>
<td>Q31: Please state number of domestic worker(s), helper(s), or maid(s) that your household has:</td>
<td>Completely remove form dissertation proposal questionnaire.</td>
<td>Have more relevant items that assess SES data.</td>
</tr>
<tr>
<td>Q32: Please state the number of car(s) that your family owns (please include company cars).</td>
<td>Completely remove form dissertation proposal questionnaire.</td>
<td>Have more relevant items that assess SES data.</td>
</tr>
<tr>
<td>Q33: How many children live in your household (whether brother(s), sister(s) or cousin(s))?</td>
<td>Edit to Q31: How many children including yourself live in your household including all brother(s), sister(s) and/or cousin(s)?</td>
<td>Rephrase as responses in the pilot data indicated “0”. Results were confusing.</td>
</tr>
<tr>
<td>Q34: Do you receive pocket money or monetary allowance form your parent(s) or guardian(s)? If so, on average how much do you receive per month in JA$?</td>
<td>Completely remove form dissertation proposal questionnaire.</td>
<td>Have more relevant items that assess SES data.</td>
</tr>
</tbody>
</table>
APPENDIX H

INFORMED CONSENT FORM FOR STUDENTS

Title: Everything in Di Dark Muss Come to Light: A Postcolonial Investigation of the Practice of Extra Lessons at the Secondary Level in Jamaica’s Education System

You are invited to participate in a study that will examine from the postcolonial theoretical perspective, the macro and micro level impacts of extra lessons as it pertains to scope, prevalence, student academic achievement and overall perception at the secondary level in the Jamaican education system. This study is conducted by Saran Stewart, PhD candidate in the Higher Education program. Results will be used to answer my primary research question: how might extra lessons improve secondary educational outcomes for students in Jamaica. Saran Stewart can be reached at 786-319-0059 or saran.stewart@du.edu. This project is supervised by the dissertation Chair, Dr. Frank Tuitt, Associate Professor, Higher Education, Morgridge College of Education, University of Denver, Denver, CO 80208, (303-871-2591, ftuitt@du.edu).

Participation in this study should take about 30 minutes of your time. Participation will involve completing the student questionnaire by responding to (31) questions about extra lessons in Jamaica. Participation in this project is strictly voluntary. There are no foreseen risks associated with this project. If, however, you experience discomfort you may discontinue the questionnaire at any time. We respect your right to choose not to answer any questions that may make you feel uncomfortable. Refusal to participate or withdrawal from participation will involve no penalty or loss of benefits to which you are otherwise entitled.

Your responses will be identified by code number only and will be kept separate from information that could identify you. This is done to protect the confidentiality of your responses. Only the researcher will have access to your individual data and any reports generated as a result of this study will use only group averages and paraphrased wording. However, should any information contained in this study be the subject of a court order or lawful subpoena, the University of Denver might not be able to avoid compliance with the order or subpoena. Although no questions in this questionnaire address it, we are required by law to tell you that if information is revealed concerning suicide, homicide, or child abuse and neglect, it is required by law that this be reported to the proper authorities. Lastly, while every effort will be made to keep responses confidential, they are not anonymous.

If you have any concerns or complaints about how you were treated during the questionnaire, please contact Paul Olk, Chair, Institutional Review Board for the Protection of Human Subjects, at 303-871-4531, or you may email du-irb@du.edu, Office of Research and Sponsored Programs or call 303-871-4050 or write to either at the
University of Denver, Office of Research and Sponsored Programs, 2199 S. University Blvd., Denver, CO 80208-2121.

You may keep this page for your records. If you do not understand any part of the above statement, please ask the researcher any questions you have.

I have read and understood the foregoing descriptions of the study called “Extra Lessons in Jamaica.” I have asked for and received a satisfactory explanation of any language that I did not fully understand. I agree to participate in this study, and I understand that I may withdraw my consent at any time. I have received a copy of this consent form.
APPENDIX I

INFORMED CONSENT FORM FOR INTERVIEWS

Title: Everything in Di Dark Muss Come to Light: A Postcolonial Investigation of the Practice of Extra Lessons at the Secondary Level in Jamaica’s Education System

You are invited to participate in a study that will examine from the postcolonial theoretical perspective, the macro and micro level impacts of extra lessons as it pertains to scope, prevalence, student academic achievement and overall perception at the secondary level in the Jamaican education system. This study is conducted by Saran Stewart, PhD candidate in the Higher Education program. Results will be used to answer my primary research question: how might extra lessons improve secondary educational outcomes for students in Jamaica. Saran Stewart can be reached at 786-319-0059 or saran.stewart@du.edu. This project is supervised by the dissertation Chair, Dr. Frank Tuitt, Associate Professor, Higher Education, Morgridge College of Education, University of Denver, Denver, CO 80208, (303-871-2591, ftuitt@du.edu).

Participation in this study should take about 60 minutes of your time. Participation will involve responding to six (6) interview questions about extra lessons in Jamaica. Participation in this project is strictly voluntary. There are no foreseen risks associated with this project. If, however, you experience discomfort you may discontinue the interview at any time. We respect your right to choose not to answer any questions that may make you feel uncomfortable. Refusal to participate or withdrawal from participation will involve no penalty or loss of benefits to which you are otherwise entitled.

Your responses will be identified by code number only and will be kept separate from information that could identify you. This is done to protect the confidentiality of your responses. Only the researcher will have access to your individual data and any reports generated as a result of this study will use only group averages and paraphrased wording. However, should any information contained in this study be the subject of a court order or lawful subpoena, the University of Denver might not be able to avoid compliance with the order or subpoena. Although no questions in this interview address it, we are required by law to tell you that if information is revealed concerning suicide, homicide, or child abuse and neglect, it is required by law that this be reported to the proper authorities. Lastly, while every effort will be made to keep responses confidential, they are not anonymous.

If you have any concerns or complaints about how you were treated during the interview, please contact Paul Olk, Chair, Institutional Review Board for the Protection of Human Subjects, at 303-871-4531, or you may email du-irb@du.edu, Office of Research and Sponsored Programs or call 303-871-4050 or write to either at the University of Denver,
You may keep this page for your records. Please sign the next page if you understand and agree to the above. If you do not understand any part of the above statement, please ask the researcher any questions you have.

I have read and understood the foregoing descriptions of the study called “Extra Lessons in Jamaica”. I have asked for and received a satisfactory explanation of any language that I did not fully understand. I agree to participate in this study, and I understand that I may withdraw my consent at any time. I have received a copy of this consent form.

Signature _____________________ Date _________________

(If appropriate, the following must be added.)
___ I agree to be audiotaped.
___ I do not agree to be audiotaped.

Signature _____________________ Date _________________

___________ I would like a summary of the results of this study to be mailed to me at the following postal or e-mail address:
ONE-ON-ONE INTERVIEW PROTOCOL

Three key government official in the Ministry of Education will be invited to participate in the study via email.

Before the start of the Initial Interview, the informed consent form will be distributed and a signed copy will be collected from each participant. Each participant will also be asked to choose a pseudonym and complete a Participant Information Sheet and return it to me.

Next, participants will be reminded that throughout the interview and reporting the findings, they will be referred to by their pseudonym to maintain their confidentiality.

Turn on recorder and state:

I’m Saran Stewart, it is (time and date) and this my one-on-one interview ith (insert pseudonym here). Throughout the course of this interview and in my results, I will be referring to you by the pseudonym you chose. The consent form that you signed and have a copy of gives me your permission to record our discussion, so that I can consult it later for my dissertation and future research. Once this research is complete, I will write my dissertation, which will be maintained by the University. Your name and any identifying information, including your professional title, will not appear in my research, only your pseudonym. Since you will not be able to be identified after today, I encourage you to be as honest as you like. Within two weeks of this interview, a full transcript will be available. If you would like to review it, please let me know. I am happy to provide a copy, should you have any feedback or comments to add.

Do you have any questions?

Let’s get started.
Interview Questions

(I) SCOPE AND PREVALENCE
1. What do you believe is the scope and prevalence of extra lessons in secondary schools in Jamaica?
2. On average how many students do you believe take extra lessons?
3. Why isn’t extra lessons regulated by the government?
4. Do you have children in extra lessons? If so, in what subjects?
5. Why did you place your child/children in extra lessons?

(II) EDUCATION OUTCOMES
1. Do you believe extra lessons increases the overall pass rate of CXC exams in Jamaica?
2. Do you believe extra lessons are for remediation in Jamaica or to secure pass rates?
3. Do you believe extra lessons provides an individualized learning strategy that is not present in public schools?
4. Do you believe extra lessons on a macro scale delivers positive educational outcomes?

(III) SOCIO ECONOMIC IMPLICATIONS
1. In your opinion what are some of the socio economic benefits of extra lessons at the secondary level to students? To schooling in Jamaica? To economic growth?
2. Do you believe extra lessons should be subsidized by the government to allow better access for at risk students to participate in extra lessons?
3. What are some of the barriers to creating wider access to extra lessons?
4. Do you believe there should be a more regulatory process for extra lessons at the secondary level in Jamaica?
APPENDIX J

Basic Case Study Designs

APPENDIX K

Holistic, Multi-Case Design of Extra Lessons in Regions A, B, & C.

Ministry of Education

Key Personell

Case 1: Region A

Students (N=10)
Parents (N=10)
Extra Lessons
Teachers (N=10)

Case 2: Region B

Students (N=10)
Parents (N=10)
Extra Lessons
Teachers (N=10)

Case 3: Region C

Students (N=10)
Parents (N=10)
Extra Lessons
Teachers (N=10)
APPENDIX L

INFORMED CONSENT FORM FOR PARENTS TO COMPLETE
FOR STUDENTS UNDER 18

Title: Everything in Di Dark Muss Come to Light: A Postcolonial Investigation of the Practice of Extra Lessons at the Secondary Level in Jamaica’s Education System

Your child is invited to participate in a study that will examine from the postcolonial theoretical perspective, the macro and micro level impacts of extra lessons as it pertains to scope, prevalence, student academic achievement and overall perception at the secondary level in the Jamaican education system. This study is being conducted by Saran Stewart, PhD candidate in the Higher Education program. Results will be used to answer the primary research question: how might extra lessons improve secondary educational outcomes for students in Jamaica. Saran Stewart can be reached at 786-319-0059 or saran.stewart@du.edu. This project is supervised by the dissertation Chair, Dr. Frank Tuitt, Associate Professor, Higher Education, Morgridge College of Education, University of Denver, Denver, CO 80208, (303-871-2591, ftuitt@du.edu).

Participation in this study should take about 90 minutes of your child’s time. Participation will involve your child participating in a group interview with other students (a total of 10 students) or sometimes called a focus group. Your child along with the other students will be asked questions about their experience in and perception of extra lessons in Jamaica. Participation in this project is strictly voluntary. There are no foreseen risks associated with this project. If, however, your child experiences discomfort your child may discontinue the focus group at any time. We respect your child’s right to choose not to answer any questions that may make him/her feel uncomfortable. Refusal to participate or withdrawal from participation will involve no penalty or loss of benefits to which your child are otherwise entitled.

Your child’s responses will be identified by code number only and will be kept separate from information that could identify him or her. This is done to protect the confidentiality of your child’s responses. However, potential breaches in confidentiality while participating in a focus group may occur. Please contact Research Compliance, at irbadmin@du.edu, if you have questions about this. Only the researcher will have access to your child’s individual data and any reports generated as a result of this study will use only group averages and paraphrased wording. However, should any information contained in this study be the subject of a court order or lawful subpoena, the University of Denver might not be able to avoid compliance with the order or subpoena. Although no questions in this focus group address it, we are required by law to tell you that if information is revealed concerning suicide, homicide, or child abuse and neglect, it is required by law that this be reported to the proper authorities.
If you have any concerns or complaints about how your child was treated during the focus group, please contact Paul Olk, Chair, Institutional Review Board for the Protection of Human Subjects, at 303-871-4531, or you may email du-irb@du.edu, Office of Research and Sponsored Programs or call 303-871-4050 or write to either at the University of Denver, Office of Research and Sponsored Programs, 2199 S. University Blvd., Denver, CO 80208-2121.

You may keep this page for your records. Please sign the next page if you understand and agree to the above. If you do not understand any part of the above statement, please ask the researcher any questions you have.

I have read and understood the foregoing descriptions of the study called “Extra Lessons in Jamaica”. I have asked for and received a satisfactory explanation of any language that I did not fully understand. I voluntarily agree to the participation of my child in this study, and I understand that he or she may withdraw at any time. I have received a copy of this consent form.

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Please choose a pseudonym that I may refer to you throughout the focus group interview. When you have selected a pseudonym, please write it on the name tent card and set it in front of you. Throughout the interview, I will refer to you by your pseudonym to maintain confidentiality of the group. Even though most of you know each other, please try to utilize pseudonyms throughout the interview. I will also use your pseudonym when I am writing the results of my study.

Please complete the information sheet – with your pseudonym – and return to me. This information will allow me to look across focus group participants and make sure that I have included various perspectives and experiences based on the information collected on this form. I will only be reporting averages and generalities from this information. There will be nothing to identify you in my written dissertation.

The consent form that you signed and have a copy gives me your permission to record our discussion so that I can consult it later for my dissertation research. I will be the only one to listen to the recording and you and I will be the only people who know who was here today. Once my research is complete, I will write my dissertation, which is maintained by the university and give a copy to the college for their use. Your names and any identifying information will not appear in the dissertation – only your pseudonyms. Since you will not be able to be identified after today, you can be as honest as you like in our discussion. This is a dialogue; so feel free to agree or disagree with each other to give your point of view. Please feel free to speak in Patois and our Jamaican language. After the discussion today, please respect the confidentiality of your fellow participants and do not disclose the details of our discussion.

I will primarily be listening and will not be as active as a participant as you all.

Within two weeks, I will email each of you a full transcript of our discussion today. If you have any feedback or additional comments to add, I encourage you to email me.

Any questions?
Let’s start.
**Interview Questions**

- **SCOPE AND PREVALENCE**

  - We are interested to learn about extra lessons.
    - Can you tell me when you first started to take extra lessons? In what subject?
    - What happened at the time that made you feel you need to take extra lessons?
    - Who suggested it?
    - Did you go to an extra lessons center (or small group or one-on-one tutoring)?
      - a) Was it held in a public high school or another location?
    - Do you remember how it went?
    - How would you describe extra lessons at the secondary level?
      - a) How many students are in the class?
      - b) How many hours per week do you spend at extra lessons?

  - Do you still take extra lessons?
    - Why? / Why not?
    - Still the same subjects?
    - When was the time that you took most extra lessons (in terms of subjects or time)?
    - What a typical day at that time looked like? How did you feel during that period?

  - For each subject, what in specific do you feel you need to strengthen through extra lessons?
    - Can you turn to your school teachers for help?
    - Can you turn to your extra lessons teachers for help?
    - Can your parents help you out?
    - What about your classmates and friends?
    - Do you feel that the extra lessons is helpful to meet your needs in these subject areas?

- **EDUCATION OUTCOMES**

  - In what ways has extra lessons helped you?
    - Confidence in taking CSEC Mathematics Exams?
    - Confidence in general school-work?
    - Getting better grades in extra lessons subjects?
    - Relationship with school teachers?
    - Ways of learning?

  - What do your extra lessons teachers teach?
    - Do they follow the school curriculum? Do they tailor to your individual problems?
    - Do you get homework from extra lessons teachers? How much?
- Do you usually do it? If not, what would the extra lessons teachers do? (if not) why do you still take extra lessons?
- Do you feel better when taking the extra courses?

• Are there any differences in the teaching styles of your school teachers and your extra lessons teachers?
  - Can you please give some examples?
  - How would a typical school class go?
  - What about an extra lessons class?
  - How large is your extra lessons classes versus your in-school classes?

• Are you interested in learning the school subjects?
  - Do you like taking the extra lessons classes?
  - Do your extra lessons teachers help you to grow interests in the subject you are learning?
    - (Yes) How did he or she do that? Tell me more details please.
    - (No) If you don’t like learning, why take all the troubles to attend extra courses?
  - Why are school grades so important? Why are exam results so important?
  - Do your parents scold you if you don’t perform well?
  - What would they say and do if that happens?
  - Do you have the pressure from teachers and friends too? Like what?

• Extra lessons takes up some (or lot of) leisure time in your life.
  - Can you tell me how you spend your time after school?
  - Do you have any hobbies?
  - If you did not take the extra lessons classes, what would you spend the time on?

• CRITICAL-INCLUSIVE PEDAGOGICAL FRAMEWORK

• In what ways does extra lessons teacher engage with you in the classroom?
  - Do the extra lessons teachers challenge you to be more responsive in class?
  - Are you encouraged to speak up and answer questions?
  - Do you talk about current issues happening in your community, school, country as a whole?
  - Does your extra lessons teacher know you outside the classroom, for example, know that you play sports, what your career or academic goals are?
  - Do the skills and perspectives that you gain in extras shape your responses in the classroom and therefore your relationships with teachers? If so, how?

• In what ways did your extra lessons teacher use creative ways of teaching, such as examples to cultural icons, pop-culture, music, use of patois in the classroom?
• Were you encouraged to use different learning styles in the extra lessons class?
  o Did you co-teach any class or subject topic in class?
  o Were you encouraged to show examples to your peers in class?

• SOCIO ECONOMIC IMPLICATIONS

• What do you want you to do in the future?
  • Going to university? Which university?
  • What occupation do your parents expect you to enter? What about yourself?
  • What do you want to study in university?
  • What kind of job or work do you want to do later? Why?
  • Will your extra lessons help you with these career goals? How?

• Has extra lessons increased your family expenses?
  • Do they have to work additional jobs/ hours to pay for extra lessons?
  • Does anyone else in your family take extra lessons?
  • Can your parents continue to afford extra lessons?
  • Do you believe extra lessons will help you to get into a university?
  • Do you believe by taking extra lessons, you will be able to get a job after school?
  • Do you believe extra lessons are another way to socialize with friends more than a way to excel in school?
  • What social class do you believe you and your family belong to – lower, middle, upper?
APPENDIX M

INFORMED CONSENT FORM FOR PARENTS/GUARDIANS’ FOCUS GROUP

Title: Everything in Di Dark Muss Come to Light: A Postcolonial Investigation of the Practice of Extra Lessons at the Secondary Level in Jamaica’s Education System

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Participation in this study should take about 90 minutes of your time. Participation will involve participating in a group interview or focus group with 10 participants. You will be asked questions about your perceptions of extra lessons in Jamaica. Participation in this project is strictly voluntary. There are no foreseen risks associated with this project. If, however, you experience discomfort you may discontinue the interview at any time. We respect your right to choose not to answer any questions that may make you feel uncomfortable. Refusal to participate or withdrawal from participation will involve no penalty or loss of benefits to which you are otherwise entitled.

Your responses will be identified by code number only and will be kept separate from information that could identify you. This is done to protect the confidentiality of your responses. However, potential breaches in confidentiality while participating in a focus group may occur. Please contact Research Compliance, at irbadmin@du.edu, if you have questions about this. Only the researcher will have access to your individual data and any reports generated as a result of this study will use only group averages and paraphrased wording. However, should any information contained in this study be the subject of a court order or lawful subpoena, the University of Denver might not be able to avoid compliance with the order or subpoena. Although no questions in this interview address it, we are required by law to tell you that if information is revealed concerning suicide, homicide, or child abuse and neglect, it is required by law that this be reported to the proper authorities.

If you have any concerns or complaints about how you were treated during the interview, please contact Paul Olk, Chair, Institutional Review Board for the Protection of Human Subjects, at 303-871-4531, or you may email du-irb@du.edu, Office of Research and Sponsored Programs or call 303-871-4050 or write to either at the University of Denver,
I have read and understood the foregoing descriptions of the study called “Extra Lessons in Jamaica”. I have asked for and received a satisfactory explanation of any language that I did not fully understand. I agree to participate in this study, and I understand that I may withdraw my consent at any time. I have received a copy of this consent form.

Signature _____________________ Date __________________

(If appropriate, the following must be added.)
___ I agree to be audiotaped.
___ I do not agree to be audiotaped.

Signature _____________________ Date __________________

___________ I would like a summary of the results of this study to be mailed to me at the following postal or e-mail address:
Distribute informed consent form, collect one signed copy form each participant. Turn on audio recorder.

I’m Saran Stewart, it is (time and date) and this is focus group (#). Do I have your permission to audio record your discussion throughout this focus group. [Wait for participant responses.] Thank you. As most of you already know, I am completing my dissertation research on the effects of extra lessons at the secondary level in Jamaica.

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I will primarily be listening and will not be as active as a participant as you all.

Within two weeks, I will email each of you a full transcript of our discussion today. If you have any feedback or additional comments to add, I encourage you to email me.

Any questions?
Let’s start
Interview Questions

(I) SCOPE AND PREVALENCE
1. How many children do you have attending school in sixth form?
2. How long has your child/children been taking extra lessons?
3. In what subjects does your child/children take extra lessons?
4. Where do they take extra lessons?
   a. In school?
   b. Out of school?
5. Why is it important for your child/children to take extra lessons?
6. How many hours per week does your child/children spend in extra lessons classes?
7. Who recommended or decided that your child/children take extra lessons?

(II) EDUCATION OUTCOMES
8. How has your child/children benefited from participation in extra lessons?
9. Do you believe extra lessons are a necessity for your child/children to do well in schools?
10. Do you believe extra lessons are a necessity for your child/children to do well in CXC exams?
11. Do you believe extra lessons has helped your child’s confidence in the classroom?
12. Do you believe extra lessons had provided additional learning strategies for your child? If so, please describe how.

(III) CRITICAL-INCLUSIVE PEDAGOGICAL FRAMEWORK
1. What do you believe are the differences between teaching in the public school classroom versus teaching in the extra lessons classes?
2. Do you believe extra lessons teachers are better teachers than public school teachers? If so, please provide an example.
3. Do you believe extra lessons teacher use creative ways of teaching in the classroom such as music, pop culture, real world contexts and Patois?
4. Do you believe extra lessons teacher are able to know their students learning styles better than classroom teachers?
5. Do you believe that your child’s extra lessons teacher is an effective teacher that produces positive educational outcomes?

(IV) SOCIO ECONOMIC IMPLICATIONS
1. How much on average per month do you pay for extra lessons?
2. Do you believe the cost for extra lessons in reasonable?
3. Has extra lessons fees been a financial burden on your family?
4. What social class do you believe you and your family fit in? Low, middle, upper?
5. Has extra lessons become a venue for students to socialize?
6. Do you think that extra lessons should be subsidized by the government so as to provide access to all students, especially student at risk of failing?
APPENDIX N

INFORMED CONSENT FORM:
EXTRA-LESSONS TEACHERS’ FOCUS GROUP

Title: Everything in Di Dark Muss Come to Light: A Postcolonial Investigation of the Practice of Extra Lessons at the Secondary Level in Jamaica’s Education System

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Participation in this study should take about 90 minutes of your time. Participation will involve participating in a group interview or focus group with 10 participants. You will be asked questions about your perceptions of extra lessons in Jamaica. Participation in this project is strictly voluntary. There are no foreseen risks associated with this project. If, however, you experience discomfort you may discontinue the interview at any time. We respect your right to choose not to answer any questions that may make you feel uncomfortable. Refusal to participate or withdrawal from participation will involve no penalty or loss of benefits to which you are otherwise entitled.

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Signature _____________________ Date _________________

(If appropriate, the following must be added.)
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I’m Saran Stewart, it is (time and date) and this is focus group (#). Do I have your permission to audio record your discussion throughout this focus group. [Wait for participant responses.] Thank you. As most of you already know, I am completing my dissertation research on the effects of extra lessons at the secondary level in Jamaica.

Please choose a pseudonym that I may refer to you throughout the focus group interview. When you have selected a pseudonym, please write it on the name tent card and set it in front of you. Throughout the interview, I will refer to you by your pseudonym to maintain confidentiality of the group. Even though most of you know each other, please try to utilize pseudonyms throughout the interview. I will also use your pseudonym when I am writing the results of my study.

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Within two weeks, I will email each of you a full transcript of our discussion today. If you have any feedback or additional comments to add, I encourage you to email me.

Any questions?
Let’s start.
Interview Questions

• SCOPE AND PREVALENCE
  1. How long have you been in the teaching profession?
  2. Do you teach in the public school system?
  3. How long have you been teaching as an extra lessons teacher?
  4. How many students do you currently teach in extra lessons?
  5. How many of these students are also in your regular class during the school day?
  6. How many hours per week do you offer extra lessons?
  7. In addition to regular lessons, do you have extra lessons on weekends or during summer?
  8. What subjects do you teach in extra lessons?
  9. How much do you charge on average per month per student?
 10. Why do you teach extra lessons?
 11. Is your institution regulated or registered by any government body?

• EDUCATION OUTCOMES
  1. As an educator, what do you perceive are the advantages and disadvantages of teaching extra lessons?
  2. Do you feel pressured to offer extra lessons?
  3. If so, by who?
     a. Parents
     b. Students
     c. Other
  4. Do you believe you are a good extra lessons teacher
  5. If so, why – what examples can you share?
  6. Do you have measurable success?
  7. Do you register students for the CSEC exams through your institution?
  8. Do you give homework? Timely feedback on homework and classwork?

• CRITICAL-INCLUSIVE PEDAGOGICAL FRAMEWORK
  1. What is your teaching style?
  2. How many students are in your extra lessons classes?
  3. Do you engage with your students inside and outside your classroom?
  4. Do you think it is important to use culturally relevant techniques in the classroom such as speaking in Patois, using real life contexts in lessons, and playing music?
  5. Do you encourage students to work in groups, to speak up in class, to show other students how to answer the problem?
  6. Do you encourage different learning styles?
7. Do you encourage your incorporate your student’s experiences in and outside the classroom into your lessons?

• SOCIO ECONOMIC IMPLICATIONS
  8. In your opinion, what social class do most of your students belong to?
  9. Has extra lessons become another socializing platform for students?
  10. Do you provide “free” tutoring to any students? If so, why and to what class of students?
  11. Do you believe extra lessons can increase school grades and CXC exams? Why? How?
APPENDIX O

INFORMED CONSENT FORM FOR OBSERVATIONS

Title: Everything in Di Dark Muss Come to Light: A Postcolonial Investigation of the Practice of Extra Lessons at the Secondary Level in Jamaica’s Education System

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Participation in this study should take about 2 hours of your time. I will observe your extra lessons class and seat myself in the rear of the classroom and apart from the students. I will use a laptop, note pad, and writing utensils to take detailed notes of my observations. After each observation, I will share comments and observation notes. Permission for the observation in this project is strictly voluntary. There are no foreseen risks associated with this project. If, however, you experience discomfort you may discontinue the observation at any time. I respect your right to choose not to answer any questions that may make you feel uncomfortable. Refusal to participate or withdrawal from participation will involve no penalty or loss of benefits to which you are otherwise entitled.

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If you have any concerns or complaints about how you were treated during the observation, please contact Paul Olk, Chair, Institutional Review Board for the Protection of Human Subjects, at 303-871-4531, or you may email du-irb@du.edu, Office of Research and Sponsored Programs or call 303-871-4050 or write to either at the
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(If appropriate, the following must be added.)

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___ I do not agree to be audiotaped.

Signature _____________________ Date __________________

___________ I would like a summary of the results of this study to be mailed to me at the following postal or e-mail address:
PART I

Remind participants of the informed consent that they signed and provide them a copy, if needed.

Next, I will inform the participant that in my observation and field notes they will be referred to by their pseudonym. Individual students will not be noted in my observation notes by name, but may be referenced by gender.

The extra lessons teacher (i.e., the participant) can elect when and how to disclose to the class that they are participating in a research study on extra lessons in Jamaica. Though, I will encourage that the following language be used in discussing this with their class:

“I have elected to participate in a research study that aims to examine the macro and micro level impacts of extra lessons as it pertains to scope, prevalence, student academic achievement and overall perception at the secondary level in the Jamaican education system. Saran Stewart, a doctoral candidate at the University of Denver, is conducting this research and will be observing our class. She will be sitting in on this class, but will not be participating. I assure you this will not be a disruption to our learning process. Should you have questions, please don’t hesitate to let me know. I am happy to address them and provide any information that you may need. My participation in the research study does not supersede your class experience, so you are encouraged to let me know if you have any questions or concerns.”

During each observation, I intend to seat myself in the rear of the classroom and apart from the students. My location in the classroom can be changed, if the extra lessons teacher believes that it is obtrusive to their lesson plan or classroom dynamic. I will use a laptop, note pad, and writing utensils to take detailed notes of my observations. In the event that the extra lessons teacher distributes handouts or materials in class that are pertinent to the research study, I reserve the right to ask the extra lessons teacher for a copy to use for my data analysis.

After each observation, I will check-in via email with the extra lessons teacher and share comments and observation notes.
PART II

I. BACKGROUND INFORMATION

Name of Evaluator __________________ Number of Students _____________

Date of Class ______________________ Topic of Exercise ________________

Start time __________________________ End Time _______________________

Pseudonym of Teacher ________________ Subject ___________________

II. OBSERVATIONS

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<tr>
<th>Time (mins)</th>
<th>Use the space below to take notes providing a description of the lab. Make note of specific examples of exchanges that demonstrated the teacher’s pedagogical skills, classroom engagement, content knowledge, or preparation.</th>
</tr>
</thead>
<tbody>
<tr>
<td>0 – 15</td>
<td></td>
</tr>
<tr>
<td>15 – 30</td>
<td></td>
</tr>
<tr>
<td>30 – 45</td>
<td></td>
</tr>
<tr>
<td>45 – 60</td>
<td></td>
</tr>
<tr>
<td>60 – 75</td>
<td></td>
</tr>
<tr>
<td>75 - 90</td>
<td></td>
</tr>
<tr>
<td>90 - 105</td>
<td></td>
</tr>
<tr>
<td>105 – 120</td>
<td></td>
</tr>
</tbody>
</table>
Using the numerical scale as follows: 0 = not observed, 1 = observed rarely (once or twice), 2 = observed occasionally (3-4 times), 3 = observed often (>50%), 4 = observed throughout (>75%)

III. USING PERSONAL NARRATIVES
1. The teacher asked questions that elicited student responses built on the students’ own ideas rather than the teacher leading them in specific directions.

Example of a question that worked:

Why did it work?

Example of a question that didn’t work as well:

Why did this not work?

2. The teacher encouraged students to reflect (explain in their own words) how they learned something/came up with an answer (metacognition).

Example:

Why did this work?

IV. FACULTY-STUDENT INTERACTION

3. The teacher creatively engaged with students, using culturally relevant techniques (reggae music, Patois, stories)

Example:

4. The teacher regularly checked on group interactions to ensure a collaborative working environment where all students were contributing equally.

Example:

5. The teachers welcomed questions, suggestions and feedback from students ensuring that they were understanding the lesson, finished the tasks and redirected them if they were lost.

Example:

V. SHARING POWER
6. The teacher had a solid grasp of the subject matter content inherent in the lesson and could apply it to real-world situations (culturally relevant).

Example:

7. The teacher acted as a resource person, working to support and enhance student learning.

Example:

8. The teacher incorporated student’s learning/suggestions into the lesson plan

Example:

VI. DIALOGICAL DISCOURSE
8. The teacher presented information that was accurate.

Examples of inaccuracies:

9. The teacher selected strategies that made content understandable to students.

Example:

10. The teacher covered all that was required in the time allotted.

11. The teacher encouraged and ask students to demonstrate different applications of learning the same content

VII. ACTIVATION OF STUDENT VOICE
1. Students were actively engaged in thought-provoking activity and stayed on task.

Examples of off task behavior observed:(text messaging, talking about social events, talking on the phone)

2. Most student questions were reflective (asking about why they were doing something) rather than procedural (how they were doing it).

Example:

3. Students actively shared ideas and problem solving strategies,
including how they learned and what they learned with each other rather than turning to the teacher for corroboration.

Example:

4. Students actively answered questions, asked questions and, engaged with the teacher and student.

Example:

VIII. POST-LESSON INTERVIEW QUESTIONS

1. What do you think went well in the class?

2. Can you give an example of an interchange you had with the students that you felt went particularly well? Why did it work well?

3. What did you feel did not go well with the class?

4. What is the reason you think these problems happened?

5. How would you modify your teaching next time to deal with this problem?

6. Are there any materials or instructions you felt would have helped you better prepare to teach this class?

If you could teach this same class over again, what would you do differently? (In particular any interactions you had with the students during cl
APPENDIX Q

Summary of the Case Study Data Analysis Process

<table>
<thead>
<tr>
<th>Data Analysis and Representation</th>
<th>Case Study</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Data managing</strong></td>
<td>Create and organize files</td>
</tr>
<tr>
<td>Reading, memoing</td>
<td>Read through text, make margin notes, form initial codes</td>
</tr>
<tr>
<td><strong>Describing</strong></td>
<td>Describe the case and its context</td>
</tr>
<tr>
<td>Classifying</td>
<td>Use categorical aggregation to establish themes or patterns</td>
</tr>
<tr>
<td><strong>Interpreting</strong></td>
<td>Use direct interpretation; develop naturalistic generalizations</td>
</tr>
<tr>
<td>Representing, Visualizing</td>
<td>Present in-depth picture of the cases using narrative, tables, and figures</td>
</tr>
</tbody>
</table>

APPENDIX R

Extra Lessons Questionnaire – Full Study Revised

**Purpose:** The purpose of this study is to assess and gain a better understanding of the characteristics and outcomes of extra lessons in Jamaica. All responses will be kept anonymous. Your participation is important so that I can better understand the usefulness and effectiveness of extra lessons in Jamaica. **Definition:** Extra Lessons or Private tutoring is receiving additional teaching instruction for CSEC (CXC)-level academic subjects (English Language, English Literature, Mathematics, Sciences, Business) in exchange for payment. It does not include extra-curricular activities such as track and field or dance.

Name of school

______________________________

What is your sex?
- Male
- Female

How old are you?

What parish do you live in?
- Kingston
- St. Andrew
- St. Thomas
- Portland
- St. Mary
- St. Ann
- Trelawny
- St. James
- Hanover
- Westmoreland
- St. Elizabeth
- Manchester
- Clarendon
- St. Catherine
What parish do you go to school in?
- Kingston
- St. Andrew
- St. Thomas
- Portland
- St. Mary
- St. Ann
- Trelawny
- St. James
- Hanover
- Westmoreland
- St. Elizabeth
- Manchester
- Clarendon
- St. Catherine

Where is your school located?
- Urban Area
- Rural Area

Have you ever received academic extra lessons during high school?
- Yes
- No

What is the primary form of extra lessons that you receive during high school? (tick one)
- Private one-on-one
- Small group/ peer to peer (student led)
- Internet tutoring (including Skype)
- In class by teacher (after school/ in-person)
- Lecture style (video recording)

Why do you attend extra lessons in high school? (tick one)
- I want to improve my understanding of a subject
- I want to improve my CSEC exam scores
- I am attracted by the tutoring advertisement
- My parents chose it for me
- Many of my friends are doing it
- My teachers recommend it
- The extra lessons class size is smaller than my school class size
Answer

If you have ever received academic extra lessons during high school? No

Why do you not attend extra lessons in high school? (tick one)

☐ I am already doing well enough in school
☐ None of the extra lessons or private tutoring are available to suit my needs
☐ Not many of my friends are doing it
☐ I do not have time
☐ I do not have the money/Cannot afford it
☐ My school teachers are knowledgeable enough
☐ My parents do not want me to do it
☐ Extra lessons is not offered in my town or city
☐ My school teachers said it is not useful or necessary
☐ The extra lessons class is too large and distracting

In what subjects have you taken extra lessons since attending high school? (You may choose more than one answer)

☐ Mathematics
☐ English Language
☐ English Literature
☐ Physics
☐ Biology
☐ Chemistry
☐ Principles of Business
☐ Principles of Accounting
☐ History
☐ Spanish
☐ French

On average, how many hours per week do you attend extra lessons for all subjects throughout the year including high peak exam periods such as January and June? (tick one)

☐ 1-4 hours
☐ 5-10 hours
☐ 11-15 hours
☐ 16-20 hours
☐ 21-24 hours
☐ 25-30 hours

On average, how many hours per week do you spend on homework assignments?

☐ 1-4 hours
☐ 5-10 hours
☐ 11-15 hours
☐ 16-20 hours
☐ 21-24 hours

Which of the following activities occurs in your extra lesson classe(s)? (please write/type "yes" or "no")
<table>
<thead>
<tr>
<th>Mathematics</th>
<th>My extra lessons classe(s) follow the school curriculum</th>
<th>I have homework from my extra lessons teacher(s).</th>
<th>I take test or mock exam(s) in my extra lessons.</th>
</tr>
</thead>
<tbody>
<tr>
<td>English</td>
<td>--------------------------------------------------------</td>
<td>--------------------------------------------------</td>
<td>--------------------------------------------------</td>
</tr>
<tr>
<td>Language</td>
<td>--------------------------------------------------------</td>
<td>--------------------------------------------------</td>
<td>--------------------------------------------------</td>
</tr>
<tr>
<td>English Literature</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Are you taking extra lessons with the same teacher as in your regular high school classes?
- Yes
- No

What was your last overall end-of-year grade average (in fourth form)?
- 0 - 10
- 11 - 20
- 21 - 30
- 31 - 40
- 41 - 50
- 51 - 60
- 61 - 70
- 71 - 80
- 81 - 89
- 90 - 100

To what extent do you agree or disagree that extra lessons or private tutoring improves the following: (please tick ONE box per statement)

<table>
<thead>
<tr>
<th>CSEC (CXC) examination grades</th>
<th>Strongly Disagree</th>
<th>Disagree</th>
<th>Neither Agree or Disagree</th>
<th>Agree</th>
<th>Strongly Agree</th>
</tr>
</thead>
<tbody>
<tr>
<td>In-school examination grades</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Confidence in examinations</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Relationship with school teachers</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

346
<table>
<thead>
<tr>
<th>Confidence in school performance</th>
<th>Learning strategies/study skills</th>
<th>My participation in extra lessons due to smaller class size</th>
<th>Motivation to learn</th>
<th>Identify barriers to learning (absence, tardiness, distractions in school and at home, lack of concentration, etc.)</th>
<th>Strategies to remove barriers to learning</th>
</tr>
</thead>
<tbody>
<tr>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
</tbody>
</table>

Where do you get the information about extra lessons classes? (tick one)

☐ Family and relatives
☐ Friends and classmates
☐ Teachers in my school
☐ Internet
☐ Advertisement on TV, in newspaper or in telephone directory
☐ Advertisement on buildings, supermarkets or buses
How would you respond to the following statements about your Mathematics extra lessons teacher(s) or mathematics private tutors? (Tick ONE box per statement)

<table>
<thead>
<tr>
<th>Statement</th>
<th>Strongly Disagree</th>
<th>Disagree</th>
<th>Neither Agree nor Disagree</th>
<th>Agree</th>
<th>Strongly Agree</th>
</tr>
</thead>
<tbody>
<tr>
<td>My extra lessons teacher engages with me inside the extra lesson classroom</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>My extra lessons teacher engages with me outside the extra lessons classroom</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>My extra lessons teacher makes an effort to know about me inside the extra lessons classroom</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>My extra lessons teacher makes an effort to know about me outside the extra lessons classroom</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>I am encouraged to speak with my extra</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
lessons
teacher in the
Jamaica
language
(patois)
inside the
extra lessons
classroom
My teachers
courage me to show
the class how
I solve
answers to
problems and
equations
I am
encouraged
to explain and help
tutor other
peers in extra
lessons
I am
encouraged
to teach my
extra lessons
teacher
another way of answering
the problem
I am
encouraged
to respectfully
challenge my
extra lessons
style of
teaching
My extra
lessons
teacher uses
creative
ways e.g. Reggae music, Jamaican language and examples I could relate to in class
I am not afraid to answer questions in class
I am expected to ask questions when I do not understand

<table>
<thead>
<tr>
<th></th>
<th>Strongly Disagree</th>
<th>Disagree</th>
<th>Neither Agree nor Disagree</th>
<th>Agree</th>
<th>Strongly Agree</th>
</tr>
</thead>
<tbody>
<tr>
<td>My extra lessons teachers were more knowledgable than my school teachers</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>My extra lessons teachers are less inspiring in their teaching styles than my school teachers</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>I have more interaction with my extra lessons teachers than my school teachers</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>My extra lessons teachers are more supportive than my school teachers</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>My school teachers are more patient with me than my extra lessons teachers</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>My school teachers provide more guidance and counseling about my life than my extra lessons teachers</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>My school teachers help me to learn knowledge and skills other than what is needed for the exam</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>My school teachers advise me</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
more on improving my behaviour
My extra lessons teachers are more likely than my school teachers to make me confident in my studying
My school teachers encourage me more to challenge their style of teaching
My school teachers are more likely to help me after school

<p>| | | | | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

What is the amount of money you/ your parent(s)/ your guardian(s) spend on extra lessons or private tutoring on average per month in JA$
In your opinion, what is the financial impact of extra lessons in your family’s budget? (tick one)
- It is a financial burden to my family
- It is worth the cost
- It is valuable to my education
- It will help me to get into a university in the future

FOR ALL RESPONDENTS, PLEASE ANSWER THE FOLLOWING: What are your father's and mother's (or equivalent male or female guardian's) highest level of education?

<table>
<thead>
<tr>
<th></th>
<th>Father (or male guardian)</th>
<th>Mother (or female guardian)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Completed primary/ preparatory school or lower</td>
<td>□</td>
<td>□</td>
</tr>
<tr>
<td>Education Level</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>-----------------------------------------------------</td>
<td>-----</td>
<td>----</td>
</tr>
<tr>
<td>Completed high school</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>Completed community college or vocational training school</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>Completed University (BA, BS, other bachelors level, first degree)</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>Postgraduate studies (Master's degree, MD, PhD, LLB, J.D., etc)</td>
<td>☐</td>
<td>☐</td>
</tr>
</tbody>
</table>

Does your mother or female guardian work? (tick one)
- ☐ Full time
- ☐ Part time
- ☐ Seasonal (e.g. agricultural (farm work), construction, higgler)
- ☐ Does not work
- ☐ No mother or female guardian in the home

Does your father or male guardian work? (tick one)
- ☐ Full time
- ☐ Part time
- ☐ Seasonal (e.g. agricultural (farm work), construction, higgler)
- ☐ Does not work
- ☐ No father or male guardian in the home

What is your mother's or female guardian's occupation? (tick one)
- ☐ Government employee
- ☐ Manager in private company
- ☐ Entrepreneur (Owns business)
- ☐ Professional or technical personnel (engineer, lawyer, doctor, electrician, etc.)
- ☐ Secretary, Clerk, Administrative Assistant
- ☐ Military personnel or police
- ☐ Skilled labourer (e.g. seamstress, dressmaker)
- ☐ Farmer, agricultural labour, gardener
- ☐ Domestic worker, helper, maid
- ☐ Unemployed
- ☐ No mother or female guardian in the home

What is your father's or male guardian's occupation? (tick one)
- ☐ Government employee
- ☐ Manager in private company
- ☐ Entrepreneur (Owns individual business)
- ☐ Professional or technical personnel (engineer, lawyer, doctor, etc)
☐ Clerk
☐ Military personnel or police
☐ Skilled labourer (handyman, carpenter, construction worker)
☐ Farmer, agricultural labour, gardener
☐ Unemployed
☐ No father or male guardian in the home

What is your household's most recent average gross monthly income in JA$? (tick one)

☐ $10,000 - $14,999
☐ $15,000 - $19,999
☐ $20,000 - $24,999
☐ $25,000 - $34,999
☐ $35,000 - $59,999
☐ $60,000 - $79,999
☐ $80,000 - $99,999
☐ $100,000 - $150,000
☐ $151,000 - $200,000
☐ $201,000 - $250,000
☐ $251,000 - $300,000
☐ $301,000 - $350,000
☐ $351,000 - $400,000
☐ $401,000 - $450,000
☐ $451,000 - $500,000
☐ >$501,000

FOR QUESTIONS BELOW, IF THE ANSWER IS "NO" OR "ZERO", PLEASE WRITE OR TYPE "0"

Please state the numbers of the following rooms in your home.

☐ Living room ____________________
☐ Dining room ____________________
☐ Bedroom ____________________
☐ Bathroom ____________________
☐ Other rooms, please state ____________________

How many children including yourself live in your household (whether brother, sister, or cousins)?

Do you want to share any other comments about extra lessons?

Would you like to participate in a group interview (focus group) with other students in your region to talk about extra lessons? If so, please provide an email address or phone number to be contacted at a later date.
APPENDIX S

Selected Quotes From the Theme, *Facilitators of Learning*:

Frequency Table of Theme Across Regions

<table>
<thead>
<tr>
<th>Case</th>
<th>Codes</th>
<th>Frequency</th>
<th>Selected Quotes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Helpful: better understanding subject</td>
<td>I believe extra lesson is good for high school students because it will help you to understand and improve your grade in the subject you are weak in and no matter how expensive you will be proud of the outcome.</td>
<td>33</td>
<td></td>
</tr>
<tr>
<td>Improve grades (in subject/exams)</td>
<td>15</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Confidence builder</td>
<td>I helps to boost my confidence in my chances of getting distinctions in CXC.</td>
<td>7</td>
<td></td>
</tr>
<tr>
<td>Beneficial &amp; worthwhile</td>
<td>I enjoy extra lessons because its beneficial. It is worthwhile.</td>
<td>15</td>
<td></td>
</tr>
<tr>
<td>Important to learning/to pass exams</td>
<td>It is very important, it helps to give a better understanding of a subject.</td>
<td>7</td>
<td></td>
</tr>
<tr>
<td>Environment for learning</td>
<td>It is a wonderful environment, much better than my school.</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td>Enjoyment</td>
<td>The extra lesson is educational fun and it help me to reach a high standard in my school work.</td>
<td>6</td>
<td></td>
</tr>
<tr>
<td>Better teachers/teaching</td>
<td>My extra lessons teacher for biology and chemistry is EXCELLENT! She gets the material covered efficiently and quickly in a way I can easily comprehend...My physics teacher is, simply put, a &quot;BOSS.&quot; They build my confidence.</td>
<td>6</td>
<td></td>
</tr>
<tr>
<td>More advanced curriculum</td>
<td>I believe extra lessons are far better than the techniques pursued in school.</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td>Develop socially</td>
<td>It also gives teenagers a chance to meet new people and socialize.</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>Region A</td>
<td>96</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Codes</td>
<td>Frequency</td>
<td>Selected Quotes</td>
<td></td>
</tr>
<tr>
<td>--------------------------------------------</td>
<td>-----------</td>
<td>---------------------------------------------------------------------------------</td>
<td></td>
</tr>
<tr>
<td><strong>Region B</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Helpful:</td>
<td>5</td>
<td>Extra lesson is very good because it help to improve our grades and helps us to</td>
<td></td>
</tr>
<tr>
<td>better</td>
<td>19</td>
<td>get better understanding of area we might not understand.</td>
<td></td>
</tr>
<tr>
<td>understanding subject</td>
<td>11</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Improve grades (in subject/exams)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Confidence builder</td>
<td>4</td>
<td>It has made my grades and self-esteem improve than how it was back then, and I</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>honestly don't regret going, now I'm more focused and confident in myself and</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>my school work.</td>
<td></td>
</tr>
<tr>
<td>Beneficial &amp; worthwhile</td>
<td>8</td>
<td>It is a worthy cost to my education.</td>
<td></td>
</tr>
<tr>
<td>Important to learning/to pass exams</td>
<td>8</td>
<td>Extra lessons are important to improve our understanding on a particular subject.</td>
<td></td>
</tr>
<tr>
<td>Environment for learning</td>
<td>4</td>
<td>I get to express myself more and share my opinions with the teacher.</td>
<td></td>
</tr>
<tr>
<td>Enjoyment</td>
<td>8</td>
<td>It is also fun as various activities makes you want to learn more.</td>
<td></td>
</tr>
<tr>
<td>Better teachers/teaching</td>
<td>6</td>
<td>It is very good, because in most cases, the extra lesson teachers are much</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>better, especially for mathematics, than regular school ones.</td>
<td></td>
</tr>
<tr>
<td>Develop socially</td>
<td>4</td>
<td>It is fun and I learn to express myself more.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>77</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Region C</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Helpful:</td>
<td>4</td>
<td>It’s helpful.</td>
<td></td>
</tr>
<tr>
<td>better</td>
<td>11</td>
<td>Extra lessons are very important. They help me to receive better grades,</td>
<td></td>
</tr>
<tr>
<td>understanding subject</td>
<td>3</td>
<td>obtain a better understanding of a subject, and give me experience for external</td>
<td></td>
</tr>
<tr>
<td>Improve grades (in subject/exams)</td>
<td>3</td>
<td>exams to come.</td>
<td></td>
</tr>
<tr>
<td>Confidence builder/ motivation</td>
<td>3</td>
<td>Extra lesson helps to build my confidence.</td>
<td></td>
</tr>
<tr>
<td>Reinforcement</td>
<td>5</td>
<td>I think extra lessons is a good opportunity for individuals to</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Service</td>
<td>Rating</td>
<td>Comment</td>
<td></td>
</tr>
<tr>
<td>----------------------------------------</td>
<td>--------</td>
<td>-------------------------------------------------------------------------------------------------------------</td>
<td></td>
</tr>
<tr>
<td>Better prepared for exam</td>
<td>2</td>
<td>Helps to fully prepare me for CSEC examination.</td>
<td></td>
</tr>
<tr>
<td>Important to learning/to pass exams</td>
<td>4</td>
<td>I think this is a good practice and it helps with improving your educational level.</td>
<td></td>
</tr>
<tr>
<td>Conducive environment for learning</td>
<td>2</td>
<td>I don’t really grasp the concept during daytime school; however there are less students in extension classes, so I feel more comfortable and relaxed at extension classes.</td>
<td></td>
</tr>
<tr>
<td>Enjoyment</td>
<td>3</td>
<td>It’s fun; you get to know people and your also getting educated.</td>
<td></td>
</tr>
<tr>
<td>Good for students</td>
<td>2</td>
<td>I think it helps to give you more self- motivation to do better.</td>
<td></td>
</tr>
<tr>
<td>Small class size</td>
<td>3</td>
<td>Extra lesson is helpful in small groups.</td>
<td></td>
</tr>
</tbody>
</table>

**Total:** 48
### APPENDIX T

**Selected Quotes From the Theme, Disadvantages of Extra Lessons**

**Frequency Table of Theme Across Regions**

<table>
<thead>
<tr>
<th>Case</th>
<th>Codes</th>
<th>Frequency</th>
<th>Selected Quotes</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Costly/unaffordable</td>
<td>11</td>
<td><em>The timing is sometimes too long or not enough. It may cost too much or the sessions long and boring.</em></td>
</tr>
<tr>
<td></td>
<td>Tiring</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td></td>
<td>No leisure time</td>
<td>4</td>
<td><em>Extra lessons take up a lot of my time, and it is quite tiring but I do benefit.</em></td>
</tr>
<tr>
<td></td>
<td>Unreliable teachers</td>
<td>2</td>
<td><em>It's sometimes a waste of time; teachers sometimes show up or when they feel like to.</em></td>
</tr>
<tr>
<td></td>
<td>Bad teachers</td>
<td>2</td>
<td><em>Teachers do not have the time to teach students, some are lazy and some doesn't care.</em></td>
</tr>
<tr>
<td></td>
<td></td>
<td>20</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Costly/unaffordable</td>
<td>4</td>
<td><em>I would love to attend extra lessons, but my parents are not financially stable and they struggle to keep me in school. They should try to keep it during the day, because when it's after school, I reach home late and tend to be very tired.</em></td>
</tr>
<tr>
<td></td>
<td>Tiring</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td></td>
<td>No leisure time</td>
<td>2</td>
<td><em>I have no time due to my involvement in music in the evenings.</em></td>
</tr>
<tr>
<td></td>
<td>Uninterested teachers</td>
<td>1</td>
<td><em>Teachers (especially math) don't like/ don't act like they like to teach extra lessons.</em></td>
</tr>
<tr>
<td></td>
<td>Stressful</td>
<td>2</td>
<td><em>It's sometime stressing.</em></td>
</tr>
<tr>
<td></td>
<td></td>
<td>11</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Costly/unaffordable</td>
<td>1</td>
<td><em>Too expensive</em></td>
</tr>
<tr>
<td></td>
<td>Large class</td>
<td>1</td>
<td><em>Yes, in extra lessons, the classrooms are very full and students are distracting.</em></td>
</tr>
<tr>
<td></td>
<td></td>
<td>4</td>
<td></td>
</tr>
</tbody>
</table>
APPENDIX U

Summary of the Random Coefficients Regression Model 1 specified

Level-1 Model

\[ ACADACHV_{ij} = \beta_{0j} + \beta_{1j}^*(EXTHRS_{ij}) + \beta_{2j}^*(HOUSEHOL_{ij}) + r_{ij} \]

Level-2 Model

\[ \beta_{0j} = \gamma_{00} + u_{0j} \]
\[ \beta_{1j} = \gamma_{10} + u_{1j} \]
\[ \beta_{2j} = \gamma_{20} + u_{2j} \]

Mixed Model

\[ ACADACHV_{ij} = \gamma_{00} + \gamma_{10}^*EXTHRS_{ij} + \gamma_{20}^*HOUSEHOL_{ij} + u_{0j} + u_{1j}^*EXTHRS_{ij} + u_{2j}^*HOUSEHOL_{ij} + r_{ij} \]

Run-time deletion has reduced the number of level-1 records to 1016
Run-time deletion has reduced the number of level-2 groups to 61

\[ \sigma^2 = 0.82218 \]

\[ \tau \]

<table>
<thead>
<tr>
<th>( \gamma_{00} )</th>
<th>( \gamma_{10} )</th>
<th>( \gamma_{20} )</th>
</tr>
</thead>
<tbody>
<tr>
<td>INTRCPT1,( \beta_0 )</td>
<td>0.40991</td>
<td>-0.01134</td>
</tr>
<tr>
<td>EXTHRS,( \beta_1 )</td>
<td>-0.01134</td>
<td>0.01191</td>
</tr>
<tr>
<td>HOUSEHOL,( \beta_2 )</td>
<td>0.00083</td>
<td>-0.00152</td>
</tr>
</tbody>
</table>

\[ \tau \text{ (as correlations)} \]

<table>
<thead>
<tr>
<th>( \gamma_{00} )</th>
<th>( \gamma_{10} )</th>
<th>( \gamma_{20} )</th>
</tr>
</thead>
<tbody>
<tr>
<td>INTRCPT1,( \beta_0 )</td>
<td>1.000</td>
<td>-0.162</td>
</tr>
<tr>
<td>EXTHRS,( \beta_1 )</td>
<td>-0.162</td>
<td>1.000</td>
</tr>
<tr>
<td>HOUSEHOL,( \beta_2 )</td>
<td>0.058</td>
<td>-0.629</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Random level-1 coefficient</th>
<th>Reliability estimate</th>
</tr>
</thead>
<tbody>
<tr>
<td>INTRCPT1,( \beta_0 )</td>
<td>0.510</td>
</tr>
<tr>
<td>EXTHRS,( \beta_1 )</td>
<td>0.192</td>
</tr>
<tr>
<td>HOUSEHOL,( \beta_2 )</td>
<td>0.114</td>
</tr>
</tbody>
</table>
The value of the log-likelihood function at iteration 56 = -1.424233E+003

Final estimation of fixed effects:

<table>
<thead>
<tr>
<th>Fixed Effect</th>
<th>Coefficient</th>
<th>SE</th>
<th>t-ratio</th>
<th>Approx. df</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>INTRCPT1, ( \beta_0 )</td>
<td>( \gamma_{00} )</td>
<td>6.669356</td>
<td>0.107906</td>
<td>61.807</td>
<td>60</td>
</tr>
<tr>
<td>INTRCPT2, ( \gamma_{10} )</td>
<td>0.064283</td>
<td>0.030782</td>
<td>2.088</td>
<td>60</td>
<td>0.041</td>
</tr>
<tr>
<td>INTRCPT2, ( \gamma_{20} )</td>
<td>0.025098</td>
<td>0.008116</td>
<td>3.092</td>
<td>60</td>
<td>0.003</td>
</tr>
</tbody>
</table>

Final estimation of fixed effects (with robust standard errors)

<table>
<thead>
<tr>
<th>Fixed Effect</th>
<th>Coefficient</th>
<th>SE</th>
<th>t-ratio</th>
<th>Approx. df</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>INTRCPT1, ( \beta_0 )</td>
<td>( \gamma_{00} )</td>
<td>6.669356</td>
<td>0.106723</td>
<td>62.492</td>
<td>60</td>
</tr>
<tr>
<td>INTRCPT2, ( \gamma_{10} )</td>
<td>0.064283</td>
<td>0.030395</td>
<td>2.115</td>
<td>60</td>
<td>0.039</td>
</tr>
<tr>
<td>INTRCPT2, ( \gamma_{20} )</td>
<td>0.025098</td>
<td>0.008001</td>
<td>3.137</td>
<td>60</td>
<td>0.003</td>
</tr>
</tbody>
</table>

Final estimation of variance components

<table>
<thead>
<tr>
<th>Random Effect</th>
<th>SD</th>
<th>Variance Component</th>
<th>df</th>
<th>( \chi^2 )</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>INTRCPT1, ( u_0 )</td>
<td>0.64024</td>
<td>0.40991</td>
<td>60</td>
<td>137.05337</td>
<td>&lt;0.001</td>
</tr>
<tr>
<td>EXTHRS slope, ( u_1 )</td>
<td>0.10915</td>
<td>0.01191</td>
<td>60</td>
<td>74.68314</td>
<td>0.096</td>
</tr>
<tr>
<td>HOUSEHOL slope, ( u_2 )</td>
<td>0.02220</td>
<td>0.00049</td>
<td>60</td>
<td>62.21898</td>
<td>0.397</td>
</tr>
<tr>
<td>level-1, ( r )</td>
<td>0.90674</td>
<td>0.82218</td>
<td>60</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Statistics for current covariance components model
Deviance = 2848.466910  
Number of estimated parameters = 7

**Variance-Covariance components test**

\[ \chi^2 \text{ statistic} = 1298.36309 \]  
Degrees of freedom = 5  
\( p \)-value = <0.001

**Test of homogeneity of level-1 variance**

\[ \chi^2 \text{ statistic} = 209.64290 \]  
degrees of freedom = 60  
\( p \)-value = 0.000

**Summary of the Random Coefficient Regression Model 2 specified**

**Level-1 Model**

\[ ACADACHV_{ij} = \beta_{0j} + \beta_{1j} \times (EXTHRS_{ij}) + \beta_{2j} \times (HOUSEHOL_{ij}) + \beta_{3j} \times (CIPTENET_{ij}) + r_{ij} \]

**Level-2 Model**

\[ \begin{align*}  
\beta_{0j} &= \gamma_{00} + u_{0j} \\
\beta_{1j} &= \gamma_{10} + u_{1j} \\
\beta_{2j} &= \gamma_{20} + u_{2j} \\
\beta_{3j} &= \gamma_{30} + u_{3j} 
\end{align*} \]

**Mixed Model**

\[ ACADACHV_{ij} = \gamma_{00} \\
+ \gamma_{10} \times EXTHRS_{ij} \\
+ \gamma_{20} \times HOUSEHOL_{ij} \\
+ \gamma_{30} \times CIPTENET_{ij} \\
+ u_{0j} + u_{1j} \times EXTHRS_{ij} + u_{2j} \times HOUSEHOL_{ij} + u_{3j} \times CIPTENET_{ij} + r_{ij} \]

Run-time deletion has reduced the number of level-1 records to 835
Run-time deletion has reduced the number of level-2 groups to 61
$\sigma^2 = 0.76676$

\[\tau\]

<table>
<thead>
<tr>
<th>Factor</th>
<th>Coefficient</th>
<th>SE</th>
<th>$t$-ratio</th>
<th>Approx. df</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>INTRCPT1, $\beta_0$</td>
<td>1.63107</td>
<td>-0.05114</td>
<td>-0.00885</td>
<td>-0.02498</td>
<td></td>
</tr>
<tr>
<td>EXTHRS, $\beta_1$</td>
<td>-0.05114</td>
<td>0.01564</td>
<td>-0.00420</td>
<td>0.00133</td>
<td></td>
</tr>
<tr>
<td>HOUSEHOL, $\beta_2$</td>
<td>-0.00885</td>
<td>-0.00420</td>
<td>0.00177</td>
<td>0.00009</td>
<td></td>
</tr>
<tr>
<td>CIPTENET, $\beta_3$</td>
<td>-0.02498</td>
<td>0.00133</td>
<td>0.00009</td>
<td>0.0048</td>
<td></td>
</tr>
</tbody>
</table>

\[\tau\text{ (as correlations)}\]

<table>
<thead>
<tr>
<th>Factor</th>
<th>Coefficient</th>
<th>SE</th>
<th>$t$-ratio</th>
<th>Approx. df</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>INTRCPT1, $\beta_0$</td>
<td>1.000</td>
<td>-0.320</td>
<td>-0.165</td>
<td>-0.889</td>
<td></td>
</tr>
<tr>
<td>EXTHRS, $\beta_1$</td>
<td>-0.320</td>
<td>1.000</td>
<td>-0.799</td>
<td>0.482</td>
<td></td>
</tr>
<tr>
<td>HOUSEHOL, $\beta_2$</td>
<td>-0.165</td>
<td>-0.799</td>
<td>1.000</td>
<td>0.098</td>
<td></td>
</tr>
<tr>
<td>CIPTENET, $\beta_3$</td>
<td>-0.889</td>
<td>0.482</td>
<td>0.098</td>
<td>1.000</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Random level-1 coefficient</th>
<th>Reliability estimate</th>
</tr>
</thead>
<tbody>
<tr>
<td>INTRCPT1, $\beta_0$</td>
<td>0.332</td>
</tr>
<tr>
<td>EXTHRS, $\beta_1$</td>
<td>0.189</td>
</tr>
<tr>
<td>HOUSEHOL, $\beta_2$</td>
<td>0.268</td>
</tr>
<tr>
<td>CIPTENET, $\beta_3$</td>
<td>0.251</td>
</tr>
</tbody>
</table>

Note: The reliability estimates reported above are based on only 56 of 61 units that had sufficient data for computation. Fixed effects and variance components are based on all the data.
The value of the log-likelihood function at iteration 1345 = -1.168763E+003

Final estimation of fixed effects:

<table>
<thead>
<tr>
<th>Fixed Effect</th>
<th>Coefficient</th>
<th>SE</th>
<th>$t$-ratio</th>
<th>Approx. df</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>For INTRCPT1, $\beta_0$</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>INTRCPT2, $\gamma_{00}$</td>
<td>6.015131</td>
<td>0.267517</td>
<td>22.485</td>
<td>60</td>
<td>&lt;0.001</td>
</tr>
<tr>
<td>For EXTHRS slope, $\beta_1$</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>INTRCPT2, $\gamma_{10}$</td>
<td>0.070868</td>
<td>0.034859</td>
<td>2.033</td>
<td>60</td>
<td>0.046</td>
</tr>
<tr>
<td>For HOUSEHOL slope, $\beta_2$</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>INTRCPT2, $\gamma_{20}$</td>
<td>0.023043</td>
<td>0.010042</td>
<td>2.295</td>
<td>60</td>
<td>0.025</td>
</tr>
<tr>
<td>For CIPTENET slope, $\beta_3$</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>INTRCPT2, $\gamma_{30}$</td>
<td>0.015473</td>
<td>0.005335</td>
<td>2.900</td>
<td>60</td>
<td>0.005</td>
</tr>
</tbody>
</table>

Final estimation of fixed effects
(with robust standard errors)
<table>
<thead>
<tr>
<th>Fixed Effect</th>
<th>Coefficient</th>
<th>SE</th>
<th>t-ratio</th>
<th>Approx df</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>For INTRCPT1, $\beta_0$</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>INTRCPT2, $\gamma_{00}$</td>
<td>6.015131</td>
<td>0.264531</td>
<td>22.739</td>
<td>60</td>
<td>&lt;0.001</td>
</tr>
<tr>
<td>For EXTHRS slope, $\beta_1$</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>INTRCPT2, $\gamma_{10}$</td>
<td>0.070868</td>
<td>0.033640</td>
<td>2.107</td>
<td>60</td>
<td>0.039</td>
</tr>
<tr>
<td>For HOUSEHOL slope, $\beta_2$</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>INTRCPT2, $\gamma_{20}$</td>
<td>0.023043</td>
<td>0.009862</td>
<td>2.337</td>
<td>60</td>
<td>0.023</td>
</tr>
<tr>
<td>For CIPTENET slope, $\beta_3$</td>
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<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>INTRCPT2, $\gamma_{30}$</td>
<td>0.015473</td>
<td>0.005237</td>
<td>2.954</td>
<td>60</td>
<td>0.004</td>
</tr>
</tbody>
</table>

Final estimation of variance components

<table>
<thead>
<tr>
<th>Random Effect</th>
<th>SD</th>
<th>Variance Component</th>
<th>df</th>
<th>$\chi^2$</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>INTRCPT1, $u_0$</td>
<td>1.27713</td>
<td>1.63107</td>
<td>55</td>
<td>81.57353</td>
<td>0.012</td>
</tr>
<tr>
<td>EXTHRS slope, $u_1$</td>
<td>0.12504</td>
<td>0.01564</td>
<td>55</td>
<td>64.91909</td>
<td>0.169</td>
</tr>
<tr>
<td>HOUSEHOL slope, $u_2$</td>
<td>0.04206</td>
<td>0.00177</td>
<td>55</td>
<td>69.57753</td>
<td>0.089</td>
</tr>
<tr>
<td>CIPTENET slope, $u_3$</td>
<td>0.02201</td>
<td>0.00048</td>
<td>55</td>
<td>68.53144</td>
<td>0.104</td>
</tr>
<tr>
<td>level-1, $r$</td>
<td>0.87565</td>
<td>0.76676</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Note: The chi-square statistics reported above are based on only 56 of 61 units that had sufficient data for computation. Fixed effects and variance components are based on all the data.

Statistics for current covariance components model

Deviance = 2337.526968
Number of estimated parameters = 11

Variance-Covariance components test

$\chi^2$ statistic = 510.94303
Degrees of freedom = 4
p-value = <0.001

Test of homogeneity of level-1 variance
\( \chi^2 \) statistic = 144.03911
degrees of freedom = 55
\( p \)-value = 0.000

**Summary of the Full Homogenous Random Coefficient Model specified**

**Level-1 Model**

\[
ACADACHV_{ij} = \beta_0 + \beta_{1j}*(EXTHRS_{ij}) + \beta_{2j}*(HOUSEHOL_{ij}) + \beta_{3j}*(CIPTENET_{ij}) + r_{ij}
\]

**Level-2 Model**

\[
\begin{align*}
\beta_0 &= \gamma_{00} + \gamma_{01}*(SCHLLOCA_j) + \gamma_{02}*(SCHLSEX_j) + u_{0j} \\
\beta_{1j} &= \gamma_{10} + \gamma_{11}*(SCHLLOCA_j) + \gamma_{12}*(SCHLSEX_j) + u_{1j} \\
\beta_{2j} &= \gamma_{20} + \gamma_{21}*(SCHLLOCA_j) + \gamma_{22}*(SCHLSEX_j) + u_{2j} \\
\beta_{3j} &= \gamma_{30} + \gamma_{31}*(SCHLLOCA_j) + \gamma_{32}*(SCHLSEX_j) + u_{3j}
\end{align*}
\]

SCHLLOCA has been centered around the grand mean.

**Mixed Model**

\[
ACADACHV_{ij} = \gamma_{00} + \gamma_{01}*(SCHLLOCA_j) + \gamma_{02}*(SCHLSEX_j) + \\
+ \gamma_{10}*(EXTHRS_{ij}) + \gamma_{11}*(SCHLLOCA_j)*EXTHRS_{ij} + \gamma_{12}*(SCHLSEX_j)*EXTHRS_{ij} + \\
+ \gamma_{20}*(HOUSEHOL_{ij}) + \gamma_{21}*(SCHLLOCA_j)*HOUSEHOL_{ij} + \gamma_{22}*(SCHLSEX_j)*HOUSEHOL_{ij} + \\
+ \gamma_{30}*(CIPTENET_{ij}) + \gamma_{31}*(SCHLLOCA_j)*CIPTENET_{ij} + \gamma_{32}*(SCHLSEX_j)*CIPTENET_{ij} + \\
+ u_{0j} + u_{1j}*(EXTHRS_{ij}) + u_{2j}*(HOUSEHOL_{ij}) + u_{3j}*(CIPTENET_{ij}) + r_{ij}
\]

Run-time deletion has reduced the number of level-1 records to 835
Run-time deletion has reduced the number of level-2 groups to 61

\( \sigma^2 = 0.77078 \)

\( \tau \)

<table>
<thead>
<tr>
<th>( \tau )</th>
<th>INTRCPT1.( \beta_0 )</th>
<th>1.31794</th>
<th>-0.04428</th>
<th>-0.00801</th>
<th>-0.02052</th>
</tr>
</thead>
<tbody>
<tr>
<td>EXTHRS.( \beta_1 )</td>
<td>-0.04428</td>
<td>0.01412</td>
<td>-0.00391</td>
<td>0.00138</td>
<td></td>
</tr>
<tr>
<td>HOUSEHOL.( \beta_2 )</td>
<td>-0.00801</td>
<td>-0.00391</td>
<td>0.00189</td>
<td>0.00003</td>
<td></td>
</tr>
<tr>
<td>CIPTENET.( \beta_3 )</td>
<td>-0.02052</td>
<td>0.00138</td>
<td>0.00003</td>
<td>0.00042</td>
<td></td>
</tr>
</tbody>
</table>

\( \tau \) (as correlations)

<table>
<thead>
<tr>
<th>( \tau ) (as correlations)</th>
<th>INTRCPT1.( \beta_0 )</th>
<th>1.000</th>
<th>-0.325</th>
<th>-0.160</th>
<th>-0.871</th>
</tr>
</thead>
<tbody>
<tr>
<td>EXTHRS.( \beta_1 )</td>
<td>-0.325</td>
<td>1.000</td>
<td>-0.756</td>
<td>0.565</td>
<td></td>
</tr>
</tbody>
</table>
HOUSEHOL, $\beta_2$  -0.160  -0.756  1.000  0.038  
CIPTENET, $\beta_3$  -0.871  0.565  0.038  1.000

<table>
<thead>
<tr>
<th>Random level-1 coefficient</th>
<th>Reliability estimate</th>
</tr>
</thead>
<tbody>
<tr>
<td>INTRCPT1, $\beta_0$</td>
<td>0.290</td>
</tr>
<tr>
<td>EXTHRS, $\beta_1$</td>
<td>0.175</td>
</tr>
<tr>
<td>HOUSEHOL, $\beta_2$</td>
<td>0.279</td>
</tr>
<tr>
<td>CIPTENET, $\beta_3$</td>
<td>0.227</td>
</tr>
</tbody>
</table>

Note: The reliability estimates reported above are based on only 56 of 61 units that had sufficient data for computation. Fixed effects and variance components are based on all the data.
The value of the log-likelihood function at iteration 1155 = -1.182568E+003

Final estimation of fixed effects:

<table>
<thead>
<tr>
<th>Fixed Effect</th>
<th>Coefficient</th>
<th>SE</th>
<th>t-ratio</th>
<th>Approx. df</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>For INTRCPT1, $\beta_0$</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>INTRCPT2, $\gamma_{00}$</td>
<td>5.724451</td>
<td>0.289601</td>
<td>19.767</td>
<td>58</td>
<td>&lt;0.001</td>
</tr>
<tr>
<td>SCHLLOCA, $\gamma_{01}$</td>
<td>-0.204158</td>
<td>0.626225</td>
<td>-0.326</td>
<td>58</td>
<td>0.746</td>
</tr>
<tr>
<td>SCHLSEX, $\gamma_{02}$</td>
<td>0.896403</td>
<td>0.417322</td>
<td>2.148</td>
<td>58</td>
<td>0.416</td>
</tr>
<tr>
<td>For EXTHRS slope, $\beta_1$</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>INTRCPT2, $\gamma_{10}$</td>
<td>0.080708</td>
<td>0.038864</td>
<td>2.077</td>
<td>58</td>
<td>0.042</td>
</tr>
<tr>
<td>SCHLLOCA, $\gamma_{11}$</td>
<td>-0.103824</td>
<td>0.079356</td>
<td>-1.308</td>
<td>58</td>
<td>0.196</td>
</tr>
<tr>
<td>SCHLSEX, $\gamma_{12}$</td>
<td>-0.023292</td>
<td>0.060741</td>
<td>-0.383</td>
<td>58</td>
<td>0.703</td>
</tr>
<tr>
<td>For HOUSEHOL slope, $\beta_2$</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>INTRCPT2, $\gamma_{20}$</td>
<td>0.024509</td>
<td>0.011865</td>
<td>2.066</td>
<td>58</td>
<td>0.043</td>
</tr>
<tr>
<td>SCHLLOCA, $\gamma_{21}$</td>
<td>0.020969</td>
<td>0.025715</td>
<td>0.815</td>
<td>58</td>
<td>0.418</td>
</tr>
<tr>
<td>SCHLSEX, $\gamma_{22}$</td>
<td>-0.004174</td>
<td>0.014562</td>
<td>-0.287</td>
<td>58</td>
<td>0.775</td>
</tr>
<tr>
<td>For CIPTENET slope, $\beta_3$</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>INTRCPT2, $\gamma_{30}$</td>
<td>0.019444</td>
<td>0.005899</td>
<td>3.296</td>
<td>58</td>
<td>0.002</td>
</tr>
<tr>
<td>SCHLLOCA, $\gamma_{31}$</td>
<td>0.008680</td>
<td>0.012643</td>
<td>0.687</td>
<td>58</td>
<td>0.495</td>
</tr>
<tr>
<td>SCHLSEX, $\gamma_{32}$</td>
<td>-0.012449</td>
<td>0.008707</td>
<td>-1.430</td>
<td>58</td>
<td>0.158</td>
</tr>
</tbody>
</table>
### Final estimation of fixed effects
(with robust standard errors)

<table>
<thead>
<tr>
<th>Fixed Effect</th>
<th>Coefficient</th>
<th>SE</th>
<th>t-ratio</th>
<th>Approx df</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>For INTRCPT1, $\beta_0$</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>INTRCPT2, $\gamma_{00}$</td>
<td>5.724451</td>
<td>0.280423</td>
<td>20.414</td>
<td>58</td>
<td>&lt;0.001</td>
</tr>
<tr>
<td>SCHLLOCA, $\gamma_{01}$</td>
<td>-0.204158</td>
<td>0.503516</td>
<td>-0.405</td>
<td>58</td>
<td>0.687</td>
</tr>
<tr>
<td>SCHLSEX, $\gamma_{02}$</td>
<td>0.896403</td>
<td>0.354812</td>
<td>2.526</td>
<td>58</td>
<td>0.014</td>
</tr>
<tr>
<td>For EXTHRS slope, $\beta_1$</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>INTRCPT2, $\gamma_{10}$</td>
<td>0.080708</td>
<td>0.037917</td>
<td>2.129</td>
<td>58</td>
<td>0.038</td>
</tr>
<tr>
<td>SCHLLOCA, $\gamma_{11}$</td>
<td>-0.103824</td>
<td>0.060424</td>
<td>-1.718</td>
<td>58</td>
<td>0.091</td>
</tr>
<tr>
<td>SCHLSEX, $\gamma_{12}$</td>
<td>-0.023292</td>
<td>0.055454</td>
<td>-0.420</td>
<td>58</td>
<td>0.676</td>
</tr>
<tr>
<td>For HOUSEHOL slope, $\beta_2$</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>INTRCPT2, $\gamma_{20}$</td>
<td>0.024509</td>
<td>0.012232</td>
<td>2.004</td>
<td>58</td>
<td>0.050</td>
</tr>
<tr>
<td>SCHLLOCA, $\gamma_{21}$</td>
<td>0.020969</td>
<td>0.020224</td>
<td>1.037</td>
<td>58</td>
<td>0.304</td>
</tr>
<tr>
<td>SCHLSEX, $\gamma_{22}$</td>
<td>-0.004174</td>
<td>0.010870</td>
<td>-0.384</td>
<td>58</td>
<td>0.702</td>
</tr>
<tr>
<td>For CIPTENET slope, $\beta_3$</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>INTRCPT2, $\gamma_{30}$</td>
<td>0.019444</td>
<td>0.006054</td>
<td>3.212</td>
<td>58</td>
<td>0.002</td>
</tr>
<tr>
<td>SCHLLOCA, $\gamma_{31}$</td>
<td>0.008680</td>
<td>0.011148</td>
<td>0.779</td>
<td>58</td>
<td>0.439</td>
</tr>
<tr>
<td>SCHLSEX, $\gamma_{32}$</td>
<td>-0.012449</td>
<td>0.006403</td>
<td>-1.944</td>
<td>58</td>
<td>0.057</td>
</tr>
</tbody>
</table>

### Final estimation of variance components

<table>
<thead>
<tr>
<th>Random Effect</th>
<th>$SD$</th>
<th>Variance Component</th>
<th>df</th>
<th>$\chi^2$</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>INTRCPT1, $u_0$</td>
<td>1.14801</td>
<td>1.31794</td>
<td>53</td>
<td>71.04629</td>
<td>0.049</td>
</tr>
<tr>
<td>EXTHRS slope, $u_1$</td>
<td>0.11883</td>
<td>0.01412</td>
<td>53</td>
<td>61.68040</td>
<td>0.193</td>
</tr>
<tr>
<td>HOUSEHOL slope, $u_2$</td>
<td>0.04352</td>
<td>0.00189</td>
<td>53</td>
<td>68.69237</td>
<td>0.072</td>
</tr>
<tr>
<td>CIPTENET slope, $u_3$</td>
<td>0.02051</td>
<td>0.00042</td>
<td>53</td>
<td>63.86051</td>
<td>0.146</td>
</tr>
<tr>
<td>level-1, $r$</td>
<td>0.87794</td>
<td>0.77078</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Note: The chi-square statistics reported above are based on only 56 of 61 units that had sufficient data for computation. Fixed effects and variance components are based on all the data.

**Statistics for current covariance components model**
Deviance = 2365.135851
Number of estimated parameters = 11
Variance-Covariance components the model

$\chi^2$ statistic = 1781.69415
Degrees of freedom = 9

$p$-value = <0.001