An Assessment of the School System Planning Process for Primary and Secondary Schools: The Case of Saint George Grenada

by

Kenson Richards

A thesis

presented to the University of Waterloo

in fulfillment of the

thesis requirement for the degree of

Masters of Environmental Studies

in

Planning

Waterloo, Ontario, Canada, 2017

Author's Declaration

I hereby declare that I am the sole author of this thesis. This is a true copy of the thesis, including all the required final revisions, as accepted by my examiners.

I understand that my thesis may be made electronically available to the public.

Abstract

School system planning involves decisions of where to build a new school, close or expandan existing school. It is important for community members to be involved in the school system planning process so that the process will be credible, legitimate and equitable. In the Lesser Antilles of the Caribbean, school system planning seems to be silo in nature and is dominated by the Ministry of Education administrators. Likewise in Grenada, school system planning is spearheaded by the Ministry of Education administrators and the ruling government. This thesis examines opportunities and barriers for community members to participate in school system planning in the parish of Saint George in Grenada, a small Caribbean island in the West Indies. A mixed method approach was used in this thesis where a case study was the main strategy of inquiry employed by the researcher. The data collection methods include: questionnaire, semi-structured interview, document analysis and field observation. The research clearly showed that school system planning is silo, lacks community involvement and is ad-hoc in nature with no formal structure for operation. Citizens as well as government officials (participants) are willing to be part of the planning process and they are cognizant of the many opportunities that could be utilized for engagement but realized that the bureaucratic structure of the government hinders their participation. Nevertheless they unanimously stated that school system planning should be more participatory in nature as there are numerous benefits to be realized from such a process.

Keywords: Silo, Participatory, School System Planning, Community Involvement, Equitable, Opportunities, Barriers, Bureaucratic.

Acknowledgements

The writing of an exemplary thesis is a very overwhelming and tedious journey, one that is surely not for the swiftest. However I have met several outstanding people along the way that have made my journey less tiring and daunting. I was blessed to have the most supportive and committed supervisor no other than Professor Robert Feick who deserves all the commendations for the final outcome of this thesis. Professor Feick not only guided me but provided strategic advice in many different ways and means throughout this journey. I would also like to say hearts off and a special thank you to my other committee members Professor Jennifer Dean and Professor Mark Seasons for their strategic and critical reviews, leadership, mentorship and timely responses to the various aspects throughout the writing phase of this research.

My success at the University of Waterloo would not been possible without the other dedicated professors and colleagues at the School of Planning, in that regard I must say thank you for a superb academic and by extension educational experience. In addition, I would like to thank Miss Cynthia Zaleskiand Miss Kelly Heald-Oliver who made every effort to assist me whenever I confronted them with an issue. I must take this opportunity in my thesis to recognize and acknowledge the financial support given to me from the University of Waterloo throughout the course of my studies.

It was very challenging for me to reach the research phase of my program were it not for the strong financial support from this prestigious institution.I also want to take this special moment to convey a warm thank you to all the research participants both individuals and organizations in the parish of Saint George Grenada for willingly participating in the study and more so providing valuable information thus making this study a success. Last but not least I would like

to extend special thanks to my family and friends for their words and fervent prayers of inspiration, motivation, support and encouragement.

Furthermore I would like to dedicate this study to my entire family,a special contingentof friends in the community and a special contingent of my co-workers at the St. Mark's Secondary School Grenada.

God is good all the time, all the time god is good.

TABLE OF CONTENTS

APPENDICES

List of Figures

List of Tables

CHAPTER 1

INTRODUCTION

There is a large body of literature that examines public participation in school system planning. School system planning in this context refers to decisions of where to build a new school, close or expandan existing school.Historically, school system planning has been dominated by educational experts and highly sophisticated models for forecasting demographic change, population mobility and community development (Teixeira and Attunes, 2008). Some jurisdictions, lack an institutional framework that coordinate school system planning with broader municipal land use planning and encourage multiple stakeholders to be engaged in the decision making process (Vincent, 2006). Nevertheless, the public should be involved in school system planning so that accurate decisions can be made;the planning process can be transparent and equitable thus resulting in a better working relationship between government and community.

Most Caribbean territories are experiencing increasing population trends and they lack the physical and financial resources to meet the needs of their population. As such there is not an organized or planned system of settlement by individuals in these territories.In Grenada, land use planning and school system planning are not coordinated as desired. Nonetheless this situation can be improved if the Ministry of Education planners can circulate proposed new school sites or school expansion proposals to the physical planning department for discussion. Also the Ministry of Education planners can be circulated with land development proposals such as new developments to be established by the physical planning unit and are allowed to comment on whether the development will impact nearby schools or children. Parents and other community members can be given the opportunity to meet with the Ministry of Education

planners to discuss siting a new school, closing or expanding an existing school. Moreover significant progress can be made if Grenada as a small island developing state adopts the planning model that was develop by the Organization of Eastern Caribbean States (OECS) with regards to planning public facilities in the Caribbean (Purcell, 2015)**.** This research assesses the possibility to increase public involvementin the school system planning process for primary and secondary schools in the parish of Saint George Grenada. This chapter articulates the research problem, outlines the research questions and objectives for the study, and describes the main organization (structure) of the thesis.

1.1 Statement of the Problem

The school system planning process for primary and secondary schools in Saint GeorgeGrenada appears to be one that is spearheaded by a single provider which is the Ministry of Education with their own policies and practices (Lagee, 2015; Hamilton, 2015; Purcell, 2015; Mitchell, 2015; and Worme, 2015). Some researchers claim thatthere is a lack of intra-governmental flows of information and regulation between the Ministry of Education and other key ministries such as: the Department of Physical Planning in the Ministry of Works, Communication and Public Utilities, Health andthe Environment, Social Development and Housing, and Youth and Sports (Lagee, 2015; Hamilton, 2015; Purcell, 2015; Mitchell, 2015; and Worme, 2015). Moreover the public is not an integral component of the process (Lagee, 2015; Hamilton, 2015; Purcell, 2015; and Worme, 2015). It is fundamental to note that the primary users of the school facility are children, teachers and principals. However parents' donot seem to have an active voice in the decision making process with regards to siting a new school, closing or expanding existing schools (Lagee, 2015; Purcell, 2015; Worme, 2105; and Hamilton, 2015). In addition teachers and principals are not actively involved in the process (Lagee, 2015;

Purcell, 2015; Worme, 2015; and Hamilton, 2015).The business and church communities in Grenada play a pivotal role in the development of schools through the funding of educational and sporting activities. However they are not active partners in the school system planning process(Lagee, 2015 and Worme, 2015). Often times the public is informed about decisions that have already being made and finalized. The manner in which some existing schools are located is a clear manifestation of this centralized planning process. For example, a number of existing primary and secondary schools are located directly in the Central Business District in the capital St George withmany located on the main road which exposes students and school staff to air pollution, noise pollution and traffic hazards. This situation is not unique to the capital but to other parishes as well.

1.2 Research Questions

The main research questions that this thesis addresses are:

(1)What are the formal and informal frameworks that guide decision making in the Ministry of Education and Physical Planning with respect to school system planning?

(2) What current and potential opportunities and barriers exist for the public to provide input to school system planning in Grenada?

(3) How can the current school system planning process inGrenada be transformed to a more participatory or communicative form?

1.3 Research Objectives

In order to address these questions the primary objectives of the research are:

(1) To examine planning frameworks and processesin the siting of new schools, expansion or closure of existing schools across pertinent government ministries.

(2) To examine current participation methods and policies in school system planningin Saint George Grenada.

(3) To formulate recommendations that may lead to the development of a framework for enhancing community input in school system planning now and in the future.

1.4 Significance of the Thesis

This thesis will be of interest to scholars in the field of planning, policy development as well as to practicing administrators in education and physical planning practice. Studies on public participation, communicative and collaborative planning (participatory planning) are core areas of research in the field of planning. The planning theory literature has largely considered public participation and collaboration as the corner stone to successful planning (e.g. Arnstein, 1969; Healy, 2006; and Innes and Booher, 2010). This study contributes to this literature by considering public participation as one aspect of the broader changes in the planning process. From this perspective, public participation in the planning process means more than creating an environment where individuals are informed or educated about matters affecting their lives or their children's lives and extends to functional arrangements where individuals can become functional partners in decision making processes.

The creation of opportunities and elimination of barriers are of course a step in the right direction in getting the public to be actively involved in the process. However this is not all of

what needs to happen in order to declare the process as collaborative or participatory. For example individuals can be invited to participate on matters through town hall meetings, web surveys or telephone interviews, but if their views or ideas are not taken into consideration then the truepurpose of public participation is defeated (Arnstein 1969, Innes and Booher, 2010). In taking this approach, this study shifts the focus of our attention on not only public participation but public empowerment, as has been the recommendation of research in several areas within the planning theory domain, including the public participation research literature as well (Arnstein, 1969;Van Driesche and Lane, 2002; Healey, 2006; Lane, 2005; Innes and Booher, 2010).

School system planning is very important in Grenada. Grenada is a small island developing state with a small economy. As such financialresources have to be spent wisely to satisfy the educational needs of the public in the most efficient and effective manner. One way to achieve this is through careful school system planning. The adoption of a participatory school system planning process by Grenada can result in schools development being more holistic, transparent and sustainable. In addition better decisions can be made which can help the rulinggovernment to save more money since schools are very costly to establish or expand. Moreover communities are given an opportunity to exercise their civic duty and be empowered in the decision making process on matters affecting their lives.

From a practice standpoint, this thesis is relevant and timely for the education and physical planning sectors in Grenada. Findings from this study may serve to formulate recommendations that can lead to the development ofa framework for enhancing community input into school system planning.This framework will consist of all the relevant stakeholders and can be used by the Ministry of Education planners to guide the process of community input in school system planning now and in the future. Apart from schools, this framework can be

used in the planning process of other public facilities such as hospitals, community centers etc in Grenada, Carriacou and Petite Martinique.

1.5 Organization of the Thesis

Chapter 2 showcases literature on education as a public good, the concepts of cost efficiency and equity in the provision of education and the central school system planning issues. Literature is also provided on land uses and schools, school system planning process from a North American context and school system planning and other stakeholders. Further details are provided on a comparison of North America and the Caribbean school system planning approaches, and emerging trends.

Chapter 3 contains pertinentinformation on the study area of Saint George parish in Grenada, the types of data used in the study, and the different data collection methods used to collect and analyze data for the study. Meanwhile Chapter 4 presents a discussion of the results in relation to the main research questions. Chapter 5 discloses information on: how the research objectives are addressed in the study, recommendations needed in school system planning in Saint George, limitations of the study and some brief concluding remarks.

CHAPTER 2

SCHOOL SYSTEM PLANNING: A LITERATURE REVIEW

2.1 Introduction

The school system in modern literature is seen as the cornerstone or focal point of the communities in which they are located. It is documented by many that a school can help to change the social, physical and economic landscapes of a community (Council of Educational Facility Planners International and United States Environmental Protection Agency, 2004). However, despite the positive outcomes schools can bring about, the planning process for such systems tend to be centralized among education experts. According to Teixeira and Attunes (2008), and Mac Donald (2010), public facilities such as schools, health facilities and other facilities are planned in relation to their location and size by the relevant experts because it is believed that they have the information that is necessary. On the contraryCarey (2011), postulated that such type of planning where community members are not involved in the planning process is very inefficient andnumerous problems in the school system such as schools being too far from residential areas, schools being underutilized and schools being too close to industrial activities usually occur.

This chapter reviews literature on school system planning. The choice of literature presented is directed by the three main research questions the study seeks to address. The research questions are as follow: (1) What are the formal and informal frameworks that guide decision making in the Ministry of Education and Physical Planning with respect to school system planning? (2) What current and potential opportunities and barriers exist for the public to provide input to school system planning inGrenada? (3) How can the current school system planning process inGrenada be transformed to a more participatory or communicative form? First, it gives an overview ofeducation as a public good. Second, it displays literature ontwo

keyconcepts cost efficiency and equity, that are central to public facilities systems planning. Third, it presents literature on the central school system planning issues and associated responses. Fourth, it explores literature related to the compatibility of different land uses and school location. Fifth, it highlights literature pertaining to the general overview of the school system planning process from a North American context and the absence of key players in the process.Six, it put forward some interesting literature on a comparison of school system planning in North America and the Caribbean region. Seven, it evaluates the participatory model of planning as the way forward for the school system.Eight, the chapter culminates with a summary of the pertinent issues discussed.

2.2 Education as a Public Good

Samuelson (1954), classically defines a public good as a good that is non- rivalrous meaning that the consumption by one individual does not detract from that of another and non-excludable in that it is difficult if not impossible to exclude an individual from enjoying the good. Education, health care and national security are essential public goods important for societal welfare.Public goods such as education areprovided or funded mainly by the government thus it falls under the public sector in most countries. Government dominates the supply side of these services in order to create equal access to everyone that might not happen otherwise if the provision of these services is dominated by the private sector (Pal, 2010). Monse et al (2013), also made it clear that the education of children is a public good that lies at the core of government policies and programmes.In some countries such as the United Kingdom, social services in particular, education were delivered almost entirely by local government personnel (Wollmann et al, 2010). Furthermore in the advanced post war welfare states, social services and public utilities were largely public sector centered, operated either directly by central

government agencies and local authorities or by non-public actors closely related to if not functionally integrated into the public sector (Wollmann et al, 2010). However in recent times, a growing number of private providers are entering the schooling market, frequently giving rise to a coexistence of public and private providers in the same locality (Pal, 2010). In addition, private sector approaches to service provision such as private and public partnerships where private companies and other corporationsare financing the majority of the cost isalso gaining prominence (Broadbent and Guthrie, 2007).

Education produces human capital. Human capital refers to the knowledge and skills possessed by individuals which enable them to function effectively in economic and social life (Schuller, 2004). More educated people contribute to more democratic societies and sustainable economies, and are less dependent on public aid and less vulnerable to economic downturns (Organization for Economic Cooperation and Development, 2012). Schools offer learning experiences that a child may not obtain at home, particularly if he or she is living in a disadvantaged environment (Heckman, 2011). Education plays a significant role in changing patterns of inequality and is one of the major drivers of intergenerational social and income mobility (Causa and Chapuis, 2009). Woesmann (2008), postulated that it is one of the most powerful ways to improve social outcomes and fosters social progress. Donoghue (2009), also hinted that educated people may raise the productivity of others with whom they work. On the contrary,ill-educated young boys and girls face a higher risk of unemployment and normally end up in low-skilled or temporary jobs, with a future of state-funded training programs (Organization for Economic Cooperation and Development, 2012). Moreover drug trafficking, vandalism, and theft are common deviant practices performed by these individuals (Organization for Economic Cooperation and Development, 2010 d). In addition, Cunha and Heckman (2007),

and Heckman (2008), postulated that low levels of educational attainment and skills leads to serious economic and social problems such as teenage pregnancy, crimes, and poverty.

2.3 Efficiency and Equity in the Provision of Education

Cost efficiency is a key concept that is central to public facility systems planning. The concept of efficiency describes how available resources are used to achieve desired outcomes (Department of Basic Education Republic of South Africa, 2013). Government resources are finite and citizens and government have important choices to make among competing demands for public goods(Stein, 2001). Unlike private goods where price and demand dictate supply, demand for public goods is not easy to define. Stein (2001), also postulated that efficiency is not a goal but an instrument to achieve a goal. Kowalski (2002), highlighted that elements of facility decision making has two main branches; economics (allocation of scarce resources) and politics (competition for scarce resources). It is critical to note that the intensity of politicization of decisions has increased over the past decade as resources have been more limited (Earthman, 2013). In the North American school system, Zimmer et al (2009), perceived efficiency strategies to be evident in attempts by school administrators to reduce the per pupil costs of education, to centralize decision-making, and to incorporate economies of scale (cost reductions through optimal organizational size) in the production and provision of educational services. According to Zimmer et al (2009), school administrators have the difficult task of balancing the educational requirements of students at a cost which is amenable to the district citizenry. In essence producing an appropriate level of educational services within a budget constraint providesadministrators an incentive to explore options to increase efficiency (Zimmer et al, 2009).

Furthermore economies of scale in the school system can enhance teacher specialization thus resulting in better instruction (Ready et al, 2004). In addition, the assignment of personnel (support staff, clerical, custodial personnel etc) is more readily achieve with larger enrolments (Ready et al, 2004). Nevertheless with larger schools, the use of instructional equipment is easier, the cost of procurement and maintenance of equipment and the cost of purchasing larger quantities of supply is reduced (Ready et al, 2004). Ready et al (2004), also indicates that larger size results in greater curriculum specialization and more resource strength. Curriculum diversification in this context is an advantage in that it responds to a broader set of student needs and interests (Ready et al, 2004). Studies of cost efficiency for producing a given level of student achievement favor school consolidation and larger size (Zimmer et al, 2009). According to Ready et al (2004), savings should accrue as costs are spread over a larger pupil base, which can be used to expand academic offerings and student services. Against these backdrops it is clear to conclude that the tendency is for governments and school administrators to build a large school in a central area on one site serving a number of catchment areas as oppose to building two or three schools to serve the same catchment areas. This large school will have one principal, a number of teachers, students and other workers. This is clearly a strategy to minimize costs but achieve educational goals at the same time. The Transportation Research Board, Institute of Medicine (2005), has also endorsed this concept by stating that the trend in school design has been to develop bigger schools to lower cost through economies of scale.

Besides cost efficiency, internal efficiency is also gaining prominence with respect to public facility systems planning, particularly in the provision of education.The authentic economic idea of efficiency in this context represents the ratio between what is brought andinvested into the system and the results coming from the system (Department of Education,

2013). Boser (2013), referred to internal efficiency as ensuring that the education dollar is well-spent or is of value. The Department of Education (2013), saw it as a more efficient redirection of the existing sources of finance and the expectation of educational institutions to provide greater value for money. An education system may be called efficient when it attains the maximum level of results for a minimum level of investment (Department of Education, 2013). According to Boser (2013), internal efficiency entails achieving educational goals in a cost-effective manner and measuring educational outputs by comparing graduation rates with enrolments. Investments and results in this context must be evaluated, aggregated, measured and marked (Department of Education, 2013). Nevertheless in more recent educational literature, the term internal efficiency has been enveloped by the concept of accountability and it is specifically related to cost-benefits, cost-effectiveness, and cost-utility in terms of both inputs and outputs (Boser, 2013).

Equity is another critical concept in public facility system planning. In the broader social context, equity refers to equality of opportunity, fairness, and social justice (Simon et al, 2007). It is important to note that equity is a social term as opposed to an economic one (Simon et al, 2007). According to the Organization for Economic Cooperation and Development (2012), and Simon et al (2007), equity in education means that personal or social circumstances such as gender, ethnic origin or family background, are not obstacles to achieving educational potential (fairness) and that all individuals reach at least a basic minimum level of skills (inclusion). In these education systems, the vast majority of students have the opportunity to attain high level skills, regardless of their own personal and socio-economic circumstances (Organization for Economic Cooperation and Development, 2012). Equity allows individuals to take full advantage of education and training irrespective of their background (Faubert, 2012; Field,

Kuczera and Pont, 2007; and Woessmann and Schutz, 2006). In equitable systems, a child from a less advantaged background does not get an education inferior to that of a child whose parents have higher incomes (Wilkie, 2007). From a fundamental perspectivethere is often seen to be a balance or a tension between a desire to provide services like education as cost effective (efficient) as possible and a simultaneous desire to ensure that fairness or equity is maintained in service delivery. A basic scenario could involve a situation where the most efficient plan could be to have one large school in an area since you only need one site, one principal, etc. However this is inequitable though when you consider differences in walking distances for some students as well as differences in time taken for nearby residents to access school amenities such as recreational facilities, libraries etc.

In the modern literature, the concept of equity also extends to educational finance. In this context it is a dual funding principle which acts as a means of ensuring that as much equality as possible is built into the provision of educational services and as much fairness as is administratively feasible is applied to sharing the taxation burden for education among the public (Ladd and Fiske, 2008). In addition, equity extends to the level of support (specialized programs, counseling, and mentoring), access to resources and instructional time given to students within the school system in particular the disadvantaged or underprivileged (Simon et al, 2007). Every child within a state should have equal access to educational facilities and services but the tax burden to provide these services should be evenly distributed among taxpayers (Ladd and Fiske, 2008). On a contrary note, despite the fact that everyone has the right to a good education and education is vital for the effective functioning of citizens in society, a high level of inequality still exist in the education system. In public education, inequalities in the distribution of wealth exist within and between school districts, resulting in disparities in access to educational

opportunities (King et al, 2003). It is critical to note that lack of inclusion and fairness (educational equity) fuels school failure, of which dropout is the most visible manifestation; with 20 percent of young adults on average, dropping out before finalizing upper secondary education (Organization for Economic Cooperation and Development, 2012). The economic and social costs of school failure and dropout are high (Organization for Economic Cooperation and Development, 2012). Therefore designing fair and inclusive education systems is a stepping stone to providing highquality education for every child (Organization for Economic Cooperation and Development, 2012). From an overall viewpoint,the notion that a good public service is one where there is broadly equal access for all, regardless of social or economic status or other differences irrelevant to their need for the service is both important and relatively uncontroversial (Le Grand, 2009).

2.4 The Central School System Planning Issues and Associated Responses

Although building one school in a central area may serve as a means of reducing costs, often times there are other issues at stake. According to New England School Development Council (NESDC)(2012), a school and its amenities can be regarded as a relatively fixed set of facilities and often times there is a more dynamic distribution of demands for school spaces.In reality, there will be times when demand exceeds supply and times when supply exceeds demand(New England School Development Council (NESDC), 2012). Changes to the need for school spaces relates to changes in demographic structures,the distribution of school age populationand policy changes that affect how existing facilities are used (for example pupil-teacher ratios, requirements for specialized rooms or facilities at schools etc) (New England School Development Council (NESDC), 2012). A common situation that often exists with

central schools is over population at some point in time then under populationat another point in time. When such a situation occurs, school boards or administrators are forced to take a number of steps such as building new schools, expanding schools, closing schools or adjusting the school attendance boundaries.

School boundary or catchment areas adjustments (restructuring) have become a common strategy in recent times. It is used by school boards and governments to avoid building new schools and to somewhat allow governments to allocate scarce resources for other purposes.A boundary adjustment is initiated by an excess of students at a school orschools within a planning area or where there is a lack of enrolment causing inefficiency in theuse of board resources (Waterloo Region District School Board, 2016).This strategy better allows for the allocation of students to specific schools through catchment zones, thus the relevant authorities get to build new schools, or build additions or close schools infrequently. In essence the adjustment of school boundaries will result in a better balance of students with available capacity as students are transferred from one school to another (Waterloo Region District School Board, 2016). For instance the boundary plan balances enrollment so that underutilized schools could gain more students and over utilized schools could gain less students (Samuels, 2011).This strategy is commonly used in the North American school system (Blasik et al, 2002).

Large-scale structural change such as redistricting (boundary adjustments) is likely to become more common place due to changing demographic patterns nation-wide as well as the increasing prevalence of chartered schools and school choice offerings impacting enrollment in many schooldistricts (Engberg et al, 2013 andThe Boston Consulting Group, 2012). According to Lemberg (2004), boundary adjustments are a feasible alternative to best manage school district resources over time. In atime of decreasing funding for school construction, increasing

enrollment, and mandated reductions in classroom loading factors, school district administrators are faced withmany complex and sensitive decisions (Lemberg, 2004). One of such decisions involves adjusting school attendance boundaries (Lemberg,2004). Moreover stagnating or declining funding caused by the ongoing economic recession is forcing administrators to investigate more cost-efficient alternatives for educating students (Schockaert, 2014). In some cases especially where there is overcrowding, temporary structures or portables are used. It is documented that 36 percent of overcrowded schools in North America used portable trailers or temporary structures to house their students (National Center for Education Statistics, 2014). In California for example, portable classrooms are the most visible response to overcrowding (National Center for Education Statistics, 2014).

Sometimes unfortunately the central school system may be under-populated even though other strategies have been used to increase enrolment and the best response may be to close the school permanently. School closures are high profile, high impact, contentious and harshly criticized events (Basu, 2004, and Irwin and Seasons, 2012). In most countries where school closure occurs it has been characterized as exclusionary, insensitive to community needs and autocratic in nature with little or no community engagement (Irwin and Seasons, 2012; Witten et al., 2003; and Kearns et al., 2009). Although school closures are seen as contentious and highly criticizedevents, Basu, (2004), it can have positive implications for school administrators with regards to efficiency (cost) but in the same light may negatively influenceequity. For instance closures can improve overall efficiencybut decreases equity as students near closed schools need to travel further to new schools. In addition community members may have to travel longer distances to use the new school facilities such as the library or playing field. School closure is not a new phenomenon, however there is not much research done on the impacts of school

closure (Irwin and Seasons, 2012). Interestingly as part of the latest policy on school closures, from a Canadian context the Liberal government in Ontario has made a critical move to establish a public consultation processwhereby school boards must incorporate the local community and other stakeholders in the decision making process (Ontario Ministry of Education, 2006, and Irwin and Seasons, 2012).

2.5 Land Use and School Location

The physical development of the land or the use in which the land has been put into has a profound influence upon schools in terms of their location and overall operation (Council of Educational Facility Planners International and United States Environmental Protection Agency, 2004). Some of these physical developments are compatible with schools while others are not. For instance residential, recreational and green infrastructure developments have significant positive impacts or externalities on schools and thus can be seen as compatible with schools (Council of Educational Facility Planners International and United States Environmental Protection Agency, 2004). On the contrary commercial development, in particular heavy commercial activities and industrial development because of their many negative impacts or externalities such as; land pollution, water pollution, noise pollution and air pollution are seen as incompatible with schools (United States Environmental Protection Agency, 2011). Nevertheless all these types of land uses have a direct influence on where schools can be located, thus careful consideration must be paid to these variables when selecting a site for locating a school. According to Carey (2011), government planning activities can strongly influence school system planning for facilities and enrollment.

Residential development in the context of school location is seen as compatible because of the many positive externalities it can offer. In simple microeconomic terms, residential development creates the demand (students) for schools (Donoghue, 2009). In other words it produces the student population that helps to maintain students' enrollment so that school facilities can be optimally utilized (Khalil and Ibrahim, 2012). According to Mitchell et al (2010), historically housing and school enrollments have been closely linked. For instance new housing developments can lead to the demand for more schools to be built or expanded whereas little or no housing developments can lead to school closures (Mitchell et al, 2010). Carey (2011), endorsed this statement by stating that since student population in public housing are usually highly concentrated, the opening, closing or partial opening or closing of facilities has a profound effect upon nearby schools. There is another dimension to residential development and schools. Schools that are located at a reasonably proximity to these developments may also function as "community schools" (Vincent, 2006, and Khalil and Ibrahim, 2012).

In that regard, nearby residents can take full advantage of night classes, library facilities and recreational facilities from these schools (Vincent, 2006). According to the United States Environmental Protection Agency (2004), starting from the early 19th century school buildings represented community and neighborhood resources. In addition students will be able to walk or bike to school thereby increasing physical activity and lessening road congestion (Cohen et al, 2006). Schools near homes may also be a necessary condition for increase parents' participation in the school activities (Alberta Teachers Association, 2012). Donoghue (2009), summarizes residential development and schools by stating that the processes of population mobility, demographic change and residential development vary in magnitude andrate from place to

place.Some areas have little populationmovement and school age population tends to decline overtime, others have more stable student population sizes.

In a similar manner, recreational facilities enable students to be engaged in physical activities such as football, basketball, athletics, and a wide variety of other activities (United States Environmental Protection Agency, 2004). Physical activities help boost students health and overall well-being (Jerett et al, 2013). This is even more critical when considering the current dramatic increase in child hood obesity (Mellor et al, 2011, and Wang and Lobstein, 2006). Meanwhile physical inactivity has emerged as a major public health problem in the United States and elsewhere (Jerrett et al, 2013). Jerrett et al (2013), made it clear that physical inactivity contributes to the formation of multiple chronic conditions including obesity, cancer, diabetes, heart disease, osteoporosis and depression.

On the other hand, Benedict and McMahon (2006), defines green infrastructure as an interconnected network of natural areas and other open spaces that conserves natural ecosystem values and functions, sustains clean air and water and provides a wide array of benefits to people and wildlife. According toRichardson et al (2010), green environments are associated with better self-perceived health, lower blood pressure, lower levels of overweight and obesity, lower levels of physician-assessed morbidity, as well as lower mortality risks. As with recreational facilities, green infrastructure provides opportunities for physical activities, it facilitates social contacts through providing opportunities to meet others and helps in the recovery of stress and attention fatigue **(**Richardson et al, 2010). Meanwhile studies have shown that children with Attention Deficit Hyperactivity Disorder (ADHD) focus better when surrounded by a natural environment (Iowa Department of Natural Resources, 2010). In addition trees help to improve air quality by removing toxins such as sulphur dioxide and carbon monoxide Iowa Department of Natural

resources (2010), cools the atmosphere Seamans (2013), and buffer noise Pincetl and Gearin (2005). Trees also help to filter harmful solar radiation Kjell, (2011), and produce the fresh and clean oxygen that we all need to survive (Mc Mahon, 2006).

Light commercial activities also have some positive externalities on nearby schools. Light commercial activities in this context includes: hotel services, cinemas, restaurants, super markets, grocery stores, departmental stores or shopping malls and other forms of retail outlets. Supermarkets, grocery stores, departmental stores and shopping malls serve as avenues where schools can get their regular supplies for cleaning, maintenance of school facilities, and meal preparation at school cafeterias (Council of Educational Facility Planners International and United StatesEnvironmental Protection Agency, 2004). Students and teachers can also use these outlets to get their personal items especially in emergency situations (Council of Educational Facility Planners International and United StatesEnvironmental Protection Agency, 2004). Furthermore shopping malls and other outlets serve as leisure hubs or meet points where students can relax their minds after a tough school day with their friends while at the same time making new friends (Council of Educational Facility Planners International and United StatesEnvironmental Protection Agency, 2004).

On the contrary, commercial development in particular heavy commercial activities in the context of school location can be seen as incompatible because of the many negative effects it can offer. Commercial development involves areas designated for trade or commerce and includes warehousing, wholesaling, retailing, distribution activities and financial establishments. Heavy commercial activities such as warehousing, wholesaling and retailing have the potential of contributing a large influx of noise and air pollution to surrounding areas (United States Environmental Protection Agency, 2011). Schools located in close proximity to these

developments and industrial land use can be negatively affected as air and noise pollution can threaten the quality of teaching and learning, health of students, teachers and other stakeholders.

Sarkar (2006), postulated that industrial pollution can also be in the form of water pollution or solid and hazardous wastes. Meanwhile the World Health Organization (WHO) (2006), claimed that the pollutants release in the air from industries are primarily ozone, nitrogen dioxide, sulphur dioxide and particulate matter (P.M 2.5 and P.M.10). Children are more susceptible than adults to air pollutants (Kulkarni and Grigg, 2008).Willis and Keller (2007), claimed that exposure to these air pollutants results in increased risk of cancer and non-carcinogenic health hazards. According to Mejia et al (2011), and Weinholl (2011), this is critical since approximately 6 million workers and 56 million children in the United States alone spend most of their day in school. The Canadian Human Activity Pattern Survey specifies that children 11-17 years spend an average of 12 percent of their time at school, making it the second most common microenvironment(Amram et al, 2011).It has been shown that there is a higher prevalence of illness among children attending schools near industrial sources (Mirabella et al, 2006a).

Although transportation networks are vital with regards to accessibility to schools, research has shown that it also creates some negative externalities around schools. According to Allen et al (2011), motor vehicles are a major source of both air and noise pollution in communities. Local air quality is affected by both the composition and intensity of the traffic (Mejia et al, 2011). Epidemiologic studies have linked exposure to traffic-generated air pollution with a series of health problems in children such as:reduced lung function, decrements in lung growth, incident asthma, otitis media, and decreased cognitive function **(**Allen et al, 2011). Moreover thehealth effects of exposure to air pollutants have been extensively documented and

reviewed in several papers (e.g. Brunekreef and Holgate, 2002; Lacasaña et al., 2005;Liu and Zhang, 2009;Ren and Tong, 2008; Srám et al., 2005;Pope and Dockery, 2006;and the Health Effects Institute, 2010). Against these backdrops, the goal for an individual school is to have a location that is highly accessible to residential land use, reasonably accessible to supporting land uses and minimally accessible to land uses with negative impacts on safety.

2.6 Overview of the School System Planning Process from a North American Context

The school system planning process in the United States of America is dominated by a rational comprehensive approach where optimization models and educational experts are at "center stage" (Teixeira and Antunes, 2008). The rational comprehensive process is a scientific and expert driven process that views a situation from a system point of view (Faludi, 2013). Location models certainly are among the main optimization models to be used within school facility planning and other public facilities planning processes in the United States of America. The discrete hierarchical location model is a common one used to determine the most efficient location of schools according to some objectives such as cost minimization, and accessibility maximization (Teixeira and Antunes, 2008). Decisions with regards to school designs, size and siting are spearheaded by educational facility planners (Mc Donald, 2010). In California for example, school district autonomy exists historically to release schools from local politics and to allow educational experts to plan to ensure that decision making is driven by educational needs (Mckoy et al, 2008). It is believed that this centralized nature of school system planning where public participation is lacking is a true reflection of the top-down or bureaucratic nature of some governments (Carey, 2011).

2.6.1 School System Planning and Urban Planners

Although there is an inter- relationship between school facility planning andurban planning, the coordinating efforts of both sectors can be challenging (Mc Donald, 2012). According to Carey (2011), it's time to bring urban planning skills to the public schools. Carey (2011), is of the firm belief that urban planners can bring a wealth of skills in the school system planning process in the areas of: transportation planning, public engagement, demographic planning which includes birth trends, assessing utilities, land use changes and housing trends. In some countries such as Canada it is possible for education planners to be trained in urban planning but this is not a global practice.Earthman (2013), also endorsed the idea by stating that there are many tasks in the school facility planning process that requires individuals who possess high degrees of technical and professional skills. Often times school districts in particular in the United States of America seldom connect those parameters when making long range plans to add classrooms, build or close schools (Carey, 2011). Educators are expert in education, and planning to them is about planning a school layout or curriculum, they are not trained in long range planning processes (Carey, 2011).

Comprehensive long-range planning for programs, demographics, and facilities is important in public school districts Carey (2011), and school facility planners and urban planners need to work collaboratively so that schools can be built in the right places and school sites can be located to community needs and desires (Mc Donald, 2010). It is even more critical for urban planners to be part of the entire process considering the fact that land use development can significantly impact the overall functionality of schools. While this may seem ideal, there is often little or no institutional framework for school facility planning and municipal land use planning to integrate (Vincent, 2006).

2.6.2 School System Planning and Local Government

Planning is a very dynamic and comprehensive process (Lagee, 2015). Governments have an important responsibility in putting structures in place to ensure that the planning process is efficient. Provinces or states establish the legislative framework for all aspects of planning. For instance in Ontario which is a province in Canada the local government establishes the Ontario Planning Act (Seasons, 2014). In Grenada including the other Caribbean territories, the Physical Planning and Development Control Act is established by governments (Purcell, 2015). In Grenada's case, the Planning Act allows for the planners in the physical planning department including the Ministry of Education planners to request a school site when a draft plan of subdivision is circulated for approval (Physical Planning and Development Control Act, 2002). In addition the Education Act which is also set up by the government gives the Minister for Education full responsibility to select a school site for a new school (Education Act, 2002). The physical planning department should routinely circulate development to the Ministry of Education planners to ask for comments on proposed developments (Physical Planning and Development Control Act, 2002). The physical planning department is not required to lead discussions on concerns such as overcrowding, under crowding, and travelling needs but often do what they can to alleviate these and other concerns.

2.6.3 School System Planning and the Public

According to Frost (2010), in the United States of America local citizens, the business community and non-governmental organizations are not given the opportunity to partake in school matters such as siting, expansion or closure. However Stevenson (2007), postulated that if the public is engage in the process, social capital can be built as enduring networks are created. Moreover public involvement promotes civic engagement and builds trust in school siting decisions (Khalil and Ibrahim, 2012). Creighton (2005), summarizes the benefits of public

participation in this manner: it improves the caliber of decisions, legitimacy, credibility and transparency. In particular, when parents become involve in school matters, a multiplier effect is developed. Research has shown that they become involved in diverse school activities including their children's education and in most instances their children excel in school (Leithwood et al, 2004). There must be a form of democracy where governance should encourage citizens to be engaged in decisions about their communities and not just see them as mere voters (Alberta Teachers Association, 2012).

2.7 A Comparison of School System Planning in North America and the Caribbean Region

School system planning in North America and the Caribbean is similar in many ways. According to Carey (2011), there is the absence of comprehensive school facilities planning in many school districts in United States of America and other parts of North America. Carey (2011), testify that in his 35 years of planning with school districts in the United States in particular, districts tend to resort to instructional models in the decision to site a new school. Often times these models do not work well locally and later they are quietly phased out by the relevant authorities (Carey, 2011). The Caribbean region is no stranger to such type of planning as well.

Although the Caribbean is regarded as a region, there is much diversity between the countries. For instance the Greater Antilles which comprises of Puerto Rico, Dominican Republic, Jamaica and Cuba etc have larger land masses, larger population sizes, larger economies (Gross National Product) and their government structures follow the presidential system of Government **(**Hudman and Jackson, 2003).

There is also the Lesser Antilles which comprises of Grenada, St Vincent, St Lucia, Dominica, Barbados, and St Kitts's, Nevis just to name a few (Hudman and Jackson, 2003). The Caribbean region is further divided into French West Indies, Dutch West Indies, Spanish West Indies and British West Indies (Hudman and Jackson, 2003). However this research will focus on the countries of Lesser Antilles with political structures aligned with the British system of democracy. Despite the differences in the Caribbean region, the island nations of the Lesser Antilles are similar in many ways and they have similar school planning needs and challenges. Possible similarities is evident in their rate of population growth, average size of communities, overall population size, topography, size of economy and culture. Collectively they have more similarities than with planning schools in Kingston Jamaica or in San Juan Puerto Rico.

According to Lagee (2015), and Purcell (2015), school system planning in the Lesser Antilles of the Caribbean lacks organization and formality. It is a fact that the constitution provides the legal mandate for the Ministry of Education to spearhead school system activities in these countries, but this entity fully conducts all school activities by them self without the incorporation of community input in the process (Lagee, 2015, and Purcell, 2015). The track of decision making for building schools, making additions, and closing schools in some parts of North America often follows what might be called the rational comprehensive model of planning (Carey, 2011). The rational comprehensive model of planning looks at what seems to be needed right now (Carey, 2011). It often appears to be data driven, but uses data snapshots that can be narrow and incomplete or underpinned by unsubstantiated assumption (Carey, 2011). Rational comprehensive planning is often done in parallel without a sense of optimizing group or community goals (Carey, 2011). School board planners in some parts of North Americaneed to develop long term capital expenditure plans which are submitted to the province, respond to

development proposals that are circulated by the local government and after conduct sub-district reviews of needs, boundaries, and demographics for a 5-10 year horizon (short to medium term scale) (Carey, 2011).

Lagee (2015), and Purcell (2015), postulated that school system planning in the Lesser Antilles of the Caribbean region follows a similar pattern to some parts of North America in the sense that if a need arises for a new school or to expand a school, the Ministry of Education goes right ahead and fulfills that need without consulting the public or other government entities who may have a wealth of great ideas on the issue. Furthermore in Grenada which is also part of the Lesser Antilles and follows the British model of democracy, the Ministry of Education spearheads all school matters with directives from the ruling government (Lagee, 2015, and Purcell, 2015). The community is not engaged for input into the school system planning process (Lagee, 2015 and Purcell, 2015). Carey (2011), coined the statement that in the age of sound bites, connecting good data to hard decisions while carefully listening to the public is very challenging.

On the other hand, although both the countries in the Lesser Antilles of the Caribbean region and some parts of North America tend to follow a rational comprehensive planning strategy, there are some differences in the school system planning process. For instance in North American cases, the relevant authorities invest in the expertise of experts and location models to take on the task of deciding where to build a new school, expand or even close a school (Carey, 2011). In addition to some extent, although the public is not an integral part of the planning process, a few other ministries besides the Ministry of Education are sometimes involved in the school system decision making process (Carey, 2011). Meanwhile the countries of the Lesser Antilles solely utilize expertise from the Ministry of Education administrators in deciding where

to build, expand or close a school (Purcell, 2015). According to Purcell (2015), these countries lack the necessary financial resources for hiring specialists or using sophisticated scientific models in the process. Moreover the islands of the Lesser Antilles are mainly small, however expertise is also needed but this is challenging because staff members tasked with planning functions also have to fill several other roles in their jobs given the size of governments (Lagee, 2015, and Purcell, 2015).

2.8 Emerging Trends

In recent times there has been much debate for participatory mechanisms as a response to the failure of the rational model base approaches to public facility planning (Council of Educational Facility Planners International and United States Environmental Protection Agency, 2004).A new type of strategy was needed focusing on debate and participation rather than solely on modeling and rationality (Innes and Booher, 2010). A few renowned organizations have proposed documents with guidelines as to how participatory principles can be incorporated into the school system planning process to produce community-centered schools (Council of Educational Facility Planners International and United States Environmental Protection Agency, 2004). A community-centered school is one that serves the educational needs of the community while strengthening and revitalizing neighborhoods (Council of Educational Facility Planners International and United States Environmental Protection Agency, 2004). For instance the school age population can attend classes during the regular school hours, residents can use the school playing field, library or gym facility or even take evening classes during non-school hours (Council of Educational Facility Planners International and United States Environmental Protection Agency, 2004).

There is the view that the marriage between participatory principles and school facility planning has many benefits to be realized but there are some challenges that must be overcome in order for it to be effective. One of the cornerstones of this marriage is the creation of community-centered schools (Council of Educational Facility Planners International and United StatesEnvironmental Protection Agency, 2004). The integration of school facility planning with community planning can produce community-centered schools that instill a unique sense of place while offering high-quality educational programs(Khalil and Ibrahim, 2012). Community-centered schools can serve as the "central hub" for a community. They can help create vibrant communities that are sustainable in terms of their economy, society and environment. The community-centered approach may also help to bring all the relevant stakeholders together in a collaborative arena with a shared vision and commitment. More so numerous other benefits can be realized from such a multi stakeholder environment. For instance increased efficiency in resource sharing can save money, a closer tie between development and new school capacity can be promoted, a better relationship may exist between schools and neighborhoods, a better alignment of comprehensive land use plans and school facility plans may also exist (International County Management Association Report, 2008). While this sounds ideal in theory a number of changes are needed for effective realization. Individuals and organizations beliefs, including what they are willing to support or oppose is governed by the political arena (Earthman, 2013).The integration of school system planning with comprehensive land use planning is difficult due to institutional fragmentation (Gurwitt, 2004). Working across institutional boundaries may be difficult even when collaboration is accepted as a goal (Linden, 2002).

2.9 Summary

A number of key take away ideas emerged from the literature. The literature clearly highlighted that the school system planning process is a very critical and complex one (Council of Educational Facility Planners International and United States Environmental Protection Agency, 2004). In siting a school, a number of key variables must be taken into consideration for optimal location. There was a clear indication that the school siting process was dominated by experts in the field and highly sophisticated optimization models (Teixeira and Antunes, 2008). This practice is very common in some parts of North America and the Lesser Antilles of the Caribbean region except for the use of sophisticated models in the Caribbean. Unfortunately professional urbanplanners and the public in general are not incorporated into the school system planning process.There were efforts in the late 1980s, to introduce a strong participatory paradigm to the process. In that regard a number of organizations put forward documents to help enhance the process (Council of Educational Facility Planners International and United StatesEnvironmental Protection Agency, 2004). It is firmly believed that once this move is made, all relevant stakeholders can be involved in the process and a holistic school and community development may evolve overtime (Council of Educational Facility Planners International and United StatesEnvironmental Protection Agency, 2004). While this sounds ideal in theory, institutional and political obstacles must first be overcome for success (Earthman, 2000, and Gurwitt, 2004).

Unfortunately there has not been much progress in the adoption of the participatory model and school system planning today is still silo (isolated) in nature. Since my research topic is endeavoring to explore the school system planning process in Saint George Grenada, this literature better enabled me to understand the dynamics of the process from a global and

regionalcontext. Nonetheless it sets up a wonderful opportunity for a comparative analysis of my findings with the literature.

CHAPTER 3

THE STUDY AREA AND RESEARCH METHODS

3.1 Introduction

This chapter focuses on two important aspects of the thesis. The first aspect covers information on Grenada and the study area Saint George. Section 3.2 presents an overview of Grenada, Carriacou and Petite Martinique. Section 3.3 covers pertinent literature on the study area Saint George. Section 3.4 focuses on an overview of the current school system in Grenada. Section 3.5 presents an overview on the institutional framework governing school system planning in Grenada,Carriacou and Petite Martinique.

3.2 Overview of Grenada, Carriacou and Petite Martinique

Grenada, Carriacou and Petite Martinique is a Caribbean island located to the northwest of Trinidad and Tobago, north east of Venezuela and south west of Saint Vincent and the Grenadines. From a physical standpoint, Grenada is 12 miles (18 kilometers) wide and 21 miles (34 kilometers) long, and covers a land area of 120 square miles (440 square kilometers). Carriacou is 13 square miles (34 square kilometers) and Petite Martinique is 486 acres (194 hectares). It is volcanic in origin with a mountainous topography. It is divided into six parishes with Saint Andrew being the largest in terms of land size followed by Saint George (Population and Housing Census Grenada, 2011, and Sinclair, 2003) (See Figure 3.1 and Table 3.2 respectively). Grenada, Carriacou and Petite Martinique currently has a population of approximately 110,000 (Population and Housing Census Grenada, 2011) and the native language is English (Steel, 2003). The demographic structure of Grenada, Carriacou and Petite Martinique is presented in Table 3.1.

Table 3.1
The Demographic Structure of Grenada, Carriacou and Petite Martinique

Age Structure	Percentage of the Population	Male	Female
0-14 years	24.5	13, 954	13,057
15-24 years	16.5	9075	9155
25-54 years	40.3	22765	21628
55-64 years	9.2	5214	4927
65 years and over	9.4	4739	5638
Total		53621	53564

Source:United Nations, Department of Economic and Social Affairs, Population Division, 2013

Figure 3.1 Map of Grenada and its Parishes

Source: The Official Website of the Government of Grenada, Carriacou and Petite Martinique, 2016.

Table 3.2
Population and Land Area by Parish

Parish	Capital	Land Area (km sq)	Population 1991	Population 2001	Population 2011
Saint George	St. George's	65	31,994	37,058	36,823
Saint Andrew	Grenville	99	24,135	25,661	25,722
Saint David	St. David's	44	11,011	11,078	12,561
Saint John	Guava	35	8,752	8,591	7,802
Saint Mark	Victoria	25	3,861	3,994	4,086
Saint Patrick	Sauteurs	42	10,118	10,674	10,980

Source: Population and Housing Census Grenada, 2011.

3.3 Overview of the Study Area Saint George

St George's which is Grenada's capital city is also the capital of the parish of Saint George. Saint George is approximately 65 square kilometers in land size and is situated on the southwestern coast of Grenada (See Figure 3.1 and Table 3.2 respectively). The parish contained approximately 36,823 persons according to the last census in 2011 (Population and Housing Census Grenada, 2011, and United Nations, Department of Economic and Social Affairs, Population Division, 2013) (See Table 3.2). From that total, over 12,000 persons between the age group (0- 20) years are also residing in the parish of Saint George (Population and Housing Census Grenada,2011).According to Mitchell (2013), the population in Saint Georgeaccounts for about 36 % of the national population. The natural increase is expected to be positive as there are a large number of young persons migrating to Saint George (United Nations, Department of Economic and Social Affairs, Population Division, 2013). Moreover the population of Saint

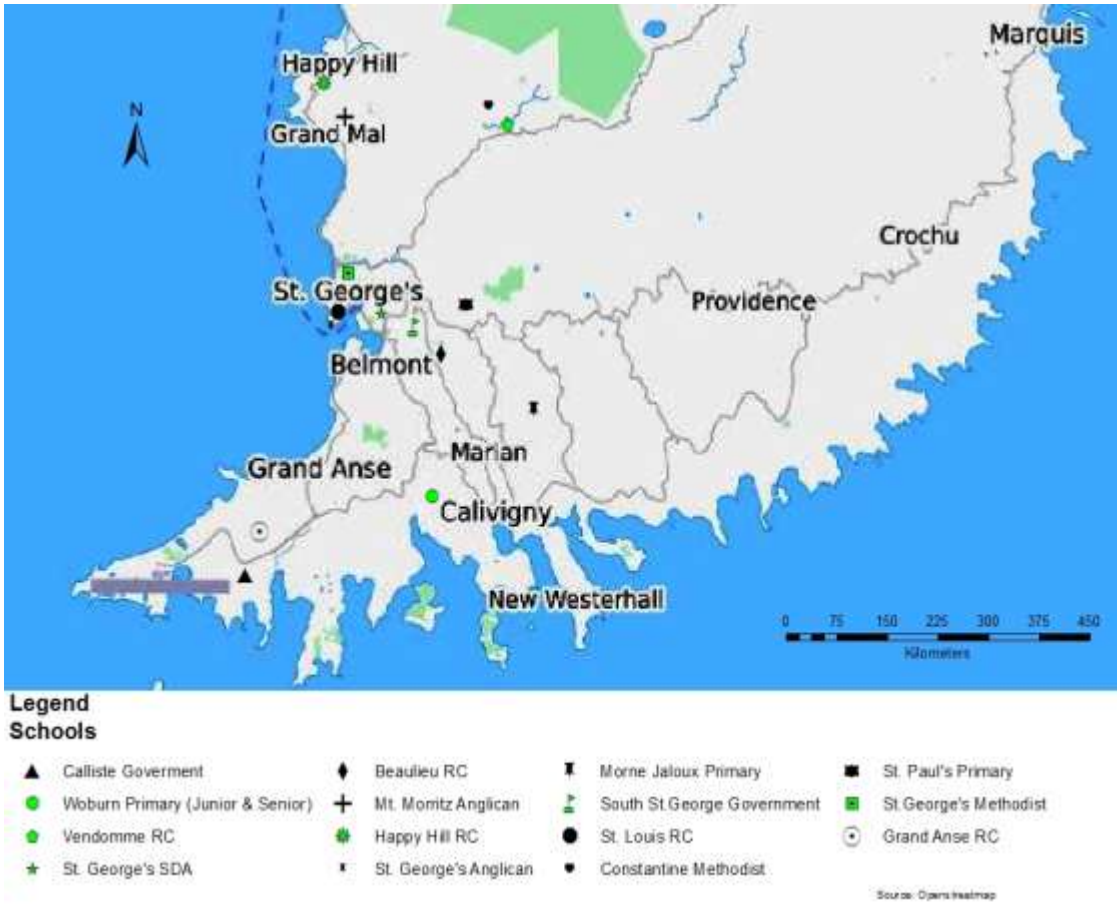
George will increase by 2 persons daily in 2015 (United Nations, Department of Economic and Social Affairs, Population Division, 2013).

As such the population is expected to be over 40,000 in the year 2020 (United Nations, Department of Economic and Social Affairs, Population Division, 2013). It is critical to note that between the years 2010-2015 there was a population growth rate in Saint George of 1.4%, while at the same period there was a population growth rate in Grenada of 0.4% (United Nations, Department of Economic and Social Affairs, Population Division, 2013). Interestingly fertility rate (total live births per woman) has declined slightly from 2.243% in 2010 to 2.132 % in 2015 but recent forecast predicts an increase in the not too distant future (United Nations, Department of Economic and Social Affairs, Population Division, 2013).Coupled with this, infant mortality rate was more or less decreasing for the last 5 years which means that more school age children will be alive (United Nations, Department of Economic and Social Affairs, Population Division, 2013). From a general perspective the population age 0-14 which is the primary and secondary school age in the year 2013 accounted for 26.8 % (27 241 with 13998 males and 13 244 females) of the total population of Grenada (United Nations, Department of Economic and Social Affairs, Population Division, 2013). This trend was also similar in the years 2014 and 2015. These population figures indicate that schools will have to be expanded or in some cases new schools will have to be built**.**

The parish also has 17 primary schools (3 government and 14 government-assisted schools) and 8 secondary schools (2 government and 6 government-assisted schools) (Ministry of Education Grenada, 2015) (See Figure 3.2, Table 3.5, Figure 3.3 and Table 3.6). Government schools are established and receive material assistance in money, goods or services from the government whereas government-assisted schools are established by the church and

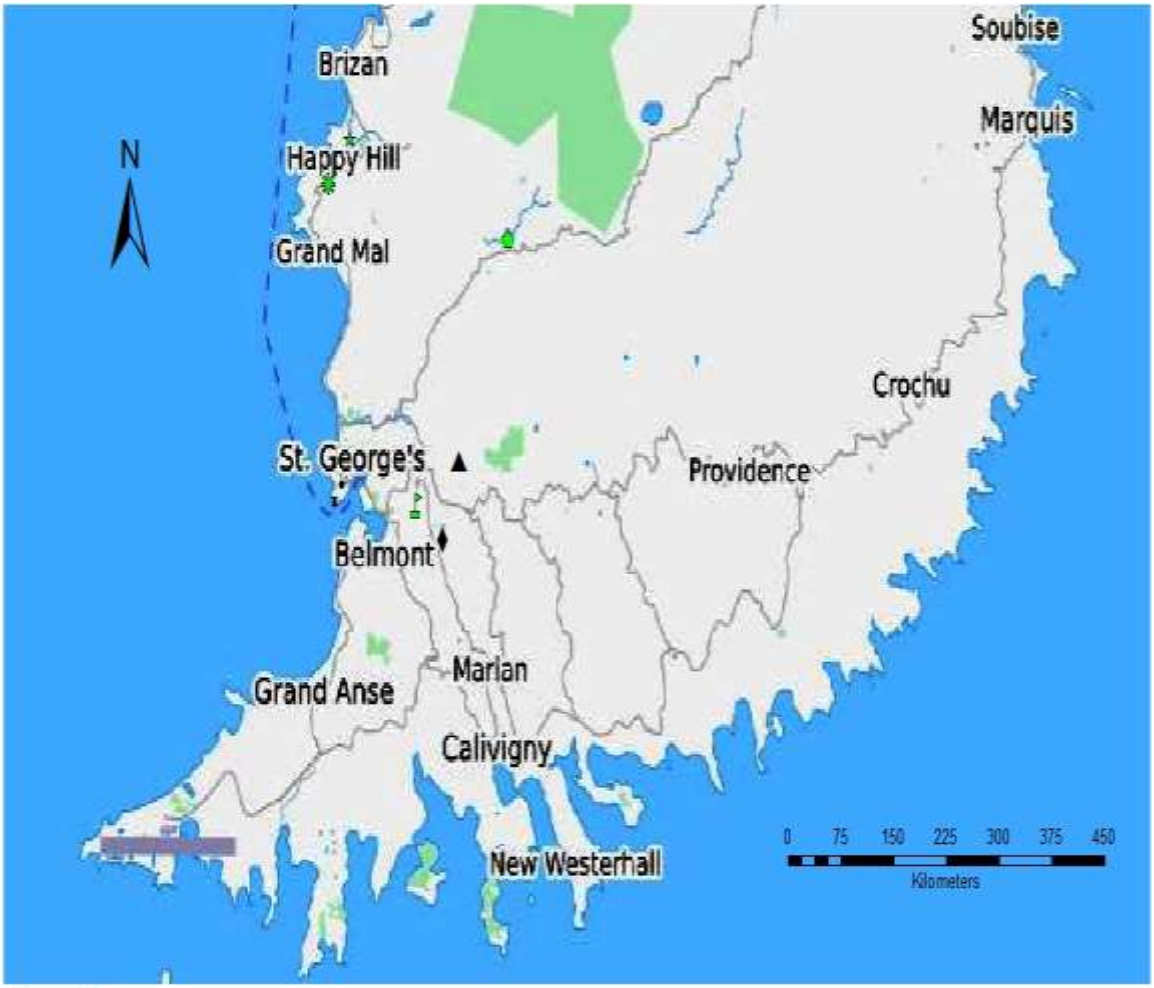
receivesassistance in money, goods or services from the government and from their church boards (Education Act of Grenada, Carriacou and Petite Martinique, 2002). The parish alone has approximately 32 percent of the island's primary schools and roughly 40 percent of the secondary schools respectively. This is also the highest among primary and secondary schools distribution for each parish. According to recent statistics from the Ministry of Education (2012-2013), there are more male than female students enrolled in both government and government-assisted primary and secondary schools in Saint George (Ministry of Education Grenada, 2015) (See Tables 3.3 and 3.4 respectively).

Figure 3.2 Primary Schools in Saint George



Source: Ministry of Education Grenada, 2015 and OpenStreetMap.Org

Figure 3.3 Secondary Schools in Saint George



Source: Ministry of Education Grenada, 2015,and OpenStreetMap.Org

Table 3.3
Students Enrollment for Government and Government-Assisted Primary Schools in Saint George

Parish of Saint George	Students Enrolment			School Address
	Total	**Female**	**Male**	
St. Paul's Government	191	86	105	St. Paul's
South St. George's Government	450	186	264	Springs
Calliste Government	177	81	96	Calliste
St. George's Anglican Senior	218	84	134	Church Street / Town of St George
Mt. Moritz Anglican	74	32	42	MountMoritz
Beaulieu Roman Catholic	245	106	139	Beaulieu
St. Louis Girls' Roman Catholic	453	453	0	Upper Church Street / Town of St George
Happy Hill Roman Catholic	299	140	159	Happy Hill
Grand Anse Roman Catholic	279	121	158	Grand Anse
Morne Jaloux Roman Catholic	162	81	81	Morne Jaloux
Vendome Roman Catholic	74	34	40	Vendome
Woburn Junior	54	18	36	Woburn
Woburn Methodist	94	41	53	Woburn
St. George's Methodist	301	129	172	Queen’s Park
Constantine Methodist	147	47	100	New Hampshire
St. George's Seventh Day Adventist	387	190	197	Archibald Avenue
St. George's Anglican Junior	401	160	241	Church Street / Town of St George
Total	4006	1989	2017	

Source: Ministry of Education Grenada, 2015

Table 3.4
Enrollment for Government and Government-Assisted Secondary Schools in Saint George

Parish of Saint George	Students Enrolment			School Address
	Male	**Female**	**Total**	
Anglican High (All Girls School)	0	693	693	Tanteen
Boca Secondary	311	279	590	Boca
Grenada Boy's Secondary (All Boys School)	832	0	832	Tanteen
Happy Hill Secondary	279	333	612	Happy Hill
J.W. Fletcher Catholic Secondary	63	54	117	Archibald Avenue
Presentation Boy's College (All Boys School)	398	0	398	Old Fort Road / Town of St George's
St. Joseph's Convent, St. George's (All Girls School)	0	520	520	Church Street / Town of St George's
Wesley College	213	173	386	Queen's Park / River Road
Total	2096	2052	4148	

Source: Ministry of Education Grenada, 2015

The mountainous terrain in Saint George is somewhat responsible for most primary and secondary schools being situated on small acreage of lands. In addition, most of these schools lack basic facilities such as a gym, library, playing field, basketball and netball facilities (Ministry of Education, 2015, and Purcell, 2015). However quite a large number of students from these institutions travel by foot or by vehicles to use facilities such as libraries and playing fields elsewhere (Purcell, 2015). It is important to establish that in the last 15 years, only a few new schools have been established in the parish of Saint George (Ministry of Education Grenada, 2015) (See Figure 3.4). Moreover 15out of 17of the existing primary schools and 6 out of 8 of the secondary schools in Saint George have been renovated and physically expanded by the

ruling government, regional and international organizations (See Tables 3.5 and 3.6 respectively). Collectively from all the other parishes, 12 primary schools and 9 secondary schools have been renovated and physically expanded.

Figure 3.4Schools Built in the Parish of Saint George for the Past Fifteen Years

Source: Ministry of Education Grenada, 2015 and OpenStreetMap.Org

Table 3.5
Primary Schools in Saint George Physically Expanded and Renovated 2000-2017

Name of School	Scope of Work	Funding Source	Project Cost in (EC$)	Year of Expansion / Renovation
South St. George's Government Phase I	Renovation / Rehabilitation.	Government of Grenada (GOG)	69,138	2005
South St. George's Government Phase II	Renovation /Rehabilitation and new wing added.	USAID	416,165	2005
Grand Anse Roman Catholic	Renovation /Rehabilitation and new structure added.	USAID	595,807	2006
Happy Hill Roman Catholic Phase I	Renovation /Rehabilitation.	USAID	382,066	2007
Happy Hill Roman Catholic Phase II	New structure.	USAID	793,141	2007
Mt. Moritz Anglican	New structure.	USAID	793,102	2016
St. Louis Roman Catholic	Renovation / Rehabilitation and new wing added.	USAID	833,327	2008
Beaulieu	Renovation / Rehabilitation and new wing added.	USAID	602,225	2007
Constantine Methodist	New toilet & classroom block.	CDB	1,585,815	2009
St. George's Methodist	Renovation and new wing added.	WB	1,301,400	2009
St. George's Anglican (Junior and Senior)	Renovation /Rehabilitation and new wing added.	WB	272,700	2007
Calliste Government School	Rehabilitation of the roof and new wing added.	Government of Turkey and GOG	445,255	2008
Vendome Roman Catholic	Rehabilitation and new wing added.	CDB	92,171	2009
Woburn Methodist (Junior and Senior)	Rehabilitation and addition of a new technical wing, toilet facilities and administrative wing.	OPEC	450,000	2016
St. Paul's Government	Renovation/ Rehabilitation and new wing added.	WB and EU	3,539,311	2007

Source: Ministry of Education Project Management Unit Grenada, 2015

Table 3.6
Secondary Schools in Saint George Physically Expanded and Renovated 2000-2017

Name of School	Scope of Work	Funding Source	Project Cost in (EC$)	Year of Expansion / Renovation
Grenada Boys Secondary School Phase I	Construction of wooden classrooms.	GOG	355,703	2008
Grenada Boys Secondary School Phase II	Construction of wooden classrooms.	GOG	538,038	2008
Grenada Boys Secondary School Phase III	Rehabilitation of existing building, construction of classroom block, toilet block and Science labs, rehabilitation of existing classrooms.	WB	10,400,000	2009
Grenada Boys Secondary School IV	Technical and administrative wing.	OPEC	6,800 ,500	2009
Presentation Boys College	Renovation of classrooms and re-roofing. Addition of a technical block.	WB and OPEC	913,903	2010
St. Joseph's Convent, St. George's Phase I	Renovation/Rehabilitation.	WB and EU	1,165,122	2008
St. Joseph's Convent, St. George's Phase II	Rebuilding and extension of the administrative block.	CDB	5,969,338	2009
Happy Hill Secondary Phase I	New classroom and administrative block.	GOG	2,077,488	2009
Happy Hill Secondary Phase II	Renovation/Rehabilitation.	WB	951,428	2008
Boca Secondary	Renovation and new wing added.	WB	2,151,681	2011
Anglican High School Phase I	Rehabilitation and new structure added.	WB and EU	2,689,663	2010
Anglican High School Phase II	Rehabilitation.	CDB	5,031,224	2011

Source: Ministry of Education Project Management Unit Grenada, 2015

Some fascinating statistics reveal that from the (17) primary schools in the parish of Saint George, (12) are under capacity and (5) are over capacity (Ministry of Education: Education

Statistical Digest, 2014) (See Table 3.7 which presents an excellent scenario of that situation). In addition, from the 12 schools that are under capacity, 11 are physically expanded and from the 5 that are over capacity, 4 are physically expanded. Nevertheless, Figure 3.5 gives a more precise display of that situation.

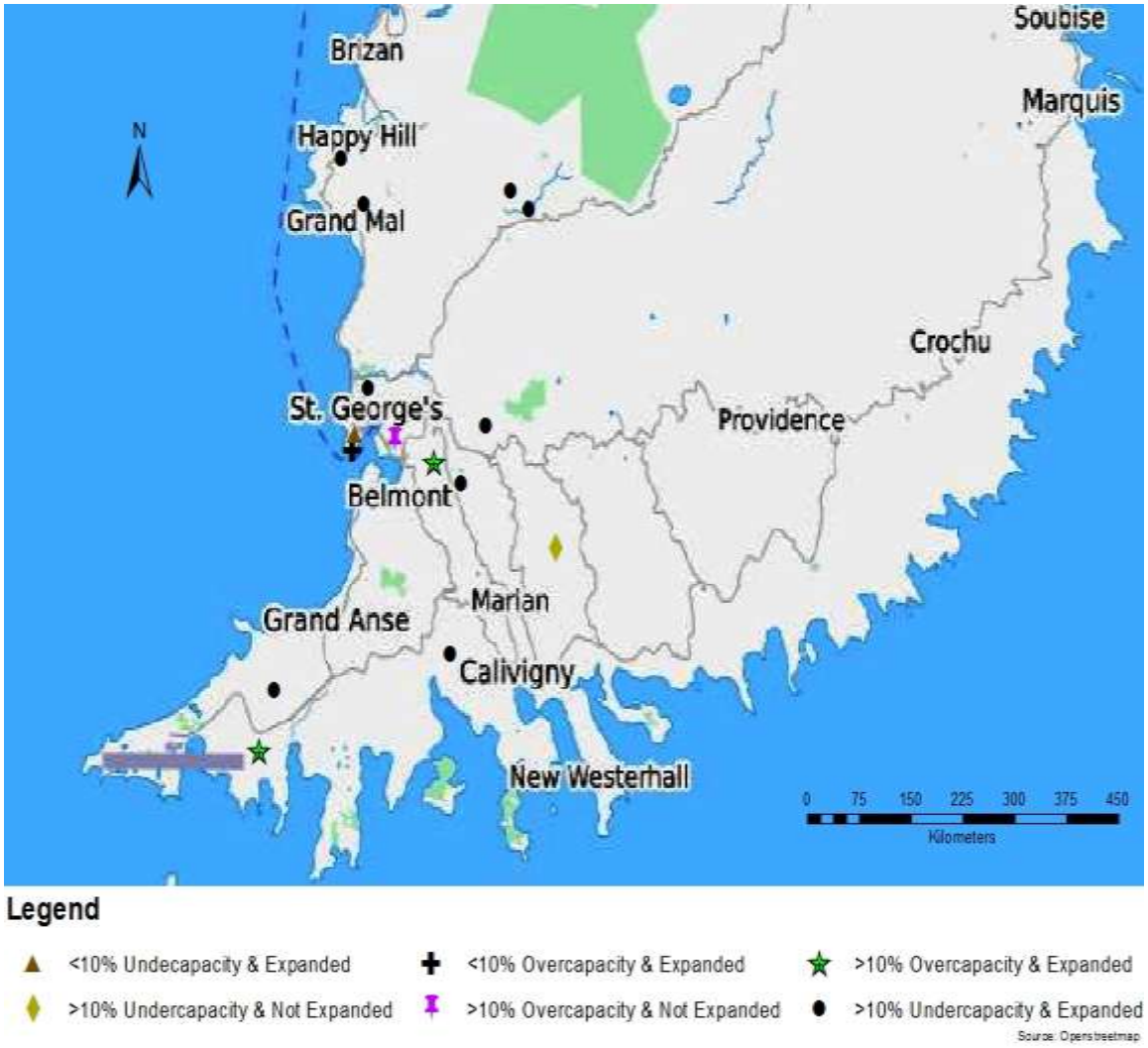
Table 3.7
Current Over Capacity and Under Capacity of Primary Schools in Saint George

Saint George	Capacity	Total Enrolment	Surplus Capacity (%)	Over Capacity/ Under Capacity
St Paul's Government	250	191	23.6	Under Capacity
South St George's Government	400	450	-12.5	Over Capacity
Calliste Government	100	177	-77.0	Over Capacity
St George's Anglican Senior	200	218	-9.0	Over Capacity
Mt Moritz Anglican	150	74	50.7	Under Capacity
Beaulieu Roman Catholic	350	245	30.0	Under Capacity
St. Louis Girl's Roman Catholic	500	453	9.4	Under Capacity
Happy Hill Roman Catholic	400	299	25.3	Under Capacity
Grand Anse Roman Catholic	350	279	20.3	Under Capacity
Morne Jaloux Roman Catholic	200	162	19.0	Under Capacity
Vendomme Roman Catholic	100	74	26.0	Under Capacity
Woburn Junior	100	54	46	Under Capacity
Woburn Methodist	400	94	76.5	Under Capacity
St George's Methodist	450	301	33.1	Under Capacity
Constantine Methodist	300	147	51.0	Under Capacity
St George's Seventh Day Adventist	300	387	-29.0	Over Capacity
St George's Anglican Junior	350	401	-14.6	Over Capacity
PARISH TOTAL	4900	4006	18.2	

Physical capacity: of a school is estimated at 35 pupil or students per classroom and15 square feet per child in case of hall spaces (Ministry of Education: Education Statistical Digest, 2014).

Source: Ministry of Education: Education Statistical Digest, 2014.

Figure 3.5 Primary Schools Capacity, Expanded and Not Expanded in Saint George



Source: Ministry of Education Grenada, 2015, and OpenStreetMap.Org

On the contrary (5) out of the (8) secondary schools in Saint George is over capacity while (2) are under capacity (Ministry of Education: Education Statistical Digest, 2014) (See Table 3.8 which showcases this situation). In addition, from the 5 schools that are over capacity, 4 arephysically expanded and from the 2 that are under capacity, they are both physically expanded. Nevertheless, Figure 3.6 presents an accurate picture of that situation.

Table 3.8
Current Over Capacity and Under Capacity of Secondary Schools in Saint George

Saint George	Capacity	Total Enrolment	Surplus Capacity (%)	Over Capacity / Under Capacity
Anglican High	525	693	-32	Over Capacity
Boca Secondary	825	590	28	Under Capacity
Grenada Boys Secondary	700	832	-19	Over Capacity
Happy Hill Secondary	500	612	-22	Over Capacity
St Joseph Convent St George	630	520	17	Under Capacity
Presentation Boys College	315	398	-26	Over Capacity
Wesley College	300	386	-29	Over Capacity
PARISH TOTAL	3795	4031	-6	

Physical capacity: of a school is estimated at 35 pupil or students per classroom and15 square feet per child in case of hall spaces (Ministry of Education: Education Statistical Digest, 2014).

Source: Ministry of Education: Education Statistical Digest, 2014.

Figure 3.6 Secondary Schools Capacity, Expanded and Not Expanded in Saint George

Source: Ministry of Education Grenada, 2015, and OpenStreetMap.Org

A close analysis of these enrollment statistics showed that most of the primary and secondary school were not close to meeting capacity. Moreover, the school expansion and renovation data from the Ministry of Education is indicating that not only the government are the financiers of school projects but other stakeholders such as World Bank, Caribbean Development Bank, United States Agency for International Development, and European Union etc do show an interest in funding school development projects. In addition the data on the enrollment capacity for government and government-assisted primary and secondary schools which showed under capacity on one end and over capacity on the other is signaling the need for a participatory school system planning process so that better decisions regarding school projects can be made.

Moreover from the period 1980- 2012 the total number of houses built in Saint George was 11,470; this is the highest when compared to the other parishes (Population and Housing Census, 2016)(See Table 3.9). From the year 1980 there has been an increase in the number of houses built in the parish of Saint George and for all the other parishes (Population and Housing Census, 2016). The rate of increase is most significant in Saint George. This has implications for school system planning in Saint George in the sense that it can dictate to the relevant authorities where the demand for new schools or school expansion is pressing now and most likely in the future.

Table 3.9
Number of Houses Built in Saint George by Parish

Parish	Before 1980	1980 - 1989	1990 -1999	2000 - 2012	TOTAL
***Saint George**	*2100	*1010	*1709	*6651	*11, 470
Saint John	373	260	417	1546	2596
Saint Mark	306	194	234	655	1389
Saint Patrick	526	342	516	1753	3137
Saint Andrew	1009	683	1312	4656	7660
Saint David	434	269	529	3045	4277
Carriacou	366	181	397	951	1895
TOTAL	5114	2939	5114	19,257	32,424

Source: Population and Housing Census, 2011.

A number of planning issues were recognized in Saint George. To better understand the types of physical planning challenges that are evident in the study area, field visits to four primary and four secondary schools were undertaken in the parish of Saint George during the months of November and December 2015 (See Appendix 25). Attention was focused on environmental factors that could affect student safety and learning (for example excessive noise from nearby industries, quality of the air, and road safety etc). It is important to note that from the schools visited, the most frequent physical planning issues observed were: schools on a busy street (main road 8), unsafe walking conditions (8), poor drainage (8), excessive noise (6), and flooding (6) (See Figures 3.7 and 3.8respectively which highlight this situation).

Figure 3.7 St Louis Roman Catholic Girls School

Figure 3.8 St George Senior Anglican School

With regards to excessive noise around schools it was discovered that industrial and transportation developments are the main causes of that problem (See Figure 3.9 which highlights a situation of noise and air pollution around a school).

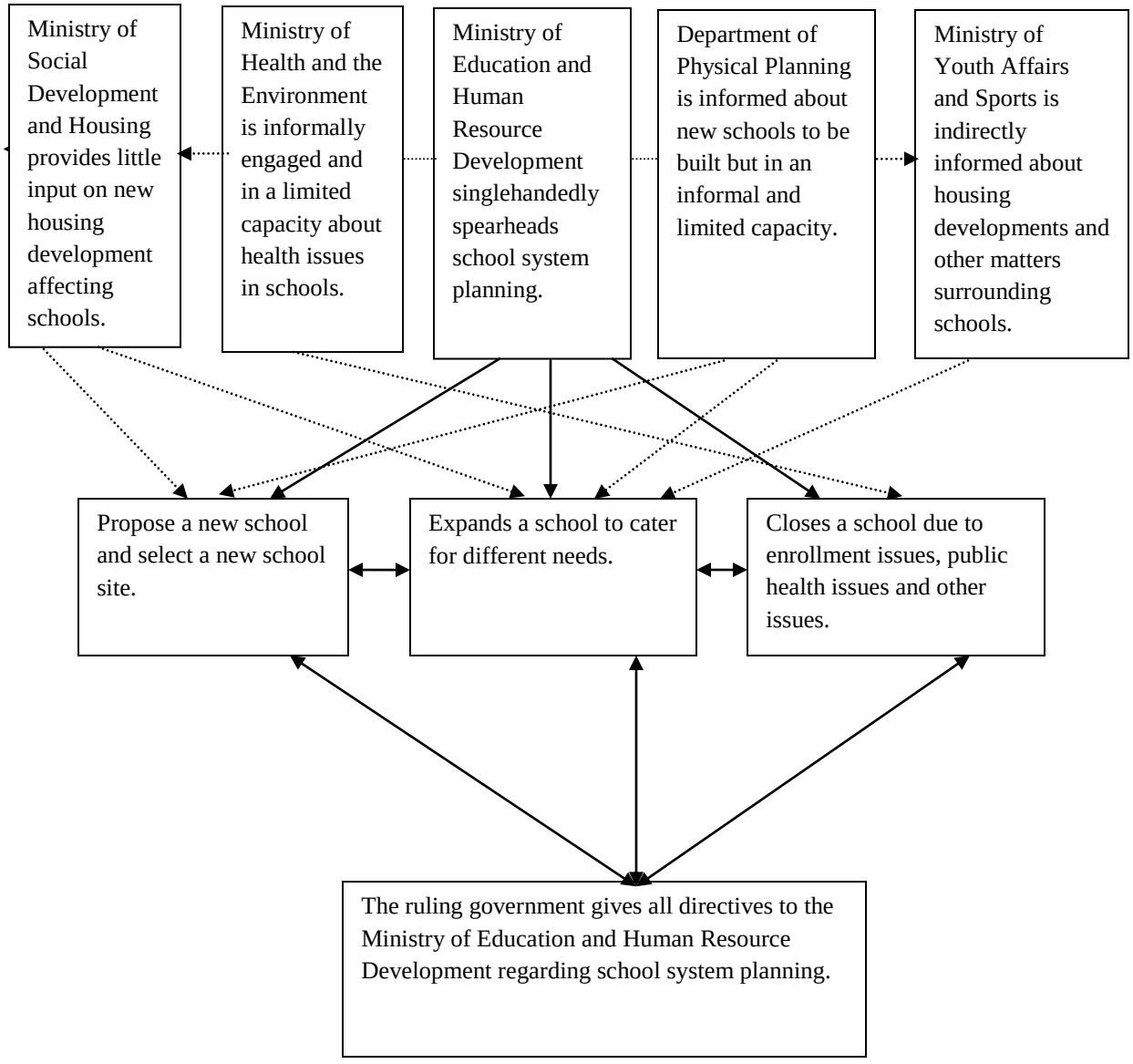
Figure 3.9 Grenlec Power Plant

These field visits were not intended to serve as a comprehensive survey of school sites and situation in the parish, but rather to highlight planning issues that may be ameliorated through community-based planning.

3.4 Brief Overview of the School System in Grenada

Grenada has 105 pre-primary schools, 65 are public and 40 are private (www.moegrenada.org). It also has 78 primary schools, 57 are public and 21 are private (www.moegrenada.org). Likewise there are 24 secondary schools, 21 are public and 3 are private (www.moegrenada.org). There are also 5 tertiary educational institutions in the country. The main stakeholder in the planning process for siting, closing and expanding a school is the Ministry of Education. However when a new school is to be sited the Ministry of Education will indirectly inform the department of Physical Planning. While this seems good, it is done informally and not made in light of active participation (See Chapter 4, Section 4.3). In addition the Ministry of Health and the Environment are sometimes informed about public health issues in schools and they play alimited role on the issue and as such is not seen as active participation on the part of the Ministry of Health and the Environment. Although housing development falls under the portfolio of the Ministry of Social Development and Housing, the ministry is indirectly and limitedly engaged with regards to how new housing developments caninfluence a new school site or even expand existing schools. All in all it is reasonable to conclude that the Ministry of Education spearheads the process and the other ministries are not fully and functional partners in the process (See Figure 3.10 which displays a true representation of that scenario).

Figure 3.10 Stakeholders Involvement in the School System Planning Process in Saint George



A good example of a direct and formal relationship on the schematic diagram in Figure 3.10 is shown by the continuous line (___) between the Ministry of Education and the ruling government. On the other hand, the broken line (….) between the Ministry of Education and the other ministries signifies an indirect and informal relationship.

According to the Education Act (2002), of Grenada, Carriacou and Petite Martinique, the minister responsible for education has full responsibility for determining where schools can be located. The Act also makes reference to parents being involved in school matters. For instance the Minister must establish an Education Advisory Council and one of the prominent persons must be a member appointed by the Minister on the nomination of the National Parent Teacher Association (The Education Act of Grenada, Carriacou and Petite Martinique, 2002). Furthermore part (2), division (3) of the Act which constitutes parents right and responsibilities clearly outline that parents can appeal against any decision under this Act that significantly affects the education, health or safety of the child; and to be consulted on the development of any special educational programme for the child (The Education Act of Grenada, Carriacou and Petite Martinique, 2002). In addition the Act makes provision for parents and teachers at an educational institutionto form an association to be known as a Parent Teacher Association as well as a National Council of Parent Teacher Associations to discuss any school related matter (The Education Act of Grenada, Carriacou and Petite Martinique, 2002). Moreover the Act makes provision for the wishes of parents to be considered by the Minister responsible for education on any school related matter (The Education Act of Grenada, Carriacou and Petite Martinique, 2002).

Likewise the Physical Planning and Development Control Act (2002), of Grenada, Carriacou and Petite Martinique also states that the Chief Executive Officer including the Physical Planning and Development Authority also has full responsibility for allocating lands for schools and foralso determining the location of schools. Interestingly both pieces of legal documents lay the foundation for the incorporation of other stakeholders on matters pertaining to school siting among others. For instance part (4), division (1) of the Education Act which

constitutes the management of educational institutions states that the minister responsible for education must establish a Board of Management for all schools(The Education Act of Grenada, Carriacou and Petite Martinique, 2002).The members of the Board of Management must include: (the principal, Parent Teacher Association representative, a senior teacher, an expert in the field of education, a business representative, a church representative, and a representative from organizations involved in community development)(The Education Act of Grenada, Carriacou and Petite Martinique, 2002). Some of the main functions of the board are to establish policies for the administration, management and operation of the school; to supervise the rebuilding or extension of the school if decided on by the Ministry; and to perform any other function conferred on it by this Act, by the regulations or by the Minister in writing (The Education Act of Grenada, Carriacou and Petite Martinique, 2002). In addition, the Act also makes provision for the establishment of an Education Advisory Council and special committees which follow a similar procedure to the Board of Management for schools. The Physical Planning and Development Control Act (2002), clearly states that the physical developments of land is mandated by the Physical Planning and Development Authority. The Planning and Development Authority must be composed of a Chief Executive Office (Head of the Planning Unit), a chairperson (public officer), an executive secretary (public officer), a member from the business community, law fraternity, engineering community, the environmental protection officer, director of housing, an agricultural representative, a representative from public works and a representative from the National Water and Sewage Authority.

According to the Act, the Physical Planning and Development Authority under the leadership of the Chief Executive Officer must prepare physical plans which include allocating and determining land for agriculture, housing, industries, and social services (schools, hospitals

etc) (The Physical Planning and Development Control Act, 2002). In addition the plan must be made available to the general public, non-governmental organizations, churches, businesses and other government ministries for their input before it is finalized (The Physical Planning and Development Control Act, 2002). Unfortunately collaboration between these two government agencies is not as desired (Purcell, 2015; Lagee, 2015; and Mitchell, 2015). The wider community comprising of parents, churches, business and non- governmental organizations are not functional partners in the process (Purcell, 2015; Lagee 2015; and Mitchell, 2015).Collaboration on school system planning seems to be between the Ministry of Education and the ruling government (Lagee, 2015; Worme, 2015; and Purcell, 2015). As such the parish of Saint George Grenada is the study area for this research with the view in mind of conducting an assessment of the school system planning process for primary and secondary schools.

3.5 A Description of the Institutional Framework Governing School System Planning in Grenada

According to the laws of Grenada, Carriacou and Petite Martinique, school system planning in Grenada should be governed by the Department of Physical Planning in the Ministry of Worksthrough the Physical Planning and Development Control Act 25 and the Ministry of Education through the Education Act of Grenada, Carriacou and Petite Martinique, 2002. The Physical Planning and Development Control Act 25 came into effect on the 5th September 2002, after it was approved by an Act of Parliament (Sustainable Land Management Project, Ministry of Agriculture, Forestry and Fisheries n.d.). It is basically a continuation of the old Act that was established in 1969 (Lagee, 2015). The functional arm of the Physical Planning Department is the Planning and Development Authority which is the entity responsible for all physical development related activities in the country (The Physical Planning and Development Control

Act, 2002). It is vital to note that no development whether private or public cannot take place without the approval of the Planning and Development Authority. According to the Physical Planning and Development Control Act (2002), the Planning and Development Authority with the lead role of the Chief Executive Officer (CEO) must prepare a physical plan for the whole of Grenada.

The physical plan must set out the prescription for the use of land which represents the results of an integrated planning process (The Physical Planning and Development Control Act, 2002). Moreover … "a physical plan may appropriate as: to allocate land for conservation, agricultural, residential, industrial, commercial, tourism or other purposes of any class specified in the plan, make provision for the development of infrastructure, public building , open spaces and other public sector investment works" (The Physical Planning and Development Control Act, 2002, pg 490). In addition, part (3) of the first schedule which involves community planning states that the Physical Planning and Development Authority is responsible for designating lands for new school sites (The Physical Planning and Development Control Act, 2002). Also, part (3) of the first schedule in the Planning Act, states that physical plans must critically consider community planning in that, lands must be controlled by zoning or designating specific uses, the layout of housing areas including density, spacing, grouping and orientation in relation to roads, open spaces and other buildings must be regulated (The Physical Planning and Development Control Act, 2002). Furthermore the Planning and Development Authority through the lead role of the Chief Executive Officer in the physical plan must determine the provision and siting of other community facilities besides schools such as: shops, churches, play centers and recreation grounds in relation to the number and siting of houses (The Physical Planning and Development Control Act, 2002).

On the other hand, the Ministry of Education role in school system planning in Grenada, Carriacou and Petite Martinique is also highlighted in the Education Act of Grenada 2002. The Grenada Education Act was established in the year 1976 and is still in effect today, however with various amendments (United Nations Educational, Scientific and Cultural Organization (UNESCO) Institute for Statistics, 2006). The Education Act was approved by an Act of Parliament and its main purpose is to serve as a regulatory instrument for the delivery of educational services at all levels from both public and private institutions (UNESCO Institute for Statistics, 2006). According to the Education Act of Grenada, Carriacou and Petite Martinique (2002), all government and government- assisted schools must have a School Management Board and one of the primary role of that Board is to provide control and management of all matters relating to the establishment and maintenance of a new school and the maintenance, rebuilding and extension of any school (UNESCO Institute for Statistics, 2006 and Education Act of Grenada, Carriacou and Petite Martinique, 2002). Other roles include: the monitoring of the conditions of the school buildings and premises or surroundings, ensuring that the premises of the school are sanitary and maintained in a condition which the Minister considers satisfactory (Education Act of Grenada, Carriacou and Petite Martinique, 2002).

The specific roles of the Ministry of Education in the school system planning lies in the power vested in the Minister responsible for Education or the Chief Education Officer on advice from the minister. For instance Division (1) of the Act states that the …. "Education Minister must subject to this Act establish public educational institutions and determine their location and classification, establish or disestablish public educational institutions and inaugurate classes or discontinue classes in those institutions where necessary"(Education Act of Grenada, Carriacou and Petite Martinique, 2002, pg 13). In a similar manner the Act makes provision for the Chief

Education Officer to conduct these duties on behalf of the Education Minister if call upon. In addition, the Chief Education Officer after partaking in the establishment of schools must ensure that all educational facilities are administered in a proper and efficient manner. Also the miscellaneous section of the Act stipulates that the … "Minister for Education on the advice of the Education Advisory Council given as aforesaid make regulations concerning: the management and conduct of public educational institutions and assisted private educational institutions in areas such as suitability of the premises (prescribing the standards to which the premises of educational institutions must conform and the establishment, administration, organization, inspection, classification and discontinuance of schools, including pre-primary schools and schools for children with special needs" (Education Act of Grenada, Carriacou and Petite Martinique, 2002, pg 5). It is of importance to note that both the Planning Act and the Education Act outline the need for public engagement on matters surrounding the establishment, expansion and overall management of schools.

Research Methods

3.6 Introduction

This study is a descriptive exploration of the school system planning process for primary and secondary schools in Saint George Grenada. The rationale for the research topic is to explore issues such as: a) if government officials believe there is a lack of coordination between government agencies with respect to school system planning, b) if there are differences between what the public sees as their potential role and what the government believe is appropriate, c) if the public believesthat planningdecisionswould be better with more public input, and d) what opportunities and barriers exist to effective public participation in school system planning. In

addition, three research questions guidedthe study. These questions emerged from the literature review and they are the research gaps that the study seeked to address (See Table 3.10)

Table 3.10
Research questions with their associated research approach and research methods.

Research Question	Research Approach	Research Method/s
(1) What are the formal and informal frameworks that guide decision making in the Ministry of Education and Physical Planning with respect to school system planning?	Qualitative Approach	Interview (Primary) Document Review(Secondary)
(2) What current and potential opportunities and barriers exist for the public to provide input to school system planning in Grenada?	Qualitative and Quantitative Approaches	Interview (Primary) Questionnaire (Primary)
(3) How can the current school system planning process in Grenada be transformed to a more participatory or communicative form?	Qualitative and Quantitative Approaches	Interview (Primary) Questionnaire (Primary) Document Review (Secondary)

This aspect of Chapter 3 focuses on the research methodology;the research approachand the main research methods used to collect and analyze data with a quest of achieving the research objectives set out in the thesis. First it seeks to evaluate the rationale and justification for the adoption of a mixed method research design. Second, it appraises the case study method of research and gives a justification for its use including its advantages and disadvantages. Third, it outlines the different methods used to collect data for the study including their advantages and disadvantages. Finally, it culminates with a summary of the pertinent issues discussed.

3.7 Mixed Methods Research Approach

This section outlines the mixed methods research strategy used in this thesis. Mixed methods research are defined by Creswell (2013), and Hatch (2002), as research which involves the combination of qualitative and quantitative research approaches, methods, techniques and

concepts in a single study. Mixed methods are usually referred to as the “third wave” in the research arena (Marshall and Rossman, 2006, and Creswell, 2013). According to Creswell (2013), and Hatch (2002), due to the fact that the mixed methods approach combine qualitative and quantitative viewpoints, data collection, and analysis techniques it enables a deep understanding of a situation or process.Creswell (2013), and Le Compte and Schensul, (1999), further stated that theproblems addressed by social science researchers are complex, and the use of eitherquantitative or qualitative approaches by themselves is inadequate to address this complexity, therefore a mixed method approach is necessary.

There are more insights to be gained from the combination of both quantitative and qualitative research than either form by itself (Le Compte and Schensul, 1999, and Hatch, 2002).Creswell (2013), and Marshall and Rossman (2006), also stated that mixing methods can result in the triangulation of data in the sense that qualitative and quantitative data can be used side by side to reinforce each other. Patton (2002), and Creswell (2013), added that triangulation of qualitative and quantitative data involves a form of comparative analysis, with the important question; “What does each analysis contribute to our understanding?” In this regard, he argues that areas of agreement enhance confidence in findings whereas areas of disagreement open avenues to better understanding of the complex nature of the phenomena or process. Moreover Creswell (2013), and Marshall and Rossman (2006), indicated that there are five main pillars of mixed methods research called: triangulation, complementarity, development, initiation and expansion.

3.8 Case Study Research Method

There are a number of prominent researchers who provide justification for the adoption of a case study research method in an effort to gain an in-depth understanding of a situation.

Creswell (2013), simply defined a case study as an empirical investigation involving a contemporary event in-depth and in its real-life context, more so when both the phenomenon and context boundaries are not clearly evident. Case studies typically combine data collection methods such as interviews, field observations, questionnaires and archival searches with the view in mind of reconstituting and analyzing the situation under investigation(Patton & Appelbaum, 2003 and Rahim & Baksh, 2003). Cutler (2004), and Gerring (2004), clearly articulate that a case study research design has several merits that add strength to research. First, the intensity of analysis is seen as a primary asset of the research. Second, there is the ability to incorporate both qualitative and quantitative data as well as different techniques for triangulation is possible and this gives worth to the validity, credibility and reliability of data. Last but not least, case studies have tremendous potential for theory building and testing.

Despite these advantages, there are some limitations with case studies. First, case studies lack rigor and is very difficult to draw a definite cause or effect (Yin, 2003). Second, there is the view that case studies are too long and often times the researcher has been careless and has allowed biased views to influence the direction of the findings and conclusions (Yin, 2003). Third, they provide very little basis for scientific generalization since they use a small number of subjects (Yin, 2003). For example some are conducted with one subject and usually raises the question "How can you generalize from a single case?" Nevertheless the advantages outweigh the disadvantages hence its use in the study.One of the most critical characteristics of case study research lies in delimiting the object of the study (Yin, 2003). In that regard, the precise delineation and delimitations of boundaries helps the researcher in determining the focus and parameters of the case study (Yin, 2003). In this thesis the study was confined to the parish of Saint George Grenada; key participants were limited to the parish of Saint George; instruments

were designed to solicit information on the school system in Saint George. In addition, field observations and document analysis were also deemed necessary as appropriate sources for data.

3.9 Data Collection Methods

The data-gathering methods used in the study included questionnaire, interview, field observation and document analysis. In the following sections, each method is explained, the rationale for their use is outlined and advantages and disadvantages examined.

3.9.1 Questionnaire

Questionnaires were used in this study to satisfy objective (2) to examine current participation methods and policies in the siting of a new school, expansion or the closure of an existing school (school system planning) in Saint George Grenada. Data gathered from the questionnaire was also used as input to objective (3) which sought to formulate recommendations that may lead to the development of a framework for enhancing community input in school system planning.

The questionnaire is one of the most popular and effective data collection methods used by researchers. It is a very cheap but versatile instrument for collecting data about people's opinion and behaviors (Newman, 2004). According to Babbie (2004), and Newman (2004), questionnaires are flexible in that several questions can be asked on a given topic. Furthermore questionnaire research is most likely the best method researchers can use to collect original data for describing a population that is too large for direct observation (Creswell, 2013). Questionnaires also lead to greater validity because the same questions are asked of all respondents (Finn and Jacobson, 2008).

Although the questionnaireis a significant data collection method, there are some drawbacks associated with the method.Questionnaires may have a low response rate as respondents may not complete them (Finn and Jacobson, 2008). The size and diversity of the sample will be limited to people ability to read or those who have a considerably amount of education (Finn and Jacobson, 2008). Questionnaires are not suitable to investigate complex issues(Finn and Jacobson, 2008).

The intention of the questionnaire was to gather pertinent data on participants level of participation in the school system planning process in Saint George, the current methods of participation that are used in the school system planning process, the barriers that hinder participants from participating in the process, and participants' perceptions of the merits and demerits of a more participatory school system planning process.

Questionnaires were targeted to 10 communities within the parish of Saint George. The aim was to target approximately 10 percent of the adult population in each community.Community is defined as a group of people (150 or more) living in the same place. First, five communities within the parish of Saint George containing at least a school (primary or secondary) as well as a population of 150 persons or more were randomly identified and selected. Five other communities within the same parish where no schools existed but had a population of 150 persons or more were also randomly identified and selected (See Figure 3.11).

In an effort to ensure that each household, business owner, church, non-governmental organization within these communities had an equal chance of being selected for the study, a systematic sampling methodology was used (Ritchie & Inkari, 2006 and Hedges, 2004). The sampling plan for this study involved three broad groups. The first broad group was education

officials consisting of teachers, principals, and senior administrators from the Ministry of Education. The second broad group was other government officials from the Physical Planning Unit, Ministries of Social Development and Housing, Health and the Environment and Youth and Sports. The final group was the broader community comprising of parents, non-parents, business community, churches and non-governmental organizations.

The three broad groups were given questionnaire in order to collect sufficient and reliable data on the topic under investigation and also to ascertain the views and perceptions of a wide cross section of the population as much as possible. Furthermore the Ministry of Education administrators and the Physical Planning Department administrators were treated as separate groups because these are the two leading government agencies responsible for school system planning in particular siting a new school in Grenada, Carriacou and Petite Martinique according to law. Therefore the intention of the researcher was to collect data separately so as to discover similarities and or differences in the views and perceptions of both organizations with regards to the subject under investigation.

Figure 3.11 Communities in Saint George

Source: Central Statistical Office, Ministry of Finance Grenada, 2015, and OpenSteetMap.org

Second a door to door systematic sampling technique was utilized for residents (parents and non-parents in communities with and without a school). The researcher approached 30

households with parents in the first community where a school existed and negotiated until a total of 20 agreed to complete the questionnaire, after this was achieved no more parents were approached. The same procedure was repeated for non-parents in the same community including both parents and non- parents in the other four communities containing schools and the five communities containing no schools. Afterwards every second house on a street from those who agreed both in the five communities where schools existed and the five communities where a school did not exist was selected to achieve a total of 10 parents and 10 non-parents in each community with schools followed by 10 parents and 10 non-parents in each community without a school for a total of 100 parents and 100 non-parents for a grand total of 200 residents.

Ten schools (5 primary and 5 secondary) were randomly selected from the different communities, 25 teachers in each school were randomly approached. The researcher negotiated to get a total of 20 teachers who agreed to complete the questionnaire and after this was achieved the researcher stop asking other teachers. The principal of each school was purposively selected. Every second teacher was systematically selected based on an alphabetical list of candidates. Altogether, a total of 9 teachers from each primary school and 9 teachers from each secondary school for a total of 90 teachers and 10 principals giving a grand total of 100 educators were achieved.

Twelve church leaders were approached and the researcher negotiated until 10 agreed to complete the questionnaire. The 10 church leaders who agreed were written down in alphabeticalorder and every second church leader was systematically selected to achieve a total of 5. Likewise 10 non-governmental organization leaders were approached, and the researcher negotiated to attain a total of 10 who agreed to complete the questionnaire. The 10 non-governmental organizations leaders who agreed were written down alphabetically and every

second organization was systematically selected to achieve a total of 5. In addition, 23 business organizations were approached and in a similar manner the researcher negotiated until 20 agreed to complete the questionnaire. The 20 business leaders who agreed were written down on a piece of paper in alphabetical order and every second business was systematically selected to achieve a total of 10. Also 2 senior administrators in the Ministries of Education and Human Resource Development, Social Development and Housing, Health and the Environment, Youth and Sports and the Department of Physical Planning were purposively selected to achieve a total of 10. All together there were: 50 parents respectively in communities with a school, without a school, 50 non- parents respectively in communities with a school, without a school, 50 primary and secondary school educators respectively, 5 church and non-governmental organization leaders respectively, 10 business owners and senior government administrators respectively for an overall total of 330 participants.

Third, with the aid of three experienced assistants, information letters explaining the purpose of the study were distributed to the identified participants. Fourth, approximately one week after the distribution of the information letters, the researcher and the assistants returned to the addresses and distributed questionnaires to those who were selected to participate. All the research participants were given (2) weeks to complete the questionnaires on their own (self-administered).On the spot follow up sessions were held for those participants who were having issues or needed clarifications where necessary. In instances where participants were not available at the time, appointments were made to return later. The sample was comprised of adults 18 years and over since at this age, cognitive abilities are considered to be stable (Poria, Reichel, & Biran, 2006 and Poria, Butler, & Airey, 2003, 2004). All participants who received a questionnaire were offered a keychain valued at Canadian $1.00 as a token for their time.

3.9.1.1 Questionnaire Instrument

The questionnaire used in this thesis contained seventy-two items (See Appendix 11). It is comprised of a mixture of Likert scale items (matrix), and close-ended and open-ended questions. The questionnaire was designed in six parts to address some of the objectives of this research as outlined earlier. Overall, the questions asked were designed to accomplish the following:

a. Analyze participants opinions on participation in the school system planning in their community,
b. Identify current opportunities and barriers to participation in the school system planning process in their community as well as their perception towards a more participatory school system planning process and how it can be achieved,
c. Explore their opinions on neighborhood land use change and schools.

Part One of the questionnaire collected data about participants' characteristics and socio-economic background.

Part Two solicited respondents' general involvement in school affairs in their communitythrough the use of eight (5) point Likert scale items.

Part Three comprised questions aimed at collecting information on participants' opinion on participation in school system planning in their community.

Part Four contained questions that sought information on the current opportunities and barriers to participation in school system planning in the community.

Part Five comprised questions that sought information on the ways by which the current school system planning process can become more participatory.

Finally Part Six contained questions that endeavored to solicit participants' personal views on the need for community involvement (stakeholders) on land use proposals close to schools and appropriate land uses around schools.

The questionnaire was conducted in the parish of Saint George, Grenada in October and November 2015 and achieved a response rate of 90 percent (n = 90). The self-administered questionnaire was distributed by the researcher and three other assistants who have a wealth of knowledge and experience in social research. Participant responses were anonymous and confidential. The data were coded to be entered into SPSS. For example, numbers were assigned to the range of responses obtained for each closed-ended item. Open-ended items were considered by the variability shown in the respondents' answers and accordingly, a coding frame of numerical assignments for each open-ended item was designed for analysis. The huge amount of qualitative data gained was subsequently analyzed according to Gillham's (2000), transcription and content analysis guide. The data was transformed into written text, and then each transcript was thoroughly examined to identify the substantive statements. Categories were then developed base on the substantive statements and a numerical coding system was design. The data was entered into the SPSS software for analysis. A detailed summary of the material can be found in Chapter Four.

3.9.2 Interview

Semi-structured in-depth interviews were used in this study to satisfy objective (1) to examine planning frameworks and processes in the siting of new schools, expansion or closure of existing schools (school system planning) across pertinent government ministries. Interviews were also used to satisfy objective (2) to examine current participation methods and policies in school system planning. Pertinent data gathered from the interview was also use as input to

objective (3) which seeks to formulate recommendations that may lead to the development of a framework for enhancing community input in school system planning now and in the future.

Hernandez, Cohen, & Garcia (1996), postulated that an interview is a cheap, unique and effective data collection method that give researchers a better understanding of respondents' attitudes and thoughts on issues. Shipley et al, (2004), highlighted that the interview arrangement tends to be more unrestricted and allows for the expression of a more thorough opinion or belief. In addition, Gilham (2000), indicated that an interview can generate rich and vivid materials due to its naturalistic setting. There is a higher return rate from interviews, and fewer incomplete items (Brown, 2001). According toDornyei(2007), the presence of the interviewer can lead to mutual understanding as questions can be rephrased or simplified for ease of clarity and understanding. Furthermore cheap tape or voice recorders can enable the researcher to record respondent word with greater accuracy and this can result in data being reviewed several times to reduce bias (Hermanowicz, 2002).

Amidst the many advantages of an interview, there are some drawbacks associated with the method. Respondents' views have a tendency to be conditioned by their particular interests and as such might be subjective and can change overtime based on circumstances (Hermanowicz, 2002). Interviews can be time consuming in terms of data collection and analysis because they need to be transcribed and coded. Interviews are small scale in nature, has potential for subconscious bias, and not 100% anonymous (Brown, 2001). Generally the advantages outnumbered the disadvantages, hence the use of this method in the study.

The interview sample consisted of stakeholders who were selected using the purposive sampling method. The stakeholders interviewed were senior administrators in the Department of

Physical Planning in the Ministry of Works, Communication and Public Utilities, in the Ministries of Education and Human Resource Development, Social Development and Housing, Health andthe Environment and Youth and Sports. It was felt that these stakeholders have first-hand knowledge and experience on the topic under investigation and can speak with a high level of authority on issues relating to school system planning in Saint George Grenada. Their incorporation in the process coincides with Shipley's (2004), idea that genuine support from government at all levels is a pre-requisite for holistic community development. Likewise, Wojno (1991), articulates that governments are in a position to give financial support; in addition they have the ability to enact legislations that fosters public participation.

The interviewees were selected in the following manner: First, a target list of ten stakeholders was created by the researcher for in-depth interviews based on the researcher's knowledge and experience (Hernandez et al., 1996). Second, each person was contacted by telephone (See Appendix 1) and provided with a brief outline of the study. Those individuals who agreed to be interviewed were provided with a formal letter outlining the study and a consent form by email prior to the interview (Appendix 4). A total of (9) interviews were conducted.

An interview guide was designed to steer and manage the interview process. It was an outline of a set of objectives, themes and questions that were explored with each interviewee. The guide was design with (10) lead or main questions followed by (10) supplementary questions and they were open-ended in nature (See Appendix 12). In this semi-structured interview format, the main aim of the guide was to ensure that the relevant issues were covered

during the interviews (Patton, 2002). The items were developed from insights gain from the review of literature that covers school system planning and from preliminary research done by the researcher on school system planning in Grenada. The in-depth interviews were carried out between October and November 2015 at an office identified by the stakeholders. Each interview had a duration of approximately 25-30 minutes on average. Eight interviews were audio-recorded with the consent of the interviewee and transcribed 'word for word' for qualitative content analysis whereas one was transcribed directly as the interviewee responded.

The textual data generated from the interviewswere analyzed according to Gillham's (2000), transcription and qualitative content analysis guide, where substantive statements were identified from individual transcripts. Content analysis is defined by Hsieh and Shannon (2005), as a research method for the subjective interpretation of the content of text data through the methodical categorization process of coding and identifying patterns or themes. The researcher employed the following steps in analyzing the data generated from interviews:

a) The researcher transformed all the data into written text.

b) The text was carefully examined to identify statementsthat make a valid point.

c) The researcher then identified themes associated with each valid point.

d) Categories were developedbased on the themes and a coding system was design for each category.

e) The categories and codes were entered into the SPSS software for analysis.

f) Conclusions were drawn from the coded data and this data is presented in Chapter 4.

3.9.3 Field (on-site) Observations

Field observations were conducted in this study to identify real life cases where educational and physical planning were not compatible and provide the researcher with firsthand knowledge of the school system.Four primary and four secondary schools were targeted. A letter was sent to the Chief Education Officer in the Ministry of Education and Human Resource Development asking for permission to conduct on-site observations on the selected schools. Principals of selected schools were contacted by telephone informing them of the purpose of the study and soliciting their permission to use the schools for an on-site observation. Upon consent from the Chief Education Officer and the principals, each primary and secondary school were examined accordingto the criteria outlined by the Council of Educational Facilities Planners International and the United States Environmental Protection Agency, 2004 (See Table 3.11).

Table 3.11
Selected Primary and Secondary School Site Criteria

Criteria	Description of Criteria	Source/s
Distance to Recreational Facilities	(1/8 mile or less)	Council of Educational Facility Planners International (CEFPI) (2004).
Distance to Center of Community(residents)	(¼ mile or less)	CEFPI (2004).
Distance to Commercial Activities	(1/8 mile[660ft.] or less)	CEFPI (2004).
Distance to Heavy Industry	Industrial or other facilities releasing chemicals should not be built or located within 2 miles of a school.	United States Environmental Protection Agency (U.S.EPA) (2011).
Distance of School Building to Transportation Networks (main roads only).	Areas of high concentrations of vehicular traffic such as freeways, highways or main roads should not be within 2 miles of a school	CEFPI (2004). U.S. EPA (2011).
Distance to Health Facility	(4 miles or less)	CEFPI (2004).
Distance to Security Facility/ Fire Facility	(4 miles or less)	CEFPI (2004).
Nature of Topography	Ideally, the site should be fairly level with some topographic relief that can provide opportunities for learning area development and site must have good drainage.	CEFPI (2004).
Site Erosion	Sites should be free from erosion from rivers, nearby sea or from slopes where deforestation has occurred	CEFPI (2004).
Flooding	Flooding potential from adjacent bodies of water should be considered. Ideally, the site should not be located within a flood plain or flood-prone area.	CEFPI (2004).
Noise	Schools should not be close to sources of incompatible noise such as air traffic, vehicle traffic, and industrial uses.	CEFPI (2004).
Safe Routes to School for Pedestrians and Bicycles.	Site should have safe walking routes for students within short distance to walk or ride bicycles.	CEFPI (2004).
Visibility, Safety of Driveways and Internal Circulation	Driveways should not create conflicts when vehicles enter the roadway particularly where slopes curve or obstacles prevent good sight. In addition site should have multiple driveway access which can aid in internal site circulation of vehicular traffic.	CEFPI (2004).

Source: Council of Educational Facilities Planners International and the United States Environmental Protection Agency, 2004.

This gave an idea as to how many schools meet and did not meet the current standards. Permission was also soughted in accordance to take photographs of the different schools examined. These photographs were used as visual aids in the exercise to document the context of the planning process for schools. Each school was visited once and each observation last for approximately one and a half hours. All relevant details were recorded on a standardized form (matrix) for each selected school (See Appendix 10). In addition spatial locations of present and past activities were studied to discover real life cases where physical planning and education planning were not compatible (for instance large scale commercial or industrial development close to schools). Photographs were also taken of these activities. The local newspapers such as Grenada Today, Grenada Informer and Voice were also scanned for planning issues. All relevant details were recorded in a special field notebook.

3.9.3.1 Collating and Categorizing of Data

The information collected on the site visits was collated and analyzed. First, the photographs were downloaded, sorted and labeled on the computer. Next the standard forms that were developed for each school site were reviewed with the aid of the photographs to ensure that accurate information was collected. In a similar manner the photographs taken for those activities around schools where physical and education planning was not so integrated were also used to verify and strengthen the narrative for each activity.

3.9.4 Document Review

In a similar manner to field observations, document review were carried out in this study to satisfy objective (1) to examine planning frameworks and processes on school system

planning across pertinent government ministries, andobjective (3) to formulate recommendations that may lead to the development of a framework for enhancing community input in school system planning now and in the future. The aim of document review was to gather pertinent data as to: who has the legal responsibility and authority for planning school systems, facilities available in schools, students enrolment in schools, current development data (houses built annually, commercial developments etc) and population trends.

According to Kellogg (1998), document review involves collecting data by reviewing existing documents.Documents may take the form of hard or softcopy (electronic) and may include newsletter, meeting minutes, reports, program logs, performance ratings and funding proposals etc (Kellogg, 1998). Potter (1996), states that documents are any preserved recordings of a person's creations, thoughts and actions.Kellogg (1998), clearly points out that document review has several merits in that it is unobtrusive, a good source of background information, very cheap, provides a behind the scenes look at a program that may not be observable, exposes valuable issues not recognized by other means, and allows exploration of past trends and patterns (Potter, 1996). In addition, Potter (1996), stated that if no individuals are alive to provide primary information, then documents are the only source of data. Also when documents are examined, confirmatory evidence that coincides with interviews, questionnaire or observation information can surface (Potter, 1996).

While document review proves to be an effective data collection mechanism, there are some shortcomings associated with the method. Information may be inapplicable, disorganized, unavailable, incomplete, inaccurate and outdated. Moreover the method could be biased because of the selective survival of information, can be time consuming to collect, review, and analyze many documents (Finn and Jacobson, 2008). Moreover the advantages outnumbered the

disadvantages, hence the use of this method in the study. This research employed a thorough document review exercise. The researcher first and foremost collected and conducted content analysis of the PhysicalPlanning and Development Control Act 2002 of Grenada, Carriacou and Petite Martinique and the Education Act 2002 of Grenada, Carriacou and Petite Martinique (See Section 3.4 in Chapter 3 for findings). Current school statistics with regards to capacity and enrollments for students, available facilities such as gyms, libraries, playing fields and sites sizes for primary and secondary schools in the parish of Saint George were also collected and examined from the Statistics Department in the Ministry of Education and Human Resource Development Grenada. Likewise current population together with future projectionsand development statistics (houses built annually) for the parish of Saint George including the other parishes were collected and examined from the Central Statistical Office in the Ministry of Finance to find out where demand for schools was most pressing now and likely in future years (See Chapter 3 for findings).

3.9.4.1 Collating and Categorizing of Data

The information collected from the different documents reviewed was collated and analyzed. The information written down from each document was revised thoroughly to ensure accuracy, then sorted and labeled on the computer.

3.10 Summary

This study utilized a mixed method research strategy that incorporated findings from four key data collection methods namely; questionnaire, interviews, field observations, and document review. Moreover, a case study design was deemed the most appropriate research strategy for

this study. The questionnaire utilized a systematic sampling method to select the population sample. The questionnaire instrument contained seventy two items and was divided into six parts with a mixture of open-ended, close-ended and Likert scale items. In addition, nine in-depth semi-structured interviews were carried out to determine the views and perspectives of some of the stakeholders from key government ministries. The sample was selected using the purposive sampling method. The interview data and the open ended questionnaire data was analyzed using Gillham (2000), content analysis guide. Field observations were conducted to collect, analyze and evaluate planning issues in relation to how schools are located and instances where physical and education planning was not compatible. The data was collected from on-site visits of four primary and four secondary schools in the Parish of Saint George.

Finally, a thorough document review exercise was conducted to find out who are the main stakeholders legally authorize for planning schools. The document review exercise also seek to determine where the demand for school is pressing now and in the future and to get a sense of whether primary and secondary schools in Saint George are over or under capacity and the facilities that are available in schools. The main documents reviewed were the Physical Planning and Development Control Act 2002 of Grenada, Carriacou and Petite Martinique, the Education Act 2002 of Grenada,Carriacou and Petite Martinique, statistical school data from the Ministry of Education and Human Resource Development, statistical development and population data from the Central Statistical Office in the Ministry of Finance, Grenada.

CHAPTER 4

RESULTS AND DISCUSSION

4.1 Introduction

This chapter presents the data gathered from questionnaires distributed to community members and senior government officials, interviews held with senior government officials and content analysis of documents. Section 4.2 presents the demographic and socio-economic characteristics of respondents. Section 4.3 to 4.5 analyses and discusses the findings in relation to the three research questions set out in the thesis. Section 4.6 summarizes the pertinent issues discussed.

4.2 Demographic and Socio-economic Characteristics of Respondents

Table 4.1 presents some demographic and socio-economic characteristics of the sample. The majority of the respondents were female (54%). 23 percent of the respondents belong to the age group under 30, whereas 19.7 percent 31-40 years, 22 percent 41-50 years, 30 percent 51-60 years and 5 percent over 60 years. In brief, approximately 64.7 percent of the population is below 50 years. When asked how long they lived in Grenada, almost all respondents (97.3%) indicate residency of at least 10 years. As to the number of years of residency in their neighborhood, 90.7 percent of the residents have been living in their neighborhoods for at least 10 years. In terms of the number of school age children participants had, 55.7 percent of participants had zero whereas 43.7 percent had at least 1 child of school age. 41.7 percent of the respondents indicated that their children attend school, and 3.7 percent indicated that their children do not attend school.

Table 4.1
Demographic and Socio-Economic Characteristics of Respondents

Participants Characteristics	Total (N)	Percentage
Gender		
Male	138	46
Female	162	54
Marital Status		
Single	172	57.3
Married	106	35.3
Divorced	15	5.0
Widow or Widower	7	2.3
Age Group		
Under 30 years	69	23
31-40 years	59	19.7
41-50 years	66	22
51-60 years	90	30
Over 60 years	15	5
Length of Residency in Grenada		
1-3 years	0	0
3-5 years	1	0.3
5-10 years	7	2.3
10-20 years	87	29.0
More than 20years	205	68.3
Length of Residency in Neighborhood		
Less than 2 years	8	2.7
2-3 years	3	1
3-5 years	3	1
5-10 years	14	4.7
10-20 years	101	33.7
More than 20 years	171	57
Level of Education		
Primary	23	7.7
Secondary	46	15.3
College	134	44.7
University	94	31.3
Other	3	1
Employment Status		
Employed full-time	171	57
Employed part-time	80	26.7
Unemployed	26	8.7
Retired	13	4.3
Student	10	3.3
Number of School Age Children		
0	167	55.7
1	85	28.3
2	39	13
3 and More	7	2.4
Number of School Age Children Attending School		
Yes	125	41.7
No	11	3.7

4. 3 What are the formal and informal frameworks that guide decision making in the Ministry of Education and Physical Planning with respect to school system planning?

A formal framework is a structure that is developed by different actors, outlines relation, documented and is used as a mechanism for solving an issue. On the contrary, an informal framework is a casual or unplanned model develop by individuals to solve an issue. Data gathered from interviews with senior government officials showed that there is no formal framework that guides decision making in the Ministry of Education and the department of Physical Planning with respect to school system planning in Saint George Grenada. However to some extent an informal framework exist between the two agencies but it is not as desired.A popular response by interviewees was;"There is no formal framework or policies in place."Interestingly one of the interviewees hinted that there was a formal framework developed by the Organization of Eastern Caribbean States (OECS) with regards to planning public facilities for Small Island Developing States, however this framework is not utilized at all by the relevant authorities.

Apart from formal and informal frameworks, all of the interviewees (100%) indicated there are also no specific policies nor technical guidelines in place to guide school system planning in Saint George Grenada. This information was also confirmed during the document review exercise. A senior administrator during interviews said that there were attempts in the past to develop these standards but it never materialized. With reference to closing schools, interviewees felt that there must be valid reasons for doing so since teachers jobs are at stake, students may lose a sense of community belonging because they will have to move to a new community,andschools acts as hubs in communities so closure may cause a community to lose

its liveliness.They went on to say that closure although not frequent in Grenada is done with little dialogue from other stakeholders.

All theinterviewees are in favor of a formal and informal frameworks for guiding school system planning in Saint George and by extension Grenada. It would be nice to envision the different ministries working collaboratively (See Figure 3.10 in Chapter 3) but in a fully engaged and formal manner. They postulated that these frameworksare very important because accurate decisions about the school system has to be made in relation to the following variables: school age population trends, household sizes, mortality rates within communities, transportation systems, public amenities and the nature of the physical landscape in terms of disaster risks such as debris flow, coastal flooding, landslides, and volcanic eruptions etc. Other interviewees echoed the sentiment that both the formal and informal frameworks can lead to relationship, consensus and capacity building among stakeholders.

Some of the government officials indicated that although there is no formal and serious informal framework guiding school system planning, decisions with regards to school system planning are dominated by the Ministry of Education with directives from the government of the day.This aspect of the research findings is a bit surprising as information surface in the Education and Planning Act 2002 of Grenada, Carriacou and Petite Martinique during the document review exercise that both the Ministry of Education and the department of Physical Planning must work collaboratively to allocate lands for and determine the establishment (siting) of schools. Generally respondents are of the view that the current school system planning process is ad-hoc and haphazard in nature as there is no clear structure in place to guide the entire process, as such developmentsare evolving as the need arises with little or no comprehensive planning.

This finding is significant for a number of reasons. The section of the findings on school closure coincides well with work done by Basu 2004, Irwin and Seasons, 2012,Witten et al., 2003, and Kearns et al., 2009 which all stated that school closures are highly contentious events that are exclusionary with regards to community needs and participation. Moreover it proved that the participants have a keen interest in the school system as 98.6 percent of the questionnaire participants stated that the public should be part of the current school system planning process (See Appendix16). In addition participants are cognizant of the importance of a formal and informal structure for guiding planning surrounding the school system.Theresults of this section arealso suggesting the need for serious inclusive planning in the school system.The findings are also consistent with other studies that have been done in some parts of North America which shows that the Ministries of Education or school boards singlehandedly spearhead school system planning with little framework for guidance and inclusive planning (Mc Donald, 2010; Mckoy et al, 2008; Carey, 2011; and Vincent, 2006).Although research findings of the thesis indicated that there are no formal and serious informal frameworks including specific and technical standards guiding school system planning from a Grenadian context. According to Draxler (2012), and (2008), and Office of the Mayor Department of Education (2017), upon recent times school boards are using formal structures through public-private partnerships for holistic and successful school system planning.

4.4 What current and potential opportunities and barriers exist for the public to provide input to school system planning in Grenada?

The second research question examinesthe current and potential opportunities and barriers that exist for the public to provide input to school system planning in Saint George Grenada.Questionnaire respondents (95.3%) indicated that they were not aware of any

opportunities that exist for the public to provide input to school system planning in Saint George Grenada. A common response by interviewees was “I don’t think any exist”. Moreover the questionnaire respondents stated that they have never participated in town hall meetings, web surveys, telephone interviews and mail surveys as methods of participation in the school system planning process in their community (See Table 4.2).

Table 4. 2
Frequency of Use- Participation in the School System Planning Process

Method		N	R	S	VO	A	TOTAL	M	S
Town Hall Meetings	N	279	18	3	0	0	300	1.08	.306
	%	93	6	1	0	0			
Web Surveys	N	290	7	3	0	0	300	1.04	.248
	%	96.7	2.3	1	0	0			
Telephone Interviews	N	287	7	6	0	0	300	1.06	.316
	%	95.7	2.3	2	0	0			
Community Workshops	N	272	17	11	0	0	300	1.13	.433
	%	90.7	5.7	3.7	0	0			
Mail Surveys	N	291	7	1	1	0	300	1.04	.256
	%	97	2.3	0.3	0.3	0			

(N) Never = 1, (R) Rarely = 2, (S) Sometimes = 3, (VO) Very Often = 4, (A) Always = 5,
M=Mean, *S*=Standard Deviation.

During interviews the government officials reinforced this impression by ratingpublic involvementin school system planning at 3 on a 1-10 scale. Opportunities for the public to participate in the school system planning process need to be organized by the Ministry of Education under the directives of the ruling government. Interestingly questionnairefindings have shown that the differentgovernment ministries and departments have numerous avenues such as: memorandums, circulars, electronic mails, public service announcements, flyers, workshops and telephone thatthey use to communicate with each other**.** Further analysis of the questionnaire findings showed that these ministries or departments currently use radio, television

programs, community meetings, public service systems, brochures, newspaper and the internet to disseminate information to the public on issues. However these avenues are not use to engage the public on school system planning issues.

Most of the interviewees stated that although no opportunities currently exist for public participation, there are several avenues that the relevant authorities can explore but they are not utilizing them. A few of the interviewees indicated that in the private schools, opportunities are created through Parent Teacher Association forums but in the government (public) schools the same (PTA) body exists but it is non-functional. Against these backdrops, it is evident that there are numerous opportunities that can be employed for the public to participate in school system planning.Moreover information coming from a high level government official in the questionnaire stated that public involvement in school system planning can lead to informed decision making as there is a wider cadre of individuals giving input. In addition,communities will get the opportunity to work closer with each other thereby sharing their views of what's good for the community. Some interesting data from the questionnaire respondents revealed that generally participants are rarely involved in non-academic activities in their community schools but seem interested on matters pertaining to their children.

In addition, more questionnaire findings showed that 91.3 percent of the respondents have never participated in school system planning before (See Appendix 16). Interestingly the 8.3 percent who participated, most of the issues did not surround the school system and to some extent most of them were satisfied with the opportunities created for input. Questionnaire findings showed that the majority of participants felt it was important (92%) and that they were

interested (83%) in having opportunities to provide input to school system planning in their community.

These findings are notable since they demonstrate that community members and government officials have tremendous interest being involved in school system planning. These findings are consistent with other studies that have been done in parts of North America which show that the Ministries of Education or school boards creates very few opportunities for inclusive planning because of their silo agenda and bureaucratic structure (Carey, 2011, and Vincent, 2006).

Overwhelmingly the interviewees felt that Parent Teachers Association seminars is a cheap an effective way to engage the public. Other potential opportunities indicated by the interviewees and discoveredduring the document review were: face to face community interactions or workshops, community focus groups where the community can be segmented into (males, females, youths, senior citizens, church community, business community etc) and sessions can be held with each group. In addition, interviewees and questionnaire findings indicated that radio talk programs, television programs, public loud speaking sessions, telephone hot line programs and write in programs (internet blogs and newspapers) are very powerful tools for public engagement and consultation.

There was a strong corroboration between the three data collection methods as to the potential opportunities that exist for participation. The selection of these opportunities was based on a number of factors. For instance they were seen as: strong relationship building avenues, effective and powerful means of engagement, familiar means of engagement since the public use them to voice their concerns on other matters, cheap means of engagement, accessible means of

engagement and channels that are very easy to use. These findings are significant for they established the existence of a network of channels for public participation that can be adopted for use in the school system planning environment. More so they prove that participants are knowledgeable and confident on opportunities that will work. The findings are also consistent with other studies that have been done in some parts of North America which shows that there are several avenues where the public can voice their concern on matters (Wates, 2000; Creighton, 2005; Healey,2006, andInnes and Booher, 2010).It is important to note here that work done by Henry, 2000; Bryant and Northington, 2005, and California Environmental Protection Agency, Department of Toxic Substances Control, 2003, add to the list of potential opportunities to participation but in a different manner. These opportunities were: community mailing list, community surveys, community interviews, information sharing web site, fact sheet, newsletters, brochures, information repository, public comment periods, neighborhood walks and picnics with a public input focus.

Both the interviewees and questionnaire respondents believed that there are numerous barriers hindering the public from participating in the school system planning process. Information depicted from Table 4.3 shows that currently the main barriers to participation in the school system planning process are: “I often do not hear about these activities” (92.7 % agreeing), the wealthier individuals dominate the meetings” (81 % agreeing), “meetings are dominated by government officials most of the time” (79% agreeing), and “I’m of the opinion that my views will not be taken into consideration” (76.7 % agreeing).

Table 4.3
Barriers to Participation in the School System Planning Process in my Community

Reason		SD	D	U	A	SA	TOTAL	M	S
I travel outside of the country very often	N	185	93	6	10	6	300	1.53	.855
	%	61.7	31	2	3.3	2			
I'm very busy with work	N	152	93	9	31	15	300	1.88	1.179
	%	50.7	31	3	10.3	15			
I'm often busy with the kids	N	156	113	7	18	6	300	1.68	.931
	%	52	37.7	23	6	2			
I often do not hear about these activities	N	4	12	6	134	144	300	4.34	.816
	%	1.3	4	2	44.7	48			
I don't feel comfortable speaking in public	N	55	204	12	23	6	300	2.07	.841
	%	18.3	68	4	7.7	2			
I'm of the opinion that my views will not be taken into consideration	N	16	38	16	183	47	300	3.69	1.051
	%	5.3	12.7	5.3	61	15.7			
The wealthier individuals dominate the meetings	N	14	19	24	184	59	300	3.85	.965
	%	4.7	6.3	8	61.3	19.7			
I don't have kids in school anymore so I am not interested	N	58	212	10	16	4	300	1.99	.749
	%	19.3	70.7	3.3	5.3	1.3			
Meetings are dominated by government official most of the time	N	14	21	28	146	91	300	3.93	1.047
	%	4.7	7.0	9.3	48.7	30.3			
I don't think community members should partake in school affairs	N	191	98	5	3	3	300	1.43	.678
	%	63.7	32.7	1.7	1	1			

(SD) Strongly Disagree = 1, (D) Disagree= 2, (U) Undecided = 3, (A) Agree = 4, (SA) Strongly Agree = 5, M=Mean, *S*=Standard Deviation.

Lack of knowledge of meetings, workshops etc and lack of communication were seen as the biggest impediments to participation in the school system planning process by the interviewees. On the other hand, I often do not hear about these activities was seen as the biggest impediment to participation in the school system by the questionnaire respondents (See Table 4.3). Other barriers that were cited include: top-down arrangement of the government, strong government with little opposing forces, school policies and funding solely driven by the government so they are of the mindset that they are the one responsible and no one else, waiting period too long, lack of scientific and technical knowledge on the part of the public, cost associated with consultations

and strict ministries budgets. Interestingly the interviewees stated that the current barriers to participation may also be barriers restricting participation in the future (potential).A comparison of the questionnaire results and the interviews showed a very high level of congruence.

Moreover,findings from the questionnaireshowed that participations personal matters are not a barrier or a hindrance from them being part of the process. For instance the factors in the questionnaire in which there was a high level of disagreement amongst respondents with regards to barriers that exist for them to provide input in the school system planning process are as follows (See Table 4.3): I don't think community members should partake in school affairs with 96.4 percent disagreeing, I travel outside of the country very often with 92.7 percent disagreeing, I don't have kids in school anymore so I am not interested with 90.4 percent disagreeing, I am often busy with the kids with 89.7 percent disagreeing,I don't feel comfortable speaking in public with 86.3 percent disagreeing, andI am very busy with work with 81.7 percent disagreeing.

It is perceived by the government officials in particular, that although individuals are willing to participate in the process and that their personal factors are not a hindrance to participation, other personal issues within communities such as: race, color, ethnicity (culture) can pose some challenges.These concerns have been shown to have negative effects on community development and the way in which society perceived government (Wilson, 2015, and Craig et al, 2011). Theliterature revealed that many of these barriers (findings) are associated with the government of the day mission or ideologies (Vincent, 2006; Creighton, 2005; Innes and Booher, 2010; Earthman, 2000, and Craig et al, 2011). Nevertheless government needs to set the stage and create the platform for positive change, if they want the planning process for such important public facility (schools) to improve. According to De Filippis and Saegert (2013), and

Phillips and Pittman (2014), government role is a pre-requisite for success in community development.

Meanwhileother current barriers discovered in the literature but differ from the research findings include: residents see school districts as experts and defer to themPoynton, (2012), tensionin relationships between school districts and residents Doble Research Associates, (2000), and lack of monitoring in the school system planning process especially where law encourages coordinated planning in the process (Bryant and Northington, 2005).Other barriers noted were: the relevant authorities are of the view that public involvement will increase the cost of the project Bryant and Northington, (2004), and school projects are often done under intense political pressure with a fear that once money is available for a project it will disappear if it is not used immediately, hence the need for swift action (Bryant and Northington, 2004). In addition, fragmentation and extreme individualism have negatively impacted the tradition of citizen engagement, causing individuals to withdraw from civic life (Harwood, 2005). It is important to note that although the research findings showed that residents' personal matters are not a hindrance to them being part of the process, work put forward by Putnam, (2000) and Mathews, (2006), showed that a common barrier to participation in school system planning is individuals' lack of interest due to changes in generational values.

4.5 How can the current school system planning process in Grenada be transformed to a more participatory or communicative form?

The interviewees suggested a number of ways by which the process can be transformed. These included: the policy makers have to enact legislations for public involvement in school system planning, donor agencies should mandate a participatory approach with regards to the development of schools, technocrats and administrators should be allow to do their work freely

with no political interference, inform and educate the public as to what are the plans for schools and get them to build consensus on issues, the Ministry of Education must make it their duty to involve other stakeholders in school affairs because school is everyone business and not only the government and innovative and creative participatory channels need to be created with the view in mind of meeting people where they are. Some of these findings were also discovered in the Planning and Education Acts 2002 during the document review exercise.

The questionnaire respondents also put forward some strategies which can enable the school system planning process to be more participatory. They include: creating a variety of opportunities for the public to give input at every stage of the process, assuring the economically and socially weak that their inputs is just as important as the economically and socially strong, allowing for the democratization of professional experts and officials, making legal provisions through the Education or Planning Act for mandatory public participation and assuring the public that the final decision is a reflection of their input (See Table 4.4).

Table 4.4
Ways the School System Planning Process can be More Participatory

Factors Rated		SD	D	U	A	SA	TOTAL	M	S
Creating a variety of opportunities for the public to give input at every stage of the process.	N	0	3	3	118	176	300	4.56	.573
	%	0	1	1	39.3	58.7			
Assuring the economically and socially weak that their inputs are just as important as the economically and socially strong.	N	0	0	2	119	179	300	4.59	.506
	%	0	0	0.7	39.7	59.7			
Making legal provisions through the Education or Planning Act for mandatory public participation.	N	3	12	12	90	183	300	4.46	.831
	%	1	4	4	30	61			
Allowing for the democratization of professional experts and officials.	N	0	0	18	94	188	300	4.57	.606
	%	0	0	6	31.3	62.7			
Assuring the public that the final decision is a reflection of their input.	N	0	4	4	98	194	300	4.61	.589
	%	0	1.3	1.3	32.7	64.7			

(SD) Strongly Disagree = 1, (D) Disagree = 2, (U) Undecided = 3, (A) Agree = 4, (SA) Strongly Agree = 5,*M*=Mean, *S*=Standard Deviation.

It is important to note that all five strategies recorded a very high degree of agreement (96%) with an overall mean score of (4.56).

Citizens and government officials' also exhibited a high level of willingness and concern on land use activities around schools. Although the majority of them did not have knowledge of land use activities negatively influencing schools, those who had were able to give valid examples which lead to great cause for concern (See Appendix 20). Nevertheless many suggested that recreation, agriculture, green infrastructure, and light businesses are appropriate land uses that can enhance the teaching and learning environment (See Appendix 21). Against this backdrop, they favored stakeholders such as the Ministry of Education, Department of Physical Planning, local council and community organizations as key players in assessing the impact of land use change proposals on local students and schools (See Appendix 33). The relevant authorities should seize this strong support going forward in developing the school system planning process.

The idea to enact polices or laws to involve individuals on matters affecting their lives are congruent with assertions by (Alberta Teachers Association, 2012, and Creighton, 2005). Generally this finding is in harmony with work done by Innes and Booher, (2010); Healey,(2006), and Arnstein, (1969) which speaks about administrators reaching out to the public (being democratic), creating avenues for the public to give input on issues and taking this input into consideration when making a decision so that individuals may feel empowered.On the contrary, other actions needed for a participatory school system planning process that differs from the research findings include: the relevant authority must make available knowledge, understanding and skills needed for shared decision making since research has shown that

effective school system planning occurs through collegial efforts Little, (1981), the relevant authorities must have a sense of trust, openness, and risk taking, and the focus must be on creating an environment of decentralization with a high emphasis on shared decision making (Corbett and Blum, 1992, and Hill and Bonan,1991). Another action cited was those who have the strongest personal stake in and the most immediate connection to the school system should be given the opportunity to tackle school issues (Murphy, 1989, and Patrinos and Fasih, 2009). In addition, Dash and Dash (2008), indicated that school is a place that deals with human as such students, teachers, and community members must be integral partners in school system planningdecisions at all levels. Overall these findings endorse the participatory principles that the thesis is strongly advocating.

4.5.1 What are the implications of a participatory school system planning process?

This section is linked to research question 3 and it analyses and discusses the implications of a participatory school system planning process as well as a mechanism suggested by the interviewees to guide school system planning now and in the future. It is the firm belief by both questionnaire participants and the interviewees that a participatory school system planning process will do more good than harm. Findings from both the interviewees and questionnaire respondents highlighted the following positive outcomes of a participatory school system planning process: better decision making as a wealth of information can be generated from a wider cross section of persons, there may be a more holistic approach towards the fulfillment of school projects, greater diplomatic ties can be forged especially where there are international donor organizations funding school projects, and more transparency and accountability can occur. Other vital outcomes as evident in Table 4.5 were: the community stands to benefit in the long run as schools can serve as community schools, schools may be in an environment that is

conducive for teaching and learning, a better community and school relationship can emerge in particular where the business community sponsor or fund several school projects, individuals may feel empowered in that they have helped make an important decision, community members may have information government officials don't haveand public-private partnerships may be fostered.

Table 4.5
Advantages of Strengthening Community Participation in School System Planning

Factors Rated		SD	D	U	A	SA	TOTAL	M	S
Community members provide information that government officials do not have	N	1	4	9	125	161	300	4.47	.656
	%	0.3	1.3	3	41.7	53.7			
Better decisions can be made	N	1	0	5	143	151	300	4.48	.569
	%	0.3	0	1.7	47.7	50.3			
Stronger ties between community and school	N	1	1	2	138	158	300	4.50	.570
	%	0.3	0.3	0.7	46	52.7			
Can reduce wastage of resources (financial resources)	N	0	1	10	140	149	300	4.46	.580
	%	0	0.3	3.3	46.7	49.7			
Can foster private-public partnerships on various school projects	N	0	2	6	134	158	300	4.49	.575
	%	0	0.7	2	44.7	52.7			

(SD) Strongly Disagree = 1, (D) Disagree= 2, (U) Undecided = 3, (A) Agree = 4, (SA) Strongly Agree = 5,*M*=Mean, *S*=Standard Deviation.

On the contrary, questionnaire data presented in Table 4.6 indicates that the main disadvantages of the participatory school system planning process are:"dominance by government officials" (82.3 % agreeing), and "failure to consider input from all community members" (74.6% agreeing). It is worthy to note that thesefindings areconfirmed in work done by: Friedman, 1973; Healey, 2006; Creighton, 2005, and Earthman, 2013, which speaks about

the tendency of administrators to believe that community persons lack scientific knowledge and therefore cannot provide input on important issues.

Table 4.6
Disadvantages of a Participatory or Communicative School System Planning Process

Factors Rated		SD	D	U	A	SA	TOTAL	M	S
Prolong decision making period	N	138	90	15	47	10	300	2.00	1.201
	%	46	30	5	15.7	3.3			
Highly controversial environment	N	124	107	21	44	3	299	1.98	1.080
	%	41.3	35.7	7	14.7	1			
Wastage of financial resources	N	122	126	25	24	3	300	1.87	.941
	%	40.7	42	8.3	8	1			
Dominance by government officials	N	5	21	27	156	91	300	4.02	.909
	%	1.7	7	9	52	30.3			
Failure to consider input from all community members	N	37	24	15	142	82	300	3.69	1.290
	%	12.3	8	5	47.3	27.3			

(SD) Strongly Disagree = 1, (D) Disagree= 2, (U) Undecided = 3, (A) Agree = 4, (SA) Strongly Agree = 5, M=Mean, *S*=Standard Deviation

Findings from interviewees were also congruent with questionnaire data. Most interviewees felt that the planning process can be slow, chaotic and there might be wastage of time and resources only if the process is not structured and administered properly.

It is important to reiterate that although participants foresee these shortcomings, the general consensus from citizens and government officials is that once the process is structured, administered and managed properly, these shortcomings might be minimized. All the interviewees (100%) who are all senior government administrators asserted that there is a need for a regulatory and governance framework with a strong participatory element in the school system planning process in Saint George and by extension Grenada. They were cognizant of the

fact that it will not be an overnight process and suggested some actions that can be employed to make it a reality.

For instance, funding institutions should dictate the process for school development which may lead to the government putting structures in place to guide the planning process for school system. In addition, there should be greater linkages with regional and international governments, wherebyplanning mechanisms for schools can be adopted. Other actions cited are: conducting a series of stakeholders' workshop whereby the relevant stakeholders can be identified to be part of the process through a policy approach, and the ruling government changing their authoritative ideologies.

They argued that once the framework is realized the following may happen: collaborative planning may be enhancedand this may help to reduce financial, social and physical risks associated with the school system, there might be greater formality, transparency and accountability in school system planning issues, there mightbe more sustainable schools leading to effective teaching and learning hence well-educated students. Other ideas noted were: the framework may minimize obstacles to information and as such promote easier access to valuable information that is needed to make informed decisions.These findings are significant for they give valid information on a course of actions that can be adopted for success in school system planning in Grenada. They also prove that participants are serious, willing and eager to be part of the process. The findings are also consistent with literature put forward by (Council of Educational Facility Planners International and the United States Environmental Protection Agency, 2004; Khalil and Ibrahim, 2012; Creighton, 2005, and Wates, 2000) with regards to the positive outcomes of a participatory school system planning process. Generally these findings

support the core principle (public participation) of the thesis with respect to school system planning in Saint George Grenada.

4.6 Summary

The interviewees overwhelmingly stated that there are no formal framework including specific policies and technical guidelines in the Ministry of Education and the department of Physical Planning with regards to school system planning. Both questionnaire participants and the interviewees felt that there were no opportunities currently available for them to give input in the school system planning process. Nevertheless they put forward several potential opportunities for participation. In addition, current and potential barriers to participation were identified and the interviewees indicated that these current barriers may also be potential barriers to participation in the future. Both the citizens and government officials are of the strong opinion that they should be an integral part of the school system planning process and that the current process should be more participatory in nature. They indicated various strategies that must be employed for this to happen. A number of advantages and a few disadvantages of the participatory planning process were identified. Moreover, the interviewees were confident that once the process is well structured and managed, the disadvantages may be minimized. Due to the fact that the participatory process may do more good than harm, there was unanimous support for the development of a regulatory and governance framework with a strong participatory element to guide the process. Interviewees were cognizant of the fact that it will not be an overnight process and indicated that the greatest action leading to its realization is for the ruling government to change their authoritative ideologies.

CHAPTER 5

CONCLUSION AND RECOMMENDATIONS

5.1 Introduction

This thesis was motivated by the need for research that explores public participation in school system planning. In particular, this thesis focused on assessing school system planning for primary and secondary schools in Saint George Grenada. Three main research questions and three research objectives were addressed in the thesis (See Chapter 1). This concluding chapter highlights how the research objectives were addressed. Further, it outlines some recommendations for improvement and limitations of the study. The section culminates with some closing remarks.

5.2 Evaluation of Research Objectives

Objective 1: to examine planning frameworks and processes on school system planning across pertinent government ministries.

This objective was addressed by findings from the field observations,document review and interviews. There was overwhelming support from the interviewees as well as evidence discovered from the documents reviewed and field observations that there are no formal andserious informal planning frameworks and processes on school system planning across pertinent government ministries. In addition the poor location of primary and secondary schools in the parish of Saint George as well as other parishes including numerous cases of incompatible land uses around schools that was discovered during field observations is a clear manifestation of the lack of planning frameworks and processes between the relevant government ministries.

Objective 2: to examine current participation methods and policies in the siting of a new school, expansion or closure of an existing school (school system planning) in Saint George Grenada.

This objective was addressed by findings from the document reviews, questionnaire and interviews. The consensus among participants is there are no current methods of participation with regards to school system planning in Saint George Grenada. Nevertheless interviewees indicated numerous opportunities for participation such as:Parent Teacher Association (PTA) seminars, face to face community interactions, community workshops and community focus groups, radio talk programs, television programs, public loud speaking sessions, telephone hot line programs and write in programs. With reference to current policies in school system planning, all the interviewees claimed there are no specific policies in place for school system planning.

Objective 3: to formulate recommendations that may lead to the development of a framework for enhancing community input in school system planning now and in the future.

This objective was addressed by findings from the document review, field observations, questionnaire and interviews. It was claimed that there is a need for a framework to enhance community input in school system planning now and in the future. There was unanimous support and a high level of willingness from questionnaire respondents and interviewees for the public to be actively involved in school system planning in their community. More so these participants also identified essential actions that are necessary for the development of such a framework. In addition, the document review highlighted the need to incorporate other stakeholders in school system planning. In brief this information allowed the researcher to put forward a strong participatory case in the recommendation section of the thesis. Also field observations allowed the researcher to capture first hand evidence of the poor location of some primary and secondary

schools and the incompatible land uses that are negatively affecting schools. This in turn allowed the researcher to advocate for the need of community base school system planning.

5.3 Planning a School System: Recommendations

1) Identification of community stakeholders: there should be a series of stakeholders' workshops at the community level where the relevant stakeholders are identified to be part of the school system planning process. The stakeholders can be:

Physical Planning officials, Ministry of Education administrators, a representative for teachers, principals, local community organizations, businesses, churches, non- governmental organizations, and students. In brief, these stakeholders should form what is called the Community School System Planning Committee (CSSPC).

2) The (CSSPC) should develop a long range school facilities plan through sound data collection and set forward strategies that support future growth and development. The CSSPC should play an integral role in the identification of environmentally desirable potential school locations and establishing school closure and expansion criteria.

3) The (CSSPC) should develop a communication plan to ensure meaningful public involvement in siting, expansion or closure of a school. The plan should include a schedule of delivery methods of information to the public, identify ways for the public to fully participate throughout the process, giving timely notices about plans and critical decision points (United States Environmental Protection Agency, 2011).

4) In addition, the (CSSPC) should publicize the release of plans and reports, the commencement of public comment periods, and the dates of public hearings through written notices that are:

- Composed in language that is clear to all stakeholders in the community;
- Placed conspicuously in schools or delivered to parent-teacher organization plans to close or expand an existing school;
- Delivered to businesses, residents, churches, neighborhood organizations in the community, school to be closed or expanded;
- Disseminated on the internet through websites and social media (e.g. Facebook, Twitter, blogs etc) (US EPA, 2011).

5) Public comments received on plans and reports should be made available on all non-final actions, and the (CSSPC) should provide responses to these comments (USEPA, 2011).

6)In brief, these recommendations should help trigger the development of a framework for enhancing community input in school system planning issues.

5.4 Limitations of the Study

The research objectives outlined in the thesis were successfully fulfilled, however a number of limitations posed some challenges. The main limitation of the research was time. Time was just not enough. If time was sufficient, may be different aspects of the thesis could have been expanded upon. For instance,two or three parishes would have been surveyed instead of one, more interviews would have been conducted with other government agencies and even with residents, and other data collection methods such as focus groups would have been utilized for a more in-depth understanding of the topic under investigation.In addition governance

structures in school system planning in Grenada including other territories in the Lesser Antilles would have been explored. Another major limitation was the difficulty in finding an appropriate time for the interviews with most of the government administrators. To address this limitation, three different times on three different days were set up and consultations were ongoing until one of the schedule times was met. There were a few instances where interviews were rushed because interviewees had other engagements. In addition, some of the residents from the different communities in Saint George were unwilling to complete the questionnaire even though they gave the assurance that they will participate. To address this limitation more time was spent educating residents about the importance of the study and how they can benefit from the study. In some cases residents completed questionnaires on the spot with step by step assistance from the researcher. Some residents even lost their questionnaire and had to receive an alternative one. Moreover, these issues did not prevent the completion of the thesis but allowed the researcher to be strategic during the course of the thesis.

5.5 Concluding Remarks

There is overwhelming evidence that the current school system planning process in Saint George Grenada is spearheaded by the Ministry of Education with directives from the ruling government. The planning process for primary and secondary schools appears to be ad-hoc as there are no formal framework or specific policies guiding the process. In addition, opportunities are not created for the public to participate in the planning process. Nevertheless, the public is willing and enthusiastic to be part of the process and is of the firm belief that there are several avenues the relevant authorities can adopt to engage them. They are quite confident that there are several merits to be gained if the current process is made to be more participatory in nature. They are also cognizant of the fact that this will not be an overnight process and that change must first

start with the ruling government changing their authoritative ideologies. In that regard they claimed that school system planning now and in the future can be more efficient and effective if guided by a regulatory and governance framework with a strong participatory element.

REFERENCES

Alberta Teachers Association. (2012). *A great school for all: Transforming education in Alberta.* Edmonton, Alta: Alberta Teachers' Association.

Alexander, D., and Lewis, L. (2014). *Condition of America's public school facilities: 2012-13 (NCES 2014-022)*. U.S. Department of Education. Washington, DC: National Center for Education Statistics.

Amram, O., Abernethy, R., Brauer, M., Davies, H., and Allen, R.W. (2011). International journal of health proximity of public elementary schools to major roads in Canadian urban areas. *Geographics, 10,* 68.

Arnstein, S. R.S. (1969). A ladder of citizen participation. *Journal of the American Institute of Planners, 35,* 216-229.

Babbie, E. (2004). *The practice of social research.*(10th ed.) Canada: Wadworth.

Basu, R. (2004). A Flyvbergian perspective on public elementary school closures in Toronto: A question of rationality or power? *Environment and Planning C,* 22, 423-451.

Benedict, M. A., and Mc Mahon, E. T. (2006). *Green infrastructure; linking landscapes and communities*. Washington, DC: Island press.

Blasik, K., Knight, K., and Till, F. (2002). The shape of choice in urban schools. *Paper presented at the meeting of the Council of the Great City Schools,* Fort Lauderdale, Florida.

Boser, U. (2013). *Size matters: A look at school district consolidation.*

Broadbent, J., and Guthrie, J. (2007). *Public sector to public services: 20 years of contextual Accounting research.* Paper for Accounting Auditing and Accountability Journal.

Brown, D. J. (2001).*Using surveys in language programs*. Cambridge: Cambridge University Press.

Brunekreef, B., and Holgate, S.T. (2002). Air pollution and health. *The Lancet 360,* 1233-1242.

California Department of Health Services (CDHS). (1998). *Advisory on relocatable and renovated classrooms*. Berkeley, California: Indoor Air Quality Section, Environmental Health Laboratory Branch.

Bryant, L. and Northington, K. (2005).Planning for schools & liveable communitiesfor generations to come: A leadership guide to renewing public school buildings.The Oregon school siting handbook.

California Envronmental Protection Agency, Department of Toxic Substances Control (2003). Public Particpation Plan. Central Los Angeles High school #11. Los Angeles California.

Carey, K.D. (2011). *School district master planning: A practical guide to demographics and .facility planning*. United States of America: Rowman and Littlefield-Education.

Carlisle, A. J., and Sharp, N.C.C. (2001). Exercise and outdoor ambient air pollution. *British Journal of Sports Medicine, 35,* 214-222.

Causa, O. and Chapuis .C. (2009). *Equity in student achievement across OECD countries: An investigation of the role of policies,* OECD Economics Department Working Papers 708, OECD, Economics Department.

Collymore, J. (2009). The need for planners and a comprehensive planning process in school location planning in Trinidad and Tobago. Presented at the UK-Ireland Planning and Research Conference, 1-3 April, Newcastle, U.K.

Corbett, H. D. & Blum, R. E. (1992). *Thinking backwards to move forward.* Unpublished manuscript, Research for Better Schools, Philadelphia.

Council of Educational Facility Planners International. (2004). *Creating connections: The CEFPI guide for educational facility planning.*Scottsdale, AZ: Council ofEducation Facility Planners International.
Council of Educational Facility Planners International and United StatesEnvironmental Protection Agency. (2004). *Schools for successful communities: An element of smart growth.* Scottsdale, AZ: Council ofEducation Facility Planners International.
Craig, G., Mayo, M., and Popple, K. (2011).*The community development reader. History, themes and issues*. United Kingdom: Policy Press Publishing.
Creighton, J.L. (2005).*The public participation handbook: Making better decisions through citizen involvement*. San Francisco: Jossey-Bass.
Creswell, J. W. (2013).*Qualitative inquiry and research design: Choosing among five approaches*. Thousand Oaks, California: Sage.
Cunha, F., and Heckman, J .J. (2007). The evolution of inequality, heterogeneity and uncertainty in labor earnings in the US economy.*NBER Working Paper No 13526*.Cambridge: National Bureau of Economic Research.
Cutler, A. (2004). Methodical failure: the use of case study method by public relations researchers. *Public Relations Review, 30*, 365-375.
Dash, M. and Dash, N. (2008). *School management.* New Delhi India: Atlantic Publishers & Distributors.
De Filippis, J., and Saegert, S. (2013). *The community development reader*. New York: Routledge Publishing.
Department of Basic Education Republic of South Africa. (2013). The internal efficiency of the school system. *A report on selected aspects of access to education, grade repetition and learner performance.*
Department of Education. (2013). Review of efficiency in the schools system.
Doble Research Associates, 2000. *Public schools: Are they making the grade?* NIF Report on the Issues. National Issues Forum Institute.
Donoghue, M.O. (2009). *Economic dimension in education*. New Brunswick, NewJersey: Transaction Publishers.
Dörnyei, Z. (2007). *Research methods in applied linguistics: Quantitative, qualitative and mixed methodologies*.Oxford: Oxford University Press.
Draxler, A.(2012). International PPPs in education: new potential or privatizing public goods? In: Robertson, S., Mundy, K., Verger, A., and Menashy, F. (eds.).*Public private partnerships in education: New actors and modes of governance in a globalizing world*. Northampton MA:Edward Elgar.
Draxler, A.(2008). New partnerships for education: building from experience. UNESCO and World. Economic Forum, Paris and Geneva
Earthman, G.I. (2013). *Planning educational facilities: What educators need to know*. (4th ed.) United States of America: Rowman and Littlefield-Education.
Engberg, J., Epple, D., Gill, B., Sieg, H., Zamarro, G., and Zimmer, R. (2013). Closing schools in a shrinking district: Does student performance depend on which schools are closed? *Paper presented at the Association for Education Finance and Policy 36th Annual Conference.*
Faludi, A.(2013). A reader in planning theory. *Urban and regional Planning Series,* 5.
Faubert, B. (2012). In-school policies and practices for overcoming school failure: Aliterature review. *OECD Education Working Paper*, Paris: OECD.

Field, S., Kuczera, M., and Pont, B. (2007). *No more failures: Ten steps to equity in education.* Paris: OECD.
Finn, J., and Jacobson, M. (2008). *Just practice: A social justice approach to social work.* Peosta, Iowa: Eddie Bowers publishing.
Gerring, J. (2004). What is a case study and what is it good for? *American Political Science Review, 98*(2), 341-354
Gillham, B. (2000). *The research interview*. London: Continuum
Grenada age structure. (2016, November 10). Retrieved from http://www.indexmundi.com/grenada/age_structure.html
Grenada gravel concrete: Corporate information. (2016, November 5). Retrieved from http://gravel.gd/information.htmGrenada ports authority
Grenada ports authority. (2016, November 5). Retrieved fromhttp://www.grenadaports.com/index.php?option=com_content&view=article&id=78&Itemid=504
Gurke, D. (2008). *Deliberation and the equity task force in the Madison metropolitan school district.* Madison, WI: University of Wisconsin
Gurwitt, R. (2004, March). Edge-ucation: what compels communities to build schools in the middle of nowhere? *Governing the States and Localities* [Newspaper].
Hamilton, A. (2015). Deputy Director of Social Services Department in the Ministry of Social Development Grenada, Carriacou and Petite Martinique.
Harwood, R. (2005). *Hope unraveled: The people's retreat and our way back.* Dayton, OH: Charles F. Kettering Foundation.
Hatch, J. A. (2002). *Doing qualitative research in education settings.* Albany: StateUniversity of New York Press.
Healey, R.(2006). *Collaborative planning: Shaping places in fragmented societies*. (2nd ed.) London: MacMillan Press.
Health Effects Institute. (2010). Traffic-related air pollution: A critical review of the literature on emissions, exposure and health effects. *Special report 17*. Boston, Massachusetts: Health Effects Institute (HEI).
Heckman, J. J. (2011). The economics of inequality: The value of early childhood education. *American Educator*, 35(1), 31-35.
Heckman, J. J. (2008). The case for investing in disadvantage young children, big ideas for children: Investing in our nation's future, Washington DC: First Focus.
Hedges, B. (2004). Sampling. In C. Seale (ed.), *Social research methods: a reader* (pp. 63-72). New York: Routledge.
Hermanowicz, J. C. (2002). The great interview: 25 strategies for studying people in bed. *Qualitative Sociology*, 25(4), 479-499.
Henry, S. (2000). *Community participation methods in design and planning*. Hoboken, New Jersey: John Wiley & Sons.
Hernandez, S., Cohen, J., and Garcia, H. (1996). Residents' attitudes towards an instant resort enclave. *Annals of Tourism Research, 23*(4), 755-779.
Hill, P. T.,& Bonan, J. (1991). *Decentralization and accountability in public education.* Santa Monica, CA: Research and Development.
Hsieh, H., & Shannon, S. (2005). Three approaches to qualitative content analysis. *Qualitative Health Research, 15*(9), 1277-1288.
Hudman, L.E., and JacksonR. H. (2003). *Geography of travel and tourism*. Boston, United States of America:Cengage learning.

Innes, J. E., and Booher, D. E. (2010).*Planning with complexity: An introduction to collaborative rationality for public policy* London, New York: Routledge.
International County Management Association (ICMA). (2008). *Local governments and schools: A community oriented approach*. Washington, DC: Sharp, M.
Iowa Department of Natural Resources. (2010). *The benefits of trees and forest*. Iowa: Division of Forestry.
Irwin, B. and Seasons, M. (2012). School closure decision-making processes: Problems and prospects. *Canadian Journal of Urban Research*, 21(2), 1-23
Isaac, E. (2015). Senior Administrative and Youth Affairs Officer in the Ministry of Social Development and Housing Grenada, Carriacou and Petite Martinique.
Jerrett, M., Almanza,E., Davies,M., Wolch, J., Dunton, G., Metz, D. S., and Mary Ann Pentz, M.A. (2013). Smart growth community design and physical activity in children. *AmericanJournal of Preventitive Medicine, 45*(4), 386-392.
Kearns, R.A., Lewis,N., McCreanor,T., and Witten, K.(2009). The status quo is not an option: Community impacts of school closure in South Taranaki, New Zealand. *Journal of Rural Studies,* 25, 131-140.
Kellogg,W.K. (WKKF) (1998). *Evaluation Handbook.* Battle Creek, Michigan.
Khalil, R.F., and Ibrahim, H.G.A. (2012). Optimizing school siting in Doha, Qatar. *International Conference on Management, Applied and Social Sciences*, 371-379.
King, R. A., Swanson, A, D., and Sweetland, S. R. (2003).*School finance: Achieving high standards with equity and efficiency*. (3rd ed). Needham Heights, Massachusetts:Allyn & Bacon Longman Publishing.
Kjell, N. (2011). *Forest, trees and human health*. New York:Springer.
Kowalski, T.J.(2002). *Planning and managing school facilities*.(2nd ed.)Santa Barbara, California:Greenwood Publishing Group.
Krueger, A. (2002). Understanding the magnitude and effect of class size on student achievement. In Krueger, A., Hanushek, E., and Rice, J.K. (eds.). *The class size debate*. Washington D.C:Economic Policy Institute.
Kulkarni, N., and Grigg, J. (2008). Effect of air pollution on children. *Paediatrics and Child Health, 18,* 238-243.
Lacasaña, M., Espluges, A., and Ballester, F. (2005). Exposure to ambient air pollution and pre-natal and early childhood effects. *European Journal of Epidemiology, 20,* 183-189.
Ladd, H. F., and Fiske, E.B. (2008). *Handbook of research in education finance and policy.* New York: Routlegde Publishing.
Lagee, A. (2015). Deputy Chief Executive Officer of the Physical Planning Unit Grenada, Carriacou and Petite Martinique.
Lane, M.B. (2005).Public participation in planning: An intellectual history.*Australian Geographer* (36)3, 283- 299.
Leach, J.(2004). *A course in public Economics*. Cambridge, United Kingdom: Cambridge University Press.
LeCompte, M. D., and Schensul, J. J. (1999). *Designing and conducting ethnographicresearch* (Ethnographer's toolkit, Vol. 1). Walnut Creek, California: AltaMira
Le Grand, J.(2009). *The other invisible hand: Delivering public services through choice and* Competition Princeton, New Jersey: Princeton University Press.

Leithwood, K.A.,Allison, P.A., and Canadian Education Association. (2004). Parents participation in school improvement processes. *Final report of the parent participation in school improvement planning project.* Toronto: Canadian Education Association.
Lemberg, D. S. (2004). Spatial analysis and modeling for the school district planning problem. In *Worldminds: Geographical perspectives on 100 problems* (pp. 119-124). Springer: Netherlands.
Linden, R. (2002). *Working across boundaries: Making collaboration work in governmentand non-profit organizations*. San Francisco: Jossey-Bass.
Little, J. W. (1981). *School success and staff development in urban desegregated Schools: A summary of recently completed research.* Boulder, CO: Center for Action Research.
Liu, L., and Zhang, J. (2009). Ambient air pollution and children's lung function in China. *Environment International, 35*, 178-186.
Marshall, C., and Rossman, G. B. (2006). *Designing qualitative research.*(4th ed.) Thousand Oaks, California: Sage.
Mathews, D. (2006). *Reclaiming public education by reclaiming our democracy*. Dayton, OH: Kettering Foundation.
Mc Donald, C. N. (2010). School siting: contested visions of the community school. *Journal of the American Planning Association*, 76(2), 184-198.
Mckoy, D., Vincent, J.M., and Makarewicz, C. (2008).Integrating infrastructure planning: the role of schools.*Access*,*33*,18-26.
Mejia, J. F., Choy, S.L., Mengersen, K., and Morawska, L. (2011). Methodology for assessing exposure and impacts of air pollutants in school children: Data collection, analysis and health. effects - A literature review. *Atmospheric Environment, 45*, 813-823
Mellor, J.M., Dolan, C.B., and Rapoport, R.B. (2011). Child body mass index, obesity, and proximity to fast food restaurants. *International Journal of Pediatric Obesity, 6*, 60-68.
Ministry of Agriculture, Fisheries and Forestry,Land Use Division Grenada, (2015).Botanical Gardens Tanteen St. George's Grenada.
Ministry of education and human resource development Grenada. (2016, November 20). Retrieved from http://www.moegrenada.org/
Ministry of Education. (2015). Botanical Gardens Tanteen St. George's Grenada.
Ministry of Education: Education Statistical Digest.(2012-2013).Botanical Gardens Tanteen St. George's Grenada.
Ministry of Education Project Management Unit Grenada, (2015). Botanical Gardens Tanteen St. George's Grenada.
Mirabelli, M.C., Wing, S., Marshall, S.W., and Wilcosky, T.C. (2006a). Asthma symptoms among adolescents who attend public schools that are located near confined swine feeding operations. *Pediatrics, 118*, 66-75.
Mitchell, D.E., Batie, M., and Mitchell, R. E. (2010).The contributions of school desegregation to housing integration: Case studies in two large urban areas. *Urban Education, 45*(2), 166-193.
Mitchell, G. (2015). Chief Medical Officer in the Ministry of Health and the Environment Grenada, Carriacou and Petite Martinique.
Mitchell, N. (2013). *Dynamics of urban St George*. Bloomington, Indiana: Xlibris Corporation Publishing.

Monse, B., Benzian, H., Naliponguit, E., Belizario, V., Schratz, A., and Helderman, W.V. P. (2013). The fit for school health outcome study – a longitudinal survey to assess health Impacts of an integrated school health programme in the Philippines. *BMC Public Health, 13*, 256.National Center for Education Statistics, 2014)

Murphy, J. T. (1989). The Paradox of decentralizing schools lessons from business, government, and the Catholic Church.*Phi Delta Kappan* 70: 808-812.

New England School Development Council (NESDC)(2012). Demographic study and long range school facilities plan Simsbury, Connecticut. Marlborough, MA.

Newman, W. (2004). *Basics of social research: qualitative and quantitative approaches.* Toronto, Canada: Pearson Education, Inc.

New Mexico Department of Transportation. (2010). *Principles of new school location planning.* New Mexico: Frost,J.

Office of the Mayor Department. (2017). New York City Community Schools Strategic Plan.New York City.

Ontario Ministry of Education. (2006). Pupil accommodation review guidelines. Retrieved from the World Wide Web on May 25th, 2016: http://www.edu.gov.on.ca/eng/policyfunding/ reviewGuide.pdf

Open street map, (2017, January 10). Retrieved from http://www.openstreetmap.org/

Pal, S. (2010). Public infrastructure, location of private schools and primary schoolattainment in an emerging economy. *Economics of Education Review*,*29*, 783-794.

Patrinos,H. A., and Fasih., T. (2009).*Decentralized decision-making in schools: The theory and evidence on school-based management*. Washington DC: World Bank Publication.

Patton, E., and Appelbaum, H. (2003). The case for case study in management. *Management Research News, 26*(5), 60-71.

Patton, M. (2002). *Qualitative research and evaluation methods*. (3rd ed.) Thousand Oaks, California: Sage Publications, Inc.

Phillips, R., and Pittman, R. (2014).*An introduction to community development*. New York: Routledge Publishing.

Physical Planning and Development Control Act of Grenada.(2002). Saint George, Grenada: Physical Planning Unit.

Pincetl, S., and Gearin, E. (2005). The reinvention of public green space.*Urban Geography, 26*(5), 365–384.

Pope III, C. A.,andDockery, D.W. (2006). Health effects of fine particulate air pollution: lines that connect. *Journal of the Air and Waste Management Association56*,709-742.

Population and Housing Census. (2011). Grenada: Central Statistical Office.

Poria, Y., Reichel, A., and Biran, A. (2006a). Heritage site perceptions and motivations to visit. *Journal of Travel Research, 44*(3), 318-326.

Poria, Y., Butler, R., and Airey, D. (2004a). The meaning of heritage sites for tourists: the case of Massada. *Tourism Analysis, 9*, 15-22.

Poria Y., Butler, R. and Airey, D. (2003). The core of heritage tourism. *Annals of Tourism Research, 30*(1), 238-254.

Potter,W.(1996).*An analysis of thinking and research about qualitative methods*. Mahwah New Jersey: Lawrence Erlbaum Associates.

Poynton, J. (2012). *Organizational training and relationship building for increasing public participation in a public school district* (Doctoral Dissertation). Retrieved from http://files.eric.ed.gov/fulltext/EJ1058485.pdf

Purcell, F. (2015). Chief Executive Officer of the Physical Planning Unit Grenada, Carriacou and Petite Martinique.
Putnam, R. D. (2000). *Bowling alone: The collapse and revival of American community.* New York, NY: Simon and Schuster.
Rahim, A., and Baksh, M. (2003). Case study method for new product development in engineer-to-order organizations. *Work Study, 52*(1), 25-36.
Ready, D., Lee, V., and Welner, K.G. (2004). Educational equity and school structure: School size, overcrowding, and schools-within-Schools. *Teachers College Record, 106*(10), 1989-2014.
Ren, C., and Tong, S. (2008). Health effects of ambient air pollution - Recent research development and contemporary methodological challenges. *Environmental Health,7*, 56.
Richardson, E., Pearce, J., Mitchell, R., Day, P., and Kingham, S. (2010).The association between green space and cause-specific mortality in urban New Zealand: An ecological analysis of green space utility. *BMC Public Health, 10*, 240.
Richie, B. and Inkari, M. (2006). Host community attitude toward tourism and cultural Tourism development: the case of the Lewes District, Southern England. *International Journal Of Tourism Research, 8*, 27-44.
Salmon, L. (2008, September 13). The second Spanish conquest of Jamaica. *The DailyGleaner* [newspaper]. Retrieve September 13, 2008, from http://www.jamaicagleaner.com/.
Samuels, C. A. (2011). School boundary plan divides minn. Suburb; Eden Prairie schools struggle for socio-economic balance. *Education Week, 31*(06), 1.
Samuelson, P.A. (1954). The pure theory of public expenditure. *Review of Economics and Statistics*, 36 387-89.
Sarkar, S. (2006). *Investigating the relationship between air pollution, population and land use patterns in the city of Kolkata* (Doctoral Dissertation) Retrieved from https://books.google.com/books?isbn=0542836602
Schockaert, F. (2014). *Parental experiences related to an intra-district boundary adjustment transition at the elementary school level* (Doctoral Dissertation) Retrieved from https://repository.library.northeastern.edu/files/neu:1120/fulltext.pdf
Schuller, T.(2004).*The benefits of learning: the impact of education on health, family life and social capital*. United Kingdom: Psychology Press.
Seamans, G.S. (2013). Mainstreaming the environmental benefits of street trees. *Urban Forestry & Urban Greening, 12* (1), 2-11.
Seasons, M. (2014, September 24). Public Participation and Planning (PDF). Retrieved November 24th, 2013 from https://learn.uwaterloo.ca/d2l/le/content/89711 /viewContent/706867/View.pdf
Shipley, R., Reeve, A., Walker, S., Grover, P., & Goodey, B. (2004). Townscape heritage initiatives evaluation: methodology for assessing the effectiveness of Heritage Lottery
Fund projects in the United Kingdom. *Environment and Planning C: Government and Policy*, 22, 523-542.
Simon, F., Malgorzata, K., and Beatriz, P. (2007). *Education and training policy no more failures: Ten steps to equity in education.* Paris, France: OECD Publishing.
Sinclair, N. (2003). *Grenada: Isle of spice (Caribbean guides).* (3rd ed.) Northampton, Massachusetts, United States of America: Interlink Publishing Group.
Srám, R.J., Binková, B., Deimek, J., and Bobak, M. (2005). Ambient air pollution andpregnancy outcomes: a review of the literature. *Environmental Health Perspectives, 113*, 375-382.

Steele, B. A. (2003). *Grenada: A history of its people (island histories).*London: MacMillan Caribbean.
Stein, J.G. (2001). *The cult of efficiency.*Toronto, Ontario: House of Anansi Press.
Stevenson, T.N. (2007).*Informal consent:The complexities of public participation in post-civil war Lebanon* (Doctoral dissertation). Retrieved from http://digitallibrary.usc.edu/cdm/ref/collection/p15799coll127/id/583135
Sustainable Land Management Project (SLM P) Management Unit Ministry of Agriculture, Forestry and Fisheries. (n.d.). Ministerial Complex, Saint George Grenada.
Teixeira, J.C., and Antunes, P.A. (2008). A hierarchical location model for public facility planning. *European Journal of Operational Research, 185*, 92–104.
The Boston Consulting Group (BCG). (2012). *Transforming Philadelphia's public schoolskey findings and recommendations.* Boston, Massachusetts: Boston Consulting Group.
The Central Statistical Office. (2015). Ministry of Finance, Grenada.
The Education Act (2002) of Grenada, Carriacou and Petit Martinique.
The official website of the government of Grenada, Carriacou and Petite Martinique. (2016, October 14). Retrieved from http://www.gov.gd/
The Organization for Economic Cooperation and Development (OECD). (2012). *Equity and quality in Education: Supporting disadvantaged students and schools*. Paris, France: OECD Publishing.
The Organization for Economic Cooperation and Development (OECD). (2010 d). *PISA 2009. results: What makes a school successful? (Volume IV),* Paris, France: OECD
The Population & Housing Census Grenada. (2011). Grenada Progress Report, 2011.
The Population & Housing Census Grenada. (2001). Grenada Progress Report, 2001.
The Transportation Research Board, Institute of Medicine. (2005). *Does the built environment influence physical activity*? Washington DC: National Academies Press.
United Nations, Department of Economic and Social Affairs, Population Division. (2013). *World population prospects: The 2012 revision*. New York.
United Nations Educational, Scientific and Cultural Organization (UNESCO)Institute for Statistics (UIS). (2006).*Global education digest: comparing educational statistics across the World*. Montreal: UNESCO Institute for Statistics.
United States Environmental Protection Agency (USEPA). (2011). *About school siting guidelines*. Washington, DC: United States Environmental Protection Agency.
Van Driesche, J., and Lane, M.B.(2002).Conservation by conversation: collaborative planning for reuse of a former military property in Sauk County, Wisconsin.*Planning Theory and Practice*, 3 133-153.
Vincent, J. (2006). Public schools as public infrastructure: roles for planning researchers. *Journal of Planning Education and Research,25*, 433-437.
Wang, Y., and Lobstein, T. (2006).Worldwide trends in childhood overweight and obesity. *International Journal of Pediatric Obesity, 1*(1), 11-25.
Waterloo Region District School Board Ontario Canada. (2016, December 5). Retrieved from thehttps://www.wrdsb.ca/
Wates, N. (2000). *The community planning handbook: How people can shape their cities, towns and villages in any part of the world*. Pentonville Road, London, United Kingdom: Earthscan Publishing.
Weinhold, B. (2011). Children's health. School siting: Environmental Protection Agency says location matters.*Environmental Health Perspectives, 119*(1), 19.

Wilkie, J. (2007). The role of education in enhancing intergenerational income mobility. *Economic Roundup,* 81-100.
Willis, M.R., and Keller, A. A. (2007). A framework for assessing the impact of land use policy on community exposure to air toxics. *Journal of Environmental Management,83,* 213-227.
Wilson, S. (2015). *Identity, culture and the politics of community development*. Newcastle, United Kingdom: Cambridge Scholars Publishing.
Witten, K., Kearns, R.A., Lewis, N., Coster, H., and Mc Creanor, T.(2003). Educational restructuring from a community viewpoint: A case study of school closure from Invercargill, New Zealand. *Environment and Planning C,* 21 203-223.
Woessmann, L. (2008). Efficiency and equity of European education and training policies. *International Tax and Public Finan*ce, *15* (2), 199-230.
Woessmann, L., and Schütz, G. (2006). Efficiency and equity in European education and training system. *Analytical report for the European Commission*preparedEuropean Expert Network on Economics of Education (EENEE) to accompany the Communication and Staff Working Paper by the European Commission under the same title.
Wojno, C. (1991). Historic preservation and economic development. *Journal of Planning Literature, 5*(3), 296-306.
Wollmann, H., and Marcou, G. (2010). *The provision of public services in Europe (between state, local government and market)*. Cheltenham, United Kingdom: Edward Elgar Publishing.
World Health Organization. (2006). *World Health Organization air quality guidelines for particulate matter, ozone, nitrogen dioxide and sulfur dioxide -Global update 2005 - Summary of risk assessment*. Geneva: World Health Organization.
Worme, A. (2015).Chief Environmental Officer in the Ministry of Health and the Environment Grenada, Carriacou and Petite Martinique.
Yin, R. (2003). *Case study research: design and methods*. (3rd ed.) Thousand Oaks, California: Sage Publications, Inc.
Zimmer, T., DeBoer, Larry., and Hirth, M. (2009). Examining economies of scale in school \consolidation: Assessment of Indiana school districts. *Journal of Education Finance,* 35 (2), 103-127.

APPENDICES

Interviews (Telephone Recruitment Script) - Appendix 1

P = Potential Participant; I = Interviewer

I - May I please speak to [name of potential participant]?

P - Hello, [name of potential participant] speaking. How may I help you?

I - My name is Kenson Richards and I am a Master's student in the School of Planning at the University of Waterloo, Canada. I am currently conducting research under the supervision of Professor Robert Feick on the assessment of the school system planning process for primary and secondary schools in Saint George Grenada. As part of my research, I am conducting interviews with stakeholders and professionals such as planners, education, health, social development and youth and sports officials to elicit their views on the school system planning process for primary and secondary schools in Saint George Grenada. As you are a key stakeholder that has interest-in and directly impact school system planning, I would like to speak with you about your views on school system planning process for both primary and secondary schools. Is this a convenient time to give you further information about the interviews?

P - No, could you call back later (agree on a more convenient time to call the person back).

OR

P - Yes, could you provide me with some more information regarding the interviews you will be conducting?

I - Background Information:

 I will be undertaking interviews starting in June 2015.

 The interview would last about one hour, and would be arranged for a time convenient to your schedule.

 Involvement in this interview is entirely voluntary and there are no known or anticipated risks to participation in this study.

 The questions are quite general (for example, How engaged is the public in the decision to site a new school, expand an existing school or close an existing school (school system planning) in Grenada?).

 You may decline to answer any of the interview questions you do not wish to answer and may terminate the interview at any time.

 With your permission, the interview will be tape-recorded to facilitate collection of information, and later transcribed for analysis.

 All information you provide will be considered confidential.

 The data collected will be kept indefinitely in a secure location.

 If you have any questions regarding this study, or would like additional information to assist you in reaching a decision about participation, please feel free to contact Professor Robert Feick at 1(519)888-4567, Ext. 35615.

 I would like to assure you that this study has been reviewed and received ethics clearance through the Office of Research Ethics at the University of Waterloo. However, the final decision about participation is yours. If you have any comments or concerns resulting from your participation in this study, please contact Dr. Maureen Nummelin in the Office of Research Ethics at 1-519-888-4567, Ext. 36005 ormaureen.nummelin@uwaterloo.ca.

 After all of the data have been analysed, you will receive an executive summary of the research results.

With your permission, I would like to mail/fax you an information letter which has all of these details along with contact names and numbers on it to help assist you in making a decision about your participation in this study.

P - No thank you.

OR

P - Sure (get contact information from potential participant i.e., mailing address / phone number).

I - Thank you very much for your time. May I call you in 2 or 3 days to see if you are interested in being interviewed? Once again, if you have any questions or concerns please do not hesitate to contact me at 1- 226-792-9307 or 1-473-420-3194 (cell).

P - Good-bye.

I - Good-bye.

Script for Door-to-Door Survey - Appendix 2

C = Child/Children; P = Potential Participant (Adult); I = Interviewer

(*Interviewer knocks on door or gate of selected address*)

(*Child/Children answers door or gate*)

I – Good morning (afternoon, evening), is there an adult person at home today that I could speak with?

C – No.

I – Thank you, I will call back at another time when one is home.

Or

C – Yes.

I – Could you let them know that someone is here to speak to them.

(*Child/Children leave/s to get adult*)

P – (*Adult comes to door or gate*) How may I help you?

I – Good morning (afternoon – evening). My name is Kenson Richards a Master's candidate at the University of Waterloo, Canada. About a week ago I left information about a survey I am conducting in Saint George. I am here today to drop off the questionnaire if this is a convenient time.

P - No thank you, I am not interested in the survey.

or

P - No, could you call back some other time (agree on a more convenient time to call back).

or

P - Sure, I would very much like to have my views reflected in the survey.

(*Researcher proceed to drop off questionnaire*)

I – As indicated, your involvement in the survey is entirely voluntary and you may withdraw at any time or refuse to answer any question you wish. (A*fter questionnaire is dropped off*) Thank you very much for your willingness thus far to participate in this survey.

P - Good-bye.

I - Good-bye.

Appreciation Letter Appendix 3

University of Waterloo

Date

Dear ***(Insert Name of Participant),***

I would like to thank you for your participation in this study entitled "An assessment of the school system planning process for primary and secondary school: The case of Saint George Grenada". As a reminder, the purpose of this study is to examine planning frameworks and processes in the siting of a new school, expansion or closure of an existing school (school system planning) across pertinent government ministries, examine current participation methods and policies in school system planning in Saint George Grenada and to formulate recommendations that may lead to the development of a framework for enhancing community input in school system planning now and in the future.

The data collected during interviews and questionnaires (surveys) will contribute to a better understanding of the current operation of the school system planning process and it will serve as the baseline for formulating recommendations that may lead to the development of a regulatory and governance framework that advocates participatory planning through the incorporation of all the key stakeholders.

Please remember that any data pertaining to you as an individual participant will be kept confidential. Once all the data are collected and analyzed for this project, I plan on sharing this information with the research community through seminars, conferences, presentations, and journal articles. If you are interested in receiving more information regarding the results of this study, or would like a summary of the results, please provide your email address, and when the study is completed, anticipated by December 2015, I will send you the information. In the meantime, if you have any questions about the study, please do not hesitate to contact me by email or telephone as noted below. As with all University of Waterloo projects involving human participants, I would like to assure you that this study has been reviewed and received ethics clearance through a University of Waterloo Research Ethics Committee. However, the final decision about participation is yours. If you have any comments or concerns resulting from your participation in this study, please feel free to contact Dr. Maureen Nummelin in the Office of Research Ethics at 1-519-888-4567, Ext. 36005 or maureen.nummelin@uwaterloo.ca.

Sincerely,

Kenson Richards

University of Waterloo
School of Planning

1-226-792-9307

1-473-420-3194

k25richa@uwaterloo.ca

Interview Information Letter and Consent Form- Appendix 4

University of Waterloo

Date

Dear ***(insert participant's name):***

This letter is an invitation to consider participating in a study I am conducting as part of my Master's degree in the School of Planning at the University of Waterloo under the supervision of Professor Robert Feick. I would like to provide you with more information about this project and what your involvement would entail if you decide to take part.

Schools are considered to be investments that involve a large amount of tax payers' dollars. According to current literature schools acts as hubs for developing a community in many dimensions. For instance it is documented that schools help to enhance community cohesion, attract more businesses in a community, it helps to attract more residents in a community and more so they act as community schools providing facilities for the community for social gatherings, night education and recreational activities. Against these backdrops it is imperative that the planning process for schools should be a comprehensive one integrating the relevant stakeholders. The purpose of this study therefore is to determine the level of public engagement in the siting of a new school or the closing of an existing school (school system planning) in Grenada. The data collected during interviews will contribute to a better understanding of the current operation of the school system planning process and it will aid in the formulation of recommendations that may lead to the development of a regulatory and governance framework that advocates participatory planning through the incorporation of all the key stakeholders.

This study will focus on public participation in the school system planning and the intra governmental flows of information and regulation in school system planning. Therefore, I would like to include your organization as one of several organizations to be involved in my study. I believe that because you are actively involved in the management and operation of your organization, you are best suited to speak to the various issues, such as the roles and responsibilities of different actors and agencies in school system planning, formal and informal frameworks used in the planning process and opportunities and barriers that exist for public participation in school system planning etc.

Participation in this study is voluntary. It will involve an interview of approximately 1 hour in length to take place in a mutually agreed upon location. You may decline to answer any of the interview questions if you so wish. Further, you may decide to withdraw from this study at any time without any negative consequences by advising the researcher. With your permission, the interview will be audio recorded to facilitate collection of information, and later transcribed for analysis. Shortly after the interview has been completed, I will send you a copy of the transcript to give you an opportunity to confirm the accuracy of our conversation and to add or clarify any points that you wish. All information you provide is considered completely confidential. Your name will not appear in any thesis or report resulting from this study, however, with your permission anonymous quotations may be used. Furthermore you will be identified in the thesis or any report as a senior government official. I will also like to assure you that your decision to participate and the contents of your interview will not be shared with your supervisor.

Data collected during this study will be retained for a period of 3 years in a locked cabinet at my home in Bonair Grenada and then be destroyed. In addition audio data will also be retained for a period of 3 years in a locked cabinet at my home and will then be erased. Only researchers associated with this project will have access. There are no known or anticipated risks to you as a participant in this study.

If you have any questions regarding this study, or would like additional information to assist you in reaching a decision about participation, please contact me at 1473-420-3194 or by email at K25Richa@uwaterloo.ca.You can also contact my supervisor, Professor Robert Feick at 519-888-4567 ext. 37865 or email robertfeick@uwaterloo.ca.

I would like to assure you that this study has been reviewed and received ethics clearance through a University of Waterloo Research Ethics Committee. However, the final decision about participation is yours. If you have any comments or concerns resulting from your participation in this study, please feel free to contact Dr. Maureen Nummelin in the Office of Research Ethics at 1-519-888-4567, Ext. 36005 or maureen.nummelin@uwaterloo.ca.

I hope that the results of my study will be of benefit to those organizations directly involved in the study, other voluntary organizations not directly involved in the study, and the broader research community.

I very much look forward to speaking with you and thank you in advance for your assistance in this project.

Yours Sincerely,

Kenson Richards

CONSENT FORM

By signing this consent form, you are not waiving your legal rights or releasing the investigator(s) or involved institution(s) from their legal and professional responsibilities.

_____

I have read the information presented in the information letter about a study being conducted by Kenson Richards of the School of Planning at the University of Waterloo. I have had the opportunity to ask any questions related to this study, to receive satisfactory answers to my questions, and any additional details I wanted.

I am aware that I have the option of allowing my interview to be audio recorded to ensure an accurate recording of my responses.

I am also aware that excerpts from the interview may be included in the thesis and/or publications to come from this research, with the understanding that the quotations will be anonymous and I will be identified in the thesis or any report as a senior government official.

I was informed that my decision to participate and the contents of my interview will not be shared with my supervisor.

I was informed that I may withdraw my consent at any time without penalty by advising the researcher.

I would like to assure you that this study has been reviewed and received ethics clearance through a University of Waterloo Research Ethics Committee. However, the final decision about participation is yours. If you have any comments or concerns resulting from your participation in this study, please feel free to contact Dr. Maureen Nummelin in the Office of Research Ethics at 1-519-888-4567, Ext. 36005 or maureen.nummelin@uwaterloo.ca.

With full knowledge of all foregoing, I agree, of my own free will, to participate in this study.

☐YES ☐NO

I agree to have my interview audio recorded.

☐YES ☐NO

I agree to the use of anonymous quotations in any thesis or publication that comes of this research.

☐YES ☐NO

Participant Name: _____ (Please print)

Participant Signature: _____

Witness Name: _____ (Please print)

Witness Signature: _____

Date: _____

Questionnaire Cover letter- Appendix 5

Date

Dear Resident:

I am a second year graduate student of the School of Planning at the University of Waterloo conducting research under the supervision of Professor Robert Feick on a research project entitled "An assessment of the school system planning process for primary and secondary schools: The case of Saint George Grenada".

The construction of schools is very costly and a large amount of tax payers' dollars are spent on constructing schools. According to studies done presently, schools help to develop a community in many ways. For example schools help to build unity in a community, attract more businesses in a community, they help to attract more residents in a community and more so they act as community schools providing facilities for the community for social gatherings, night education and recreational activities. Therefore the planning process for schools should be one that is done properly inviting all key partners in the process so that the best decisions can be made. As a resident of Saint George where this study will be conducted your opinions may be important to this study.I would appreciate the opportunity to collect some feedback about your experience on this topic.I plan to conduct this research by dropping off questionnaire at your door step between the hours of 4pm -8pm, and expect to be in your neighborhood during the week of September 1st - 5th 2015. Once the questionnaire is given, you are expected to complete the questionnaire by yourself over a period of two (2) weeks. After two (2) weeks, I will come back to your door step to collect the completed questionnaire.However, I would be happy to arrange another time for dropping off questionnaire, if you prefer.Your involvement in this survey is entirely voluntary and there are no known or anticipated risks to participation in this study. If you agree to participate, the survey should not take more than about an hour. The questions are quite simple and straightforward. However, you may decline answering any questions you feel you do not wish to answer. All information you provide will be considered confidential and will be grouped with responses from other participants. Further, you will not be identified by name in any thesis, report or publication resulting from this study. Instead you will be identified in the thesis or any report as parents, non- parents and the business community accordingly. Consent to participate in the study is implied by you completing and returning the questionnaire to me. The data collected

shall be stored in a locked cabinet at my home in Grenada for a period of 3 years, and then it will be destroyed.

If after receiving this letter, you have any questions about this study, or would like additional information to assist you in reaching a decision about participation, please feel free to contact ProfessorRobert Feickat 519-888-4567, Ext.37865.

I would like to assure you that this study has been reviewed and received ethics clearance through a University of Waterloo Research Ethics Committee. However, the final decision about participation is yours. If you have any comments or concerns resulting from your participation in this study, please feel free to contact Dr. Maureen Nummelin in the Office of Research Ethics at 1-519-888-4567, Ext. 36005 or maureen.nummelin@uwaterloo.ca.

Thank you in advance for your interest in this project.

Yours sincerely,

Kenson Richards
University of Waterloo
Faculty of Environment, School of Planning
1-226-792-9307 and 1- 473- 420-3194
K25Richa@uwaterloo.ca

Follow up Letter for Participants Requesting a Final Copy of the Study- Appendix 6

University of Waterloo

Date

Dear ***(Insert Name of Participant),***

I would like to express a heartfelt thank you for your interest in requesting a final copy of this study entitled "An assessment of the school system planning process for primary and secondary school: The case of Grenada". As a reminder, the purpose of this study is to examine planning frameworks and processes in the siting of a new school, expansion or closure of an existing school (school system planning) across pertinent government ministries, examine current participation methods and policies in school system planning in Saint George Grenada and to formulate recommendations that may lead to the development of a framework for enhancing community input in school system planning now and in the future.

It is my hope that the knowledge and information generated from this study may be of great interest to you and may benefit you in whichever way possible. Should you have any comments

or concerns from this study, please contact ProfessorRobert Feickat 519-888-4567, Ext.37865 or robertfeick@uwaterloo.ca and Kenson Richards at 1-473-420-3194 or K25richa@uwaterloo.ca.

I would like to assure you that this study has been reviewed and received ethics clearance through a University of Waterloo Research Ethics Committee. However, the final decision about participation is yours. If you have any comments or concerns resulting from your participation in this study, please feel free to contact Dr. Maureen Nummelin in the Office of Research Ethics at 1-519-888-4567, Ext. 36005 or maureen.nummelin@uwaterloo.ca.

Sincerely,

Kenson Richards

University of Waterloo
Faculty of Environment

School of Planning

1-226-792-9307

1-473-420-3194

k25richa@uwaterloo.ca

Organization Recruitment Letter and Consent Form- Appendix 7

(Faculty of Environment, School of Planning, University of Waterloo, Waterloo Ontario, Canada)

Date:

Dear ___:

This letter is a request for **[name of organization]'s** assistance with a project I am conducting as part of my Master's degree in the [School of Planning] at the University of Waterloo, Ontario, under the supervision of Dr. [Robert Feick]. The title of my research project is "An assessment of the school system planning process for primary and secondary schools: The case of Saint George Grenada." I would like to provide you with more information about this project that explores issues such as: a) if government officials believe there is a lack of coordination between government bodies (agencies) with respect to school system planning, b) if there are differences between what the public sees as their potential role and what government believe is appropriate,

c) if the public believes that planning decisions would be better with more public input, and d) what opportunities and barriers exist to effective public participation in school system planning.

The purpose of this study is to examine planning frameworks and processes in the siting of a new school, expansion or closure of an existing school (school system planning) across pertinent government ministries, examine current participation methods and policies in school system planning in Saint George Grenada and to formulate recommendations that may lead to the development of a framework for enhancing community input in school system planning now and in the future.

Knowledge and information generated from this study may help public policy makers, education administrators, planning administrators and the government of the day by providing them with baseline data; (for example how the process is organized, why it is organized the way it is, who is involved, what are their roles and responsibilities etc.) for assessing the current state of the school system planning process and for determining how a course may be charted for improvement and monitoring of the process. In addition evidence based recommendations that address mechanisms for promoting a more communicative and collaborative school system planning environment will be provided. The notion is for these recommendations to help trigger a policy that "champions" mandatory involvement of the public in school system decision making process.

More so it is the hope that information from this study will either signal the initiation of a participatory planning paradigm or strengthen the existing participatory paradigm with respect to school system planning in Grenada. It is also the hope of this study to educate or remind the public about their fundamental role in society on matters of public interest. Nonetheless, although this study is undertaken in Grenada, the fundamental issues addressed transcend scale, time and geographic boundaries and the results may be of interest to the relevant authorities elsewhere since some of the other Caribbean territories are encountering similar planning problems.

It is my hope to connect with some members of the **[name of organization]** to invite them to participate in this research project. I believe that the members of your organization have unique understandings and stories relating to school system planning in Grenada. During the course of this study, I will be conducting interviews and questionnaires with senior administrators to gather their perspectives and opinions on school system planning in Grenada. At the end of this study the publication of this thesis will share the knowledge from this study with other organizations, participatory planning researchers and community members.

To respect the privacy and rights of the **[name of organization]** and its participants, I will not be contacting the members directly. What I intend to do, is provide the **[name of organization]** with an information letter to be distributed by the **[name of organization]** at their discretion. Contact information for me and my advisor will be contained on the letter. If a member is

interested in participating they will be invited to contact me**,** [Kenson Richards], to discuss participation in this study in further detail.

Participation of any member is completely voluntary. Each member will make their own independent decision as to whether or not they would like to be involved. All members will be informed and reminded of their rights to participate or withdraw before any interview or questionnaire, or at any time in the study. Members will receive an information letter including detailed information about this study, as well as informed consent forms.

In addition I am kindly requesting permission from **[name of organization]** to take photographs of schools visited in the parish of St .George. Furthermore a letter will be forwarded to **[name of organization]** requesting permission. I would appreciate if **[name of organization]** can sign the letter indicating the approval of the request and **[name of organization]** can send emails to the relevant schools informing them of the approval. I will also email the various schools a scanned copy of the signed permission letter in advance. I would like to assure you that photographs will be taken after school hours when students are not present so that no identification of individuals will appear in photographs.

To support the findings of this study, quotations and excerpts from the perspectives and opinions will be labeled with pseudonyms to protect the identity of the participants. Names of participants will not appear in the thesis or reports resulting from this study. Participants will not be identifiable, and only described by gender if necessary. Furthermore participants will be identified in the thesis or any reports as senior government officials, church community, and non-governmental organization representatives accordingly.

If the **[name of organization]** wishes the identity of the organization to remain confidential, a pseudonym will be given to the organization. All paper field notes collected will be retained for a period of 3 years in a locked cabinet at my home in Bonair Grenada. All paper notes will be confidentially destroyed after a period of 3 years. Further, electronic data will be retained for a minimum of 7 years on a CD at my home and on a password protected computer at Professor Robert Feick Office at the University of Waterloo, then it will be disposed off. Finally, only myself and my advisor, [Professor Robert Feick] in the [School of Planning] at the University of Waterloo will have access to these materials. There are no known or anticipated risks to participants in this study.

If you have any questions regarding this study or would like additional information to assist you in reaching a decision about participation, please contact me at [1-226-792-9307 or 1-473-420-3194] or by email [k25Richa@uwaterloo.ca]. You may also contact my supervisor, [Robert Feick] at [(519) 888-4567 ext.37865] or by email [robertfeick@uwaterloo.ca].

I would like to assure you that this study has been reviewed and received ethics clearance through a University of Waterloo Research Ethics Committee. However, the final decision about participation is yours. If you have any comments or concerns resulting from your participation in this study, please feel free to contact Dr. Maureen Nummelin in the Office of Research Ethics at 1-519-888-4567, Ext. 36005 or maureen.nummelin@uwaterloo.ca.

I hope that the results of my study will be beneficial to the **[name of organization]**, to your members, community members, and to the broader research community. I very much look forward to speaking with you and thank you in advance for your assistance with this project.

Yours sincerely,

[Kenson Richards]

Master's Candidate

School of Planning

University of Waterloo

[Robert Feick]

Associate Professor

School of Planning

University of Waterloo

Organization Permission Form

By signing this consent form, you are not waiving your legal rights or releasing the investigator(s) or involved institution(s) from their legal and professional responsibilities.

_____

We have read the information presented in the information letter about a study being conducted by [Kenson Richards] of the [School of Planning] at the University of Waterloo, Ontario, under the supervision of [Professor Robert Feick] at the University of Waterloo. We have had the opportunity to ask any questions related to this study, to receive satisfactory answers to our questions, and any additional details we wanted.

We are aware that the name of our organization will only be used in the thesis or any publications that comes from the research with our permission.

We are aware that members of the organization will be identified in the thesis or any reports as senior government officials, church community, and non- governmental organization representatives accordingly.

We were informed that this organization may withdraw from assistance with the project at any time. We were informed that study participants may withdraw from participation at any time without penalty by advising the researcher.

I would like to assure you that this study has been reviewed and received ethics clearance through a University of Waterloo Research Ethics Committee. However, the final decision about participation is yours. If you have any comments or concerns resulting from your participation in this study, please feel free to contact Dr. Maureen Nummelin in the Office of Research Ethics at 1-519-888-4567, Ext. 36005 or maureen.nummelin@uwaterloo.ca.

[Kenson Richards]

Master's Candidate

School of Planning

University of Waterloo

[Robert Feick]

Associate Professor

School of Planning

University of Waterloo

We agree to help the researcher recruit participants for this study **[name of organization].**

□ YES □ NO

We agree to the use of the name of the **[name of organization]** in any thesis or publication that comes of this research.

□ YES □ NO

If NO, a pseudonym will be used to protect the identity of the organization.

We agree that the researcher may take photographs of schools in the parish of St. George for use in papers and reports which emerge from this thesis provided that no individuals will be identified in photographs **[name of organization].**
□ YES □ NO

Director Name: _____ (Please print)

Director Signature: _____

Board of Directors Representative Name: _____ (Please print)

Board of Directors Representative Signature: _____

Witness Name: _____ (Please print)

Witness Signature: _____

Date: _____

Permission Letter for the Ministry of Education- Appendix 8

University of Waterloo

Date

Dear ***(Name of Organization),***

This letter is a request for **[name of organization]'s** assistance with a project I am conducting as part of my Master's degree in the [School of Planning] at the University of Waterloo, Ontario, under the supervision of Dr. [Robert Feick]. The title of my research project is "An assessment of the school system planning process for primary and secondary schools: The case of Grenada." The purpose of this study is to examine planning frameworks and processes in the siting of a new school, expansion or closure of an existing school (school system planning) across pertinent government ministries, examine current participation methods and policies in school system planning in Saint George Grenada and to formulate recommendations that may lead to the development of a framework for enhancing community input in school system planning now and in the future. Therefore in an effort to collect the necessary data for this study, I am kindly requesting your permission to take photographs of the schools I intend to visit in the parish of St, George. I would like to clearly indicate that photographs will be taken after school hours when students are not present so that no identification of individuals will appear in photographs. Should you have any comments or concerns about this study, please contact ProfessorRobert

Feickat 519-888-4567, Ext.37865 or robertfeick@uwaterloo.ca and Kenson Richards at 1- 473-420-3194 or K25richa@uwaterloo.ca. I would like to assure you that this study has been reviewed and received ethics clearance through a University of Waterloo Research Ethics Committee. However, the final decision about participation is yours. If you have any comments or concerns resulting from your participation in this study, please feel free to contact Dr. Maureen Nummelin in the Office of Research Ethics at 1-519-888-4567, Ext. 36005 or maureen.nummelin@uwaterloo.ca.

Sincerely,

Kenson Richards

University of Waterloo
Faculty of Environment

School of Planning

1-226-792-9307

1- 473- 420-3194

k25richa@uwaterloo.ca

Director Name: _____
Director Signature: _____

Date: _____

School Recruitment Letter- Appendix 9

(Faculty of Environment, School of Planning, University of Waterloo, Waterloo Ontario, Canada)

Dear Mr. /Ms ***(School Principal's Name):***

(I) have received approval from your school board (Ministry of Education) to invite schools to participate in a survey on school system planning in Grenada. You may have received an e-mail from the (Ministry of Education 1- 473- 440 - 2737) advising you of this approval.

If you choose to participate, your school will be part of a representative sample of 10 schools across the parish participating in this project. This project will primarily help community members, educators, planners and other government officials become part and parcel of a comprehensive school system planning process.

The survey will be conducted during the month of September 2015 with approximately 9 teachers plus the principal (with permission) in each selected school.

What is involved for your school?

- Approximately 9 teachers plus the principal will be given a questionnaire sample to be filled out over a 2 week period, after which they will be collected.
- On-site observation of the school will be conducted; specific jottings and photographs will be taken as necessary. The on-site observations will be down by me.

What are the benefits and honorarium to your school?

- Your school will receive an individualized school feedback report that includes your school's opinions and views on school system planning compared to other participating schools. I would like to assure you that participants (principals, teachers) names will not be identifiable in the individualize school feedback report. The feedback report will be a combination of feedback from all of the teachers and principal of a selected school who participated and their input will be examined as a group only. In essence participants (teachers and principals) will be identified in the thesis or any reports as educators.

- Your school will receive aspecial token of appreciation which is a small plaque with the University of Waterloo engraved on it for the time and effort of school personnel in completing the survey.

Included in this package is a brochure which provides complete project information including;

- Project description,
- Permission protocol details,
- Benefits to participating schools.

Ethics Information

I would like to assure you that this study has been reviewed and received ethics clearance through a University of Waterloo Research Ethics Committee. However, the final decision about participation is yours. If you have any comments or concerns resulting from your participation in this study, please feel free to contact Dr. Maureen Nummelin in the Office of Research Ethics at 1-519-888-4567, Ext. 36005 ormaureen.nummelin@uwaterloo.ca.

What are the next steps?

- Review the project brochure.
- Send me an email clearly outlining your intent to participate or not participate in this project.

I understand that school administrators and staff are busy and I wish to provide support in any way possible to assist your school's participation in this project. I will call you within the next week to provide you with more information about the project and to discuss your school's participation. We look forward to collaborating with you on this exciting project.

Sincerely,

Kenson Richards
University of Waterloo
Faculty of Environment, School of Planning
1-226-792-9307 and 1- 473-420-3194
K25Richa@uwaterloo

School Criteria Work Sheet -Appendix 10

Work sheet for schools visited and did not make the specification according to the school siting manual

Name of School Visited: _____

Date of Visit: _____

School Address _____

Criteria	Findings from Field Observation
Site acreage	
Distance to Recreational Facilities	
Distance to Center of Community (residents)	
Distance to Commercial Activities	
Distance to Heavy Industry	
Distance of School Building to Transportation Networks (main roads only)	
Distance to Health Facility	
Distance to Security Facility/ Fire Facility	
Nature of Topography	
Site Erosion	
Flooding	
Noise	
Safe Routes to School for Pedestrians and Bicyclists	
Visibility, Safety of Driveways and Internal Circulation	
Additional Comments	

Questionnaire Instrument-Appendix 11

Instructions: Please select or fill in the most appropriate responses.

PART 1
A. Participant Characteristics

Participant Address: _____

1) Gender: ( ) Male ( ) Female

2) Marital Status: ( ) Single ( ) Married ( ) Divorced ( ) Widow or Widower

3) Please select your age group: ( ) Under 30 years ( ) 31 to 40 years ( ) 41 to 50years ( ) 51 to 60 years
( ) Over 60 years

4) How long have you lived in Grenada?
( ) Less than 2 years ( ) 2 to 3years ( ) 3 to 5 years ( ) 5 to 10 years ( ) 10 to 20 years ( ) More than 20 years

5) How long have you lived in this neighborhood?
( ) Less than 2 years ( ) 2 to 3years ( ) 3 to 5 years ( ) 5 to 10 years ( ) 10 to 20 years ( ) More than 20 years

6) What is your highest level of education attained?
( ) Primary ( ) Secondary ( ) College ( ) University ( ) Other, please specify ———

7) What is your employment status?
( ) Employed Full-Time ( ) Employed Part-Time ( ) Unemployed ( ) Retired ( ) Student

8) How many school-age children do you have?
( ) 0 ( ) 1 ( ) 2 ( ) 3 ( ) 4 and more

If the answer to question eight **(8)** is not zero **(0)**, please answer question **(9)** and **(10)** below.

9) Do they attend school?
( ) Yes ( ) No

10) What is the name (s) of the school (s) they attend?

_____

PART 2
B. Participant General Involvement in Community Schools

11) Please read the following statements carefully, and then indicate your level of involvement in the school system in your community. N=Never R=Rarely S=Sometimes VO=Very Often A=Always	
a) I attend Parent Teachers Association (PTA) meetings in my community.	N R S VO A
b) I visit or call the school to find out how my child is progressing academically.	N R S VO A
c) I go to open house meetings in the school to discuss my child academic performance.	N R S VO A
d) I have volunteered my services in assisting the school with their yearly activities. For example fund raising activities such as, school fun day.	N R S VO A
e) I have volunteered my services in assisting the school in drafting different policies. For example a lateness policy.	N R S VO A
f) I use the school library for my personal research and studies.	N R S VO A
g) I use the school playing field after school hours for my recreational activities.	N R S VO A
h)I use the school facility for social gatherings such as meetings, weddings and dinners etc.	N R S VO A
i) Other…….	

PART 3
C. Opinions on Participation in the School System Planning. School system planning in this context refers to decisions of where to build a new school, moving an existing school, closing an existing school or expanding an existing school. It **does not** include school operation issues such as what is taught in classes or when should school start and end etc.

12) Have you ever participated in the school system planning (for example attending public meetings, sharing your thoughts or opinions over the phone on siting a new school or closing an existing school) in your community before?
( ) Yes ( ) No

13) If no, would you be interested in having opportunities to provide input in the future?
( ) Yes ( ) No

14) If yes, what was the issue about?

_____

15) How recent was your participation?
( ) Less than 5 years ( ) 5-10 years ( ) 11-15years ( ) 16 years or more

16) Were you satisfied with the opportunities you had to provide input?
( ) Yes ( ) No

17) Please explain your answer to question **(16)**above.

PART 4
D. Current Opportunities and Barriers to Participation

18) How important it is for you to participate in the school system planning in your community?

Scale

( ) Not Important ( ) Slightly Important ( ) Moderately Important ( ) Important ( ) Very Important

19) How aware are you of current opportunities that exist for you to participate in the school system planning process in your community?

Scale
1 2 3 4 5

Not Aware Very Aware

20) How often have you used the following methods of participation in the school system planning process in your community: N=Never R=Rarely S=Sometimes VO=Very Often A=Always	
a) Town hall meetings	N R S VO A
b) Web surveys	N R S VO A
c) Telephone interviews	N R S VO A
d) Community workshops	N R S VO A
e) Mail surveys	N R S VO A
f) Other ————	

21) The following are reasons (barriers) why I am unable to participate in the school system planning in my community: SD =Strongly Disagree D=Disagree U=Undecided A=Agree SA= Strongly Agree	
a) I travel outside of the country very often	SD D U A SA
b) I am very busy with work	SD D U A SA
c) I am often busy with the kids	SD D U A SA
d) I often do not hear about these activities	SD D U A SA
e) I don't feel comfortable speaking in public	SD D U A SA
f) I am of the opinion that my views will not be taken into consideration	SD D U A SA
g) The wealthier individuals dominate the meetings	SD D U A SA
h) I don't have kids in school anymore so I am not interested	SD D U A SA
i) Meetings are dominated by government officials most of the time	SD DU A SA
j) I don't think community members should partake in school affairs	SD D U A SA
h) Other _____	

22) In my opinion these are some major advantages of strengthening community participation in school system planning: SD =Strongly Disagree D=Disagree U=Undecided A=Agree SA= Strongly Agree	
a) Community members provides information government officials may not have	SD D U A SA
b) Better decisions can be made	SD D U A SA
c) Stronger ties between community and school	SD D U A SA
d) Can reduce wastage of resources (e.g. financial resources)	SD D U A SA
e) Can foster private- public partnership on various school projects.	SD D U A SA
f) Other _____	

23) In my opinion these are some major disadvantages of a participatory or communicative school system planning process: SD =Strongly Disagree D=Disagree U=Undecided A=Agree SA= Strongly Agree	
a) Prolongs decision making period	SD D U A SA
b) Highly controversial environment	SD D U A SA
c) Wastage of financial resources	SD D U A SA
d) Dominance by government officials	SD D U A SA
e) Failure to consider input from all community members	SD D U A SA
f)Other _____	

Questions 24 to 29 should be answered by government officials only

24) What method/s of information sharing do you use between different government ministries and departments or between government and communities?

_____

_____

25) What method/s of public outreach or public participation do you use?

_____

_____

26) What method/s seems to work best?

_____

27) What barriers and opportunities do you perceive within government for community participation in school system planning?

_____

_____

28) What barriers and opportunities do you perceive within communities for effective community participation in school system planning?

_____

_____

29) Do you think that community participation in the school system planning will help or hinder government operations?

_____

PART 5
E. Perceptions and Attitudes towards a more Participatory / Communicative School System Planning Process

30) The public should be part and parcel of the current school system planning process.

Scale

( ) Strongly Disagree ( ) Disagree ( ) Undecided ( ) Agree ( ) Strongly Agree

31) The current school system planning process can be transformed into a more participatory form by doing the following: SD =Strongly Disagree D=Disagree U=Undecided A=Agree SA= Strongly Agree	
a) Creating a variety of opportunities for the public to give input at every stage of the process	SD D U A SA
b) Assuring the economically and socially weak that their input is just as important as the economically and socially strong	SD D U A SA
c) Making legal provisions through the Education or Planning Act for mandatory public participation	SD D U A SA
d) Allowing for the democratization of professional experts and officials	SD D U A SA
e) Assuring the public that the final decision is a reflection of their input	SD D U A SA
f) Other _____	

PART 6
F. Opinions on Neighborhood Land Use Change and Schools
Land use change: refers to physical developments, such as (a new housing development or a new road system or a new business development,) on the land that may have an impact on nearby schools.

32) Do you know of any situation where existing land uses near schools have impacted negatively on students and schools?
( ) Yes ( ) No

33) If yes, please give an example of the type of problem that has occurred.

_____

_____

34) What types of land uses are most appropriate near schools?

_____

_____

35) Do you think there is a need for community members to comment on land use change proposals (for example the building of houses, industries or construction of roads) that may affect schools?
( ) Yes ( ) No

36) Are there specific types of land use proposals that you are most interested in providing input for**?**
( ) Yes ( ) No

37) If yes, please give examples of these types of land use proposals.

_____

_____

38) Who do you believe should decide if a land use change proposal could have negative impacts on local students and schools?
Check as many as appropriate.

( ) Ministry of Education ( ) Department of Physical Planning ( ) Local Council ( ) Community Organizations

Other, please specify _____

<u>Questions 39 should be answered by government officials only</u>

39) What is the current role of your ministry or department with respect to land use change and school system planning?

_____

40) Is there anything else you would like to add concerning the school system planning process in your community?

Thank You Very Much For Completing This Survey!

Interview Guide - Appendix 12

Interview Objectives	Themes	Lead Questions	Supplementary Questions
To determine the level of public engagement in the siting of a new school, closure or expansion of an existing school (school system planning) in Saint George Grenada.	Current operation of the school system planning process	**a)** How engaged is the public in the decision to site a new school, expand an existing school or close an existing school (school system planning) in Saint George Grenada?	**a)** Who are the major stakeholders currently involved in the process? **b)** Who is responsible for what aspects of the school system planning process? **c**) On a scale of 1-10, where 1 is the lowest and 10 is the highest, where would you rate the current school system planning process in terms of public involvement in decision making? **d)** Do you know how the planning process for siting new schools or closing existing schools in the other Caribbean countries is organized?
To determine what formal and informal frameworks are used to guide the planning process for locating a new school, closure or expansion of an existing school (school system planning) in Saint George Grenada.	Formal and informal frameworks	**a)** What formal frameworks are used to guide the planning process for siting of a new school or closing of an existing school (school system planning) in Saint George Grenada? **b)** What specific policies are in place to guide the planning process surrounding the siting of a new school or the closing of an existing school in Saint George Grenada?	**a)** What informal frameworks are used to guide the planning process for siting of a new school or closing of an existing school (school system planning) in Saint George Grenada? **b)** What technical standards are used in closing a school? **c)** What technical standards are used in selecting a site for a new school?
To identify the current and potential opportunities and barriers that exist for the public to participate in the school system planning process in Saint George Grenada	Current and potential opportunities and barriers to public participation	a) What are the opportunities that exist currently for the public to participate in the school system planning process in Saint George Grenada?	**a)** What potential opportunities exist for the public to participate in the school system planning process in Saint George Grenada? **b)** In your opinion, what barriers exist currently that hinders the public in participating in the school system planning process in Saint George Grenada? **c)** In your view, what potential barriers exist for the public to participate in the school system planning process in Saint George Grenada? **d)** How could these barriers to participation be eliminated?
To explore how the current school system planning process in Saint George Grenada can be transformed into a more participatory or communicative form?	Public participation and involvement	**a**) In your view, do you think that the current school system planning process in Saint George Grenada should be transform into a more participatory form? **b)** If yes, how can the current school system planning process in Saint George Grenada be transformed into a more participatory or communicative form?	**a)** In your view, what are the major implications of making that change?
To formulate recommendations that may lead to the development of a regulatory and governance framework to guide the practice of school system planning now and in the future.	Action to be taken	**a)** Is there a need for the development of a regulatory and governance framework to guide the planning process for school system in Saint George Grenada? **b)** If yes, what actions should be taken to develop a regulatory and governance framework for school system planning in Saint George Grenada?	**a)** In your view, why is there a need for such a framework?

Primary Schools Attended-Appendix 13

Responses:	Parents in communities with schools	Parents in communities without schools	Primary school educators	Secondary school educators	Government officials	Total
Happy Hill Primary School	2	5				7
St George's Senior Anglican School	2			1	1	4
St Mary's Junior (Private)		1	2	1		4
Calliste Primary School	2		1	1		4
St Paul's Government School	3					3
Grand Anse Roman Catholic School	1		1	1		3
St Louis Girls Roman Catholic			2			2
Grenada Junior Academy (Private)		2				2
Grenada Seventh Day Adventist Primary School		1	1			2
Telescope Government School			2			2
Uganda Martha Catholic School (Private)		1				1
South St George Government School			1			1
Mt Morris Anglican Primary School		1				1
St Andrews Methodist			1			1
Grenville Roman Catholic School					1	1

Secondary Schools Attended– Appendix 14

Responses:	Parents in communities with schools	Parents in communities without schools	Primary and secondary school educators	Business owners	Government officials	Total
Grenada Boys Secondary School	9	4	4	1		18
Happy Hill Secondary School	5	12		1		18
Presentation Boys College	4	4	6	1	1	16
Wesley College	7	4				11
Boca Secondary School	3		4			7
Anglican High School		1	2			3
Westmorland Secondary School (Private)	2		1			3
St Joseph Convent St George's				2	1	3
St David's Roman Catholic Secondary School			1		1	2
Beacon High School (Private)			1			1
JW Fletcher Secondary School			1			1
Berean Christian Academy (Private)			1			1

Participants Level of Involvement in the School System in their Community-Appendix 15

Factors Rated		N	R	S	VO	A	TOTAL	M	S
I attend PTA meetings in my community.	N	154	5	62	22		293	2.25	1.428
	%	51.3	1.7	20.7	16.7	7.3			
I visit or call the school to find out how my child is progressing academically.	N	160	5	75	43	8	291	2.09	1.282
	%	53.3	1.7	25	14.3	2.7			
I attend open house meetings to discuss my child academic performance.	N	157	4	67	46	17	291	2.18	1.379
	%	52.3	1.3	22.3	15.3	5.7			
I volunteer my services to assist the school in yearly activities (fund raising).	N	147	7	102	21	16	293	2.15	1.269
	%	49	2.3	34	7	5.3			
I volunteer my services to assist the school in drafting policies.	N	180	3	91	11	7	292	1.84	1.129
	%	60	1	30.3	3.7	2.3			
I use the school library for personal research or studies.	N	284	6	1	0	2	293	1.05	.375
	%	94.7	2	0.3	0	0.7			
I use the school playing field after school hours for recreational purposes.	N	281	6	4	0	2	293	1.08	.423
	%	93.7	2	1.3	0	0.7			
I use the school facility for social gatherings such as meetings, weddings, and dinners etc.	N	284	6	2	0	1	293	1.05	.317
	%	94.7	2	0.7	0	0.3			

(N) Never = 1, (R) Rarely = 2, (S) Sometimes = 3, (VO) Very Often = 4, (A) Always = 5, *M*=Mean, *S*=Standard Deviation.

Participation in School System Planning – Appendix 16

Factors	Total	Percentage	Mean	Standard Deviation
Participation in School System Planning Before				
Yes	25	8.3		
No	274	91.3		
Total	288			
Interest in Opportunity to Provide Input				
Yes	250	83.3		
No	38	12.7		
Total	288			
Timing of Participation				
Less than 5 years	14	4.7		
5-10 years	2	1		
11-15 years	3	0.7		
16 and more	2	1		
Total	22	7.3		
Satisfaction with Opportunity				
Yes	17	5.7		
No	4	1.3		
Importance of Participation in School System Planning				
Not Important	7	2.3		
Slightly Important	7	2.3		
Moderately Important	10	3.3		
Important	138	46		
Very Important	138	46		
Mean			4.31	
Standard Deviation				.838
Awareness of Opportunities for Participation				
(1) Not Aware	207	69		
(2) Somewhat Aware	79	26.3		
(3) Moderately Aware	10	3.3		
(4) Aware	4	1.3		
(5) Very Aware	0	0		
Mean			1.37	
Standard Deviation				.616
Public Involvement in School System Planning				
Strongly Disagree	0	0		
Disagree	1	0.3		
Undecided	3	1		
Agree	94	31.3		
Strongly Agree	202	67.3		
Mean			4.66	
Standard Deviation				.516

Nature of the Issue – Appendix 17

Responses:	*Parents in communities with schools*	*Parents in communities without schools*	*Primary school educators*	*Secondary school educators*	*Business owners*	*Government officials*	*Non-government organization leaders*	*Total*
School relocation.			1		1	2		4
Fund raising activities.	1	1		1				3
School site identification.				1		1		2
Transition from primary to secondary.			1				1	2
Parents to teach in schools.						1		1
Improvement in literacy and numeracy.						1		1
Repairing of school property.		1						1
Inadequacy of school facility.				1				1
Discipline in schools.					1			1
Policy for repeaters.					1			1

Community Involvement on Land Use Proposals Affecting Schools – Appendix 18

Factors	N	Percentages	Mean	Standard Deviation
Knowledge of Land Use Negatively Affecting Schools				
Yes	79	26.3		
No	221	73.7		
Total	300			
Community Involvement on Land Use Proposals Affecting Schools				
Yes	297	99		
No	03	1		
Total	300			
Interest in Providing Input on Specific Land Use Proposals				
Yes	79	26.3		
No	221	73.7		
Total	300			

Explanation of Satisfaction– Appendix 19

Responses:	*Parents in communities with schools*	*Primary school educators*	*Secondary school educators*	*Business owners*	*Government officials*	*Non-government organisation leaders*	*Total*
Very satisfying as discussions are frank.		1		3	1	1	6
No opportunities for dialogue with school authorities.		1	1		2		4
The inclusion of literacy in schools.					1		1
Concern for site selection in relation to hazards.					1		1
Great improvement thereafter.	1						1

Examples of the Type of Problem That Has Occurred- Appendix 20

Responses:	The number of respondents who saw each factor as having a negative effect on students and the schools.	Schools affected
1) Noise from the Grenlec power station	25	Wesley College, Presentation Boys College, St Joseph Convent, St Louis Girls RC School.
2) Air pollution from the Grenlec power station	19	Wesley College, Presentation Boys College, St Joseph Convent, St Louis Girls RC School, St Georges Anglican Junior and Senior , Grenada Boys Secondary, Anglican High School etc.
3) Severe noise and bad odor from a nearby pig farm	13	Boca Secondary, Saint David's Secondary School, Saint David's Primary School.
4) The Maurice Bishop International Airport runway activities creating severe noise and air pollution and vibrating effects on surrounding	13	Calliste Government, South St George Government, Grand Anse Case Study Research Method Roman Catholic.
5) Severe noise from the Gravel and Concrete mining operations	11	Wesley College, Presentation Boys College, St Joseph Convent, St Louis Girls RC School.
6) Air pollution from the Gravel and Concrete mining operations	10	Wesley College, Presentation Boys College, St Joseph Convent, St Louis Girls RC School, St Georges Anglican Junior and Senior , Grenada Boys Secondary, Anglican High School etc.
7) Noise and air pollution from the activities in the central business district in St George's	9	Presentation Boys College, St Joseph Convent, St Louis Girls RC School, St Georges Anglican Junior and Senior, Grenada Boys Secondary, Anglican High School, Grenada Boys Secondary School.
8) Nearby houses creating tremendous noise	5	Presentation Boys College, St Joseph Convent, St Louis Girls RC School, St Georges Anglican Senior , Grenada Boys Secondary, Anglican High School, Boca Secondary, Happy Hill Secondary, Happy Hill Primary etc.
9) Public cemetery producing severe noise and bad odor	4	Presentation Boys College, St Joseph Convent, St Louis Girls RC School, St Georges Anglican Junior and Senior , Grenada Boys Secondary, Anglican High School etc.
10) Noise and air pollution from the activities in the port facility in St George's	3	Presentation Boys College, St Joseph Convent, St Louis Girls RC School, St Georges Anglican Junior and Senior, Grenada Boys Secondary, Anglican High School.

Land Uses that are Most Appropriate Near Schools-Appendix 21

Responses:	The number of respondents who saw each type of land use as appropriate near schools.
Recreation	192
Agriculture	131
Green spaces	112
Light Businesses	97
Religious Institutions	35
Housing Development	34
Entertainment	16
Government Buildings (Libraries, community centers etc)	12
Road systems	4

Examples of Types of Land Use Proposals –Appendix 22

Responses:	The number of respondents who are interested in providing input for a particular type of land use/s
Recreation	48
Green spaces	41
Light Businesses	27
Agriculture	25
Religious Institutions	11
Entertainment	7
Tourism for private and government benefit	7
Housing Development	6
Industrial land use for private and government benefits	5

Decision Makers on the Effect of Land Use on Nearby Schools – Appendix 23

Factors Rated		Yes	No	Total
Ministry of Education	N	298	2	300
	%	99.3	0.7	
Department of Physical Planning	N	297	3	300
	%	99	1	
Local Council	N	268	32	300
	%	89.3	10.7	
Community Organizations	N	298	2	300
	%	99.3	0.7	

Other Concerns about School System Planning – Appendix 24

Responses:	*Parents in communities with schools*	*Parents in communities without schools*	*Non-parents in communities without schools*	*Secondary school educators*	*Business owners*	*Non-government organization leaders*	*Total*
Government needs to change their mindset.	1						1
Government must always involve the public.		1					1
Public must be involve in school decisions.		1					1
Better training centers needed.			1				1
Better school book program needed.			1				1
Theater needed to develop the creative arts of students.					1		1
A holistic approach to planning schools is needed.						1	1
St Joseph Convent, St Louis Girls Roman Catholic needs to be relocated.				1			1

Field Observation Data– Appendix 25

Research Findings for the St George Anglican Senior Primary school

St George's Anglican Senior Primary School		
Criteria	**Observation**	**Evaluation or Met / Not Met Standard**
Distance to Recreational Facilities	Approx, 2.5 miles	Not met
Distance to Center of Community	Approx, 1 mile	Not met
Distance to Commercial Activities	Approx,5ft	Not met / Too close
Distance to Heavy Industry	Approx, 3.5 miles	Met
Distance of School Building to Transportation Networks (Main roads only)	Approx, 5ft from a main road	Not met
Distance to Health Facility	Approx, ½ mile	Met
Distance to Security Facility/ Fire Facility	Approx, 1 mile	Met
Nature of Topography	Topography is generally rolling and drainage is poor	Not met
Site Erosion	Site is not prone to erosion, surrounded by large concrete buildings	Met
Flooding	Site is away from rivers, sea or rocks but is flooded by water from concrete surroundings	Not met
Noise	School is in a noisy district from vehicular traffic and commercial activities	Not met
Safe Routes to School for Pedestrians and Bicycles	There are no safe routes for students to walk or bike (road very narrow)	Not met
Visibility, Safety of Driveways and Internal Circulation	One driveway to school and there is often conflict when vehicles enter the roadway. In addition internal circulation on site is not possible.	Not met

Research Findings for the St Louis Roman Catholic Girls

St Louis Roman Catholic Girls		
Criteria	**Observation**	**Evaluation or Met / Not Met Standard**
Distance to Recreational Facilities	Approx, 2 ¾ miles	Not met
Distance to Center of Community	Approx, 1 mile	Not met
Distance to Commercial Activities	Approx, 5ft	Not met / Too close
Distance to Heavy Industry	Approx, 4 miles	Met
Distance of School Building to Transportation Networks (Main roads only)	Approx, 5ft from a main road	Not met
Distance to Health Facility	Approx, ¼ mile	Met
Distance to Security Facility/ Fire Facility	Approx, 1.5 mile	Met
Nature of Topography	Topography is hilly with a few areas of flatness and drainage is poor.	Not met
Site Erosion	Site is not prone to erosion, surrounded by large concrete buildings	Met
Flooding	Site is away from rivers, sea or rocks but is flooded by water from concrete surroundings	Not met
Noise	School is in a noisy district from vehicular traffic and commercial activities	Not met
Safe Routes to School for Pedestrians and Bicycles.	There are no safe routes for students to walk or bike (road very narrow)	Not met
Visibility, Safety of Driveways and Internal Circulation	One driveway to school and there is often conflict when vehicles enter the roadway. In addition internal circulation on site is not possible.	Not met

Research Findings for the Calliste Government School

Calliste Government School		
Criteria	**Observation**	**Evaluation or Met / Not Met Standard**
Distance to Recreational Facilities	Approx,5 miles	Not met
Distance to Center of Community	Approx, ¼ mile	Met
Distance to Commercial Activities	Approx, 1 ¾ miles	Not met
Distance to Heavy Industry	Approx, 3.5 miles	Met
Distance of School Building to Transportation Networks (Main roads only)	Approx, ½ mile from a main road	Not met
Distance to Health Facility	Approx, 2 miles	Met
Distance to Security Facility/ Fire Facility	Approx,1.5 miles	Met
Nature of Topography	Topography is generally flat with small portions of hilliness and drainage is poor	Not met
Site Erosion	Site is not so far away from the sea and faces the potential of erosion from the sea.	Not met
Flooding	Site is not very far away from the sea hence the potential for flooding from tsunamis and climate change impacts. In addition the site floods when it rains heavy.	Not met
Noise	School is in a noisy district from airport activity	Not Met
Safe Routes to School for Pedestrians and Bicycles	There are no safe routes for students to walk or bike (road very narrow)	Not Met
Visibility, Safety of Driveways and Internal Circulation	One driveway to school but there is little conflict as road leading to school is a secondary one not frequently used by vehicles and there is good internal circulation on the site.	Met

Calliste Government School

Research Findings for the St Paul's Government School

St Paul's Government School		
Criteria	**Observation**	**Evaluation or Met / Not Met Standard**
Distance to Recreational Facilities	Approx, 3 miles	Not met
Distance to Center of Community	Approx, 2 miles	Not met
Distance to Commercial Activities	Approx, 1 mile	Not met
Distance to Heavy Industry	Approx, 3 miles	Met
Distance of School Building to Transportation Networks (Main roads only)	Approx, ½ mile from a main road	Not met
Distance to Health Facility	Approx, 2.5 miles	Met
Distance to Security Facility/ Fire Facility	Approx, 3 miles	Met
Nature of Topography	Topography is generally rolling and drainage is poor.	Not met
Site Erosion	Site prone to erosion from a nearby stream	Not met
Flooding	Site is prone to flooding from nearby stream.	Not met
Noise	School seem to be in a quiet environment	Met
Safe Routes to School for Pedestrians and Bicycles	There are no safe routes for students to walk or bike (road very narrow)	Not Met
Visibility, Safety of Driveways and Internal Circulation	One driveway to school and there is often conflict when vehicles enter the roadway. In addition internal circulation is not possible.	Not Met

St Paul's Government School

Research Findings for Wesley College

Wesley College		
Criteria	**Observation**	**Evaluation or Met / Not Met Standard**
Distance to Recreational Facilities	Approx, 25ft	Met
Distance to Center of Community	Approx,10 ft	Met
Distance to Commercial Activities	Approx,150 ft	Met
Distance to Heavy Industry	Approx, ½ mile	Not met
Distance of School Building to Transportation Networks (main roads only)	Approx, ¾ miles from a main road	Not met
Distance to Health Facility	Approx, 2 miles	Met
Distance to Security Facility/ Fire Facility	Approx, 2 ¾ miles	Met
Nature of Topography	Topography is generally flat but drainage is poor.	Not met
Site Erosion	Site is slowly eroded by nearby river	Not Met
Flooding	Site is often flooded by nearby river since it is on the flood plain of the St. John's River	Not met
Noise	School is in a noisy district from industrial activities of Grenlec Power Plant and the Gravel and Concrete mining operations.	Not met
Safe Routes to School for Pedestrians and Bicycles	There are no safe routes for pedestrians and bicycles.	Not Met
Visibility, Safety of Driveways and Internal Circulation	School has one driveway and there is some level of conflict when vehicles enter the roadway. Also internal circulation is limited on the site.	Not Met

Wesley College

Research Findings for the Presentation Boys College

Presentation Boys College		
Criteria	**Observation**	**Evaluation or Met / Not Met Standard**
Distance to Recreational Facilities	Approx, 2 ¾ miles Approx, 5ft respectively	Not met
Distance to Center of Community	Approx, 1 mile	Not met
Distance to Commercial Activities	Approx,15ft	Not met/ too close
Distance to Heavy Industry	Approx,3.5 miles	Met
Distance of School Building to Transportation Networks (Main roads only)	Approx,3ft from a main road	Not met
Distance to Health Facility	Approx, ¾ miles	Met
Distance to Security Facility/ Fire Facility	Approx,1.5 miles	Met
Nature of Topography	Topography is generally hilly and drainage is poor.	Not Met
Site Erosion	Site is not prone to erosion	Met
Flooding	Site is on a steep slope but not too far away from the sea and may face the risk of tsunamis and climate change impacts. In addition there is serious flooding on the site from concrete surroundings when it rains.	Not met
Noise	School is in a noisy district from vehicular traffic and commercial activities	Not met
Safe Routes to School for Pedestrians and Bicycles.	There are no safe routes for students to walk or bike (road very narrow)	Not Met
Visibility, Safety of Driveways and Internal Circulation	One driveway to school and there is often conflict when vehicles enter the roadway. In addition internal circulation on site is not possible.	Not Met

Presentation Boys College

Research Findings for the St Joseph's Convent St, George's

St Joseph's Convent St, George's		
Criteria	**Observation**	**Evaluation or Met / Not Met Standard**
Distance to Recreational Facilities	Approx, 2 ¾ miles	Not met
Distance to center of community	Approx,1 mile	Not met
Distance to Commercial Activities	Approx,10 ft	Not met / Too close
Distance to Heavy Industry	Approx,4 miles	Met
Distance of School Building to Transportation Networks (Main roads only)	Approx, 3ft from a main road	Not met
Distance to Health Facility	Approx, ¼ miles	Met
Distance to Security Facility/ Fire Facility	Approx, 1.5 miles	Met
Nature of Topography	Topography is generally hilly and drainage is poor.	Not Met
Site Erosion	Site is not prone to erosion	Met
Flooding	Site is on a steep slope but not too far away from the sea and may face the risk of tsunamis and climate change impacts. In addition there is serious flooding on the site from concrete surroundings when it rains.	Not met
Noise	School is in a noisy district from vehicular traffic and commercial activities	Not met
Safe Routes to School for Pedestrians and Bicycles.	There are no safe routes for students to walk or bike (road very narrow)	Not Met
Visibility, Safety of Driveways and Internal Circulation	One driveway to school and there is often conflict when vehicles enter the roadway. In addition internal circulation on the site is not possible.	Not Met

St Joseph's Convent St, George

Research Findings for the Anglican High School

Anglican High School		
Criteria	**Observation**	**Evaluation or Met / Not Met Standard**
Distance to Recreational Facilities	Approx, 2 miles	Not met
Distance to Center of Community	Approx, 1 mile	Not met
Distance to Commercial Activities	Approx, 1/8 mile	Met
Distance to Heavy Industry	Approx, 1 ¾ miles	Not met
Distance of School Building to Transportation Networks (Main roads only)	Approx, 3ft from a main road	Not met
Distance to Health Facility	Approx, 2 miles	Met
Distance to Security Facility/ Fire Facility	Approx, 1.5 miles	Met
Nature of Topography	Topography is generally hilly.	Not met
Site Erosion	Site is not prone to erosion	Met
Flooding	Site is not very far away from the sea hence the potential for flooding from tsunamis and climate change impacts. In addition the site floods when it rains heavy.	Not met
Noise	School is in a noisy district from vehicular traffic, port activities and commercial activities.	Not met
Safe Routes to School for Pedestrians and Bicycles	There are no safe routes for walking or biking to school.	Not Met
Visibility, Safety of Driveways and Internal Circulation	School has two driveways however there is still conflict when vehicles enter the roadway. There is some level of internal circulation on the site.	Met

Anglican High School and its Surrounding

Gravel and Concrete Mining Operations

Source: http://gravel.gd/information.htm

The Gravel and Concrete mining operations which is approximately ½ mile away from Wesley College produces severe noise, air and land pollution to the school and surrounding communities

Maurice Bishop International Airport Runway and it's Close Proximity to Calliste School

Calliste Government School is in very close proximity to the airport runway: as such it experiences plenty noise, air pollution and a strong vibrating effect when the large planes traverse the airport runway.

The Central Business District of Saint George

St Joseph's Convent St, George's, Presentation Boys College, St George's, Anglican Senior, and St, Louis Roman Catholic Girls St, George's are located approximately ¼ mile from the Central Business District (CBD) in St, George's. These schools experiences a considerably amount of noise and air pollution from the hustling and bustling activities in the CBD on a daily basis.

The Saint George Cemetery and its Close Proximity to the Presentation Boys College

The Presentation Boys College is approximately 10feet away from the top portion of the cemetery, ever so often it experiences noise pollution from funeral activities held at the cemetery and there is a very bad odor coming from the facility.

The Saint George Port Facility

Source:http://www.grenadaports.com/index.php?option=com_content&view=article&id=78&Itemid=504

The Anglican High School is approximately ½ mile from the port facility and it experiences a considerably amount of noise and air pollution (dust and smoke) on a daily basis.