

BUILDING HUMAN CAPITAL THROUGH EDUCATION

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Educational resilience is “the heightened likelihood of success in school and other life accomplishments despite environmental adversities brought about by early traits, conditions, and experiences” (Wang, Haertel, & Walberg, 1994, p. 46). Using the Social Affirmation Framework and Eriksonian development theory, this article explores education in the Caribbean. This paper attempts to answer 4 questions: What is Social Affirmation? What is the relationship between psychosocial development and educational resilience? What is underperformance in Caribbean education?; and, How can social affirmation explain the educational resilience demonstrated in high performing students?

Keywords: Social Affirmation, Education, Resilience, Development, Social Support

The proliferation of complex organizations has made most human activities collective endeavors. We grow up in and start families. We work in and rely on organizations for goods and services. We learn in schools and universities. We play sports in teams. We join clubs and associations. Many of us will grow old and die in hospitals or nursing homes. We build these human enterprises because of what they can do for us. They produce consumer goods, offer entertainment, provide social services and health care, and deliver the mail. (Bolman & Deal, 2003, p. 5)

The quality of education systems in the Caribbean directly informs the quality of the workers in the next generation. In the Caribbean and the wider world, education is valued by many as a means of social mobility. A value can be understood in terms of a thing being “useful, desired or esteemed.” (Reber, 1985; 1995, p. 834). “Yukl (2013) defined values as “internalized attitudes about what is right and wrong, ethical and unethical, moral and immoral” (p. 143).” (in Miller & Hutton, 2014, p. 76). Branche and Morgan (2011) said, “To affirm is to assert, to declare a value.” (slide 2). So education is valued by all. Consequently, governments across the region, parents with children in school, and students themselves, do their best to ensure that their grades, the most accepted indicator of academic competence, are high or at an acceptable level for social promotion. However, concern persists in the region in spite of the high value placed on education about the underperformance of students in education. This is of particular concern for the boys as, there is a

Disturbing trend towards drop-out, marginalization and under-performance of young males compared to their female counterparts. The ratio of girls passing the CXC exams in some countries range from ... [high:low] in some countries to [low:high] in others. We need strategies for boys so that we do not contribute to “breeding a generation of very angry, very frustrated young men, many of whom, after three to five years of secondary schooling, can only function at the lowest levels of the job market. (Mitchell, 2002, pp. 10-11)

This paper attempts to answer 4 questions in light of the Social Affirmation Framework (Branche & Morgan, 2011). They are:

1. What is Social Affirmation?
2. What is the relationship between psychosocial development and educational resilience?
3. What is underperformance in Caribbean education?; and,
4. How can social affirmation explain the educational resilience demonstrated in high performing students?

Theoretical Framework

The Social Affirmation Framework

At the core of understanding social affirmation is an understanding of the self. Most simply, the self is the way in which we define or introduce ourselves to others. Critical to understanding the process of social affirmation, is understanding identity. According to Morgan (2014) "... identity is about who we are and what matters to us; about what images and meanings define and represent us given where we are; and about what we want and aspire to be." (Morgan, 2014, p. 1) Therefore, the individual, the psyche, the mind, is always at the centre of every experience – receiving, interpreting and responding to all external and internal stimuli. Therefore, a Caribbean self is created by the processes occurring in Caribbean families and societies. In light of the centrality of the self in interaction, Branche (2011) proposes that:

Social Affirmation is a Caribbean behavioural science framework that focuses on community resources in the social production of valued selves. Valued selves naturally inoculate against many community challenges and problems. "... the Social Affirmation process is a process of psycho-social adaptation whereby the values and relationships of a community are organised to help establish the 'stabilization of personality' through the availability of self and identity scripts/roles which are supported by an appeal to values and behavior deemed to be appropriate and meaningful given the existing traditions in the particular and the wider community." (Branche & Morgan, 2011; slide 2)

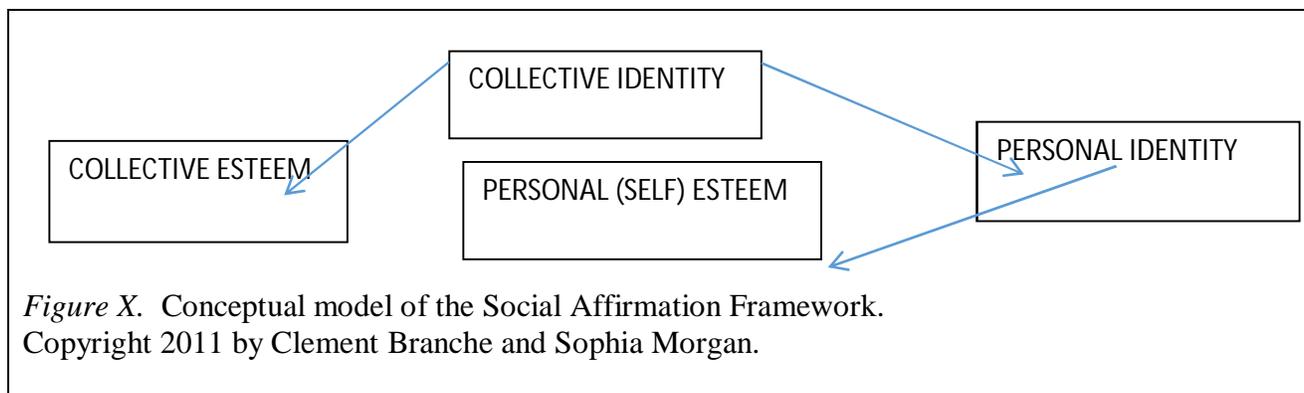
Note that the Social Affirmation Framework focuses on the valued self within a particular community setting, for example a good son, an excellent scholar, a master musician. As an indigenous behavioural framework for the Caribbean, it is sensitive to the historical, cultural and economic forces, in particular the plantation legacy, that have shaped and continue to shape the lives of the Caribbean people. It is able to explain how the Caribbean self that is produced is first valued by the people who produced it, and so it will continue to exist and be reproduced in the environment that created it (See Branche and Morgan, 2011).

Four dimensions of the Framework have been identified by Branche and Morgan (2011). These refer to,

- a. The psycho-social process of the construction of 'robust' collective selves which takes place at the community level.
- b. A behavioural science framework for Caribbean studies, interrelating the sociological, psychological and social psychological, with a focus on collective power and collective selves.
- c. A research project attempting to identify the collective power sources and resources that support the establishment of valued selves.
- d. A critical framework for examining historical alterity relations (that is relationships of power and domination in which the self has to find its place) and for promoting discourse towards a "free community of valued persons." (slides 4-5)

On every dimension, the valued self is the focus for research and analysis. Branche and Morgan (2011) posit that "Man cannot survive without this affirmative meaning making. Basic to the

adaptation of groups and individuals is the development of positive images, values and meanings, often attached to some set of collective ideal selves and identities. This means that even in difficult circumstances there are bedrock positive tendencies and potentials.” (slide 6) For the purposes of this paper we will focus on the underlying psycho-social processes that are critical in the development of a collective Caribbean identity, and how those underlying Eriksonian developmental processes contribute to building human capital. Figure 1 below shows the conceptual relationships of the Social Affirmation Framework.



This shows the conceptual relationships of the identity and esteem components of the Social Affirmation Framework. A collective identity directly influences collective esteem and personal identity. Personal identity directly influences personal esteem.

In general it is expected that the collective identity of the individual, that is their group’s identity to others, will directly influence the collective feelings about the group (collective esteem) as well as the personal identity that is assumed. Personal identity is strongly associated with personal esteem (positive or negative feelings about the self). As individuals cannot choose where they are born, parents and other primary caregivers mirror the identities that can be selected.

Eriksonian Development

Education is first informal in the home and then formalized in the school system. Figure 2 below shows that general self-esteem during formal schooling is determined by social competence, a composition of their relationship with their peers and their parents. As vocabulary rapidly increases between 2 and 7 years of age, and the middle school years of formal education occur between 8 and 11 years, the foundation of educational resilience spans two Eriksonian stages of development – *initiative versus guilt* and *industry versus inferiority*. Leading developmental psychologists like Piaget and Vygotsky also agree on the importance of language in learning. More than thirty years of research related to Vygotsky’s sociocultural theory shows that language is highly correlated with memorization, recall, reading skills and more (See Berk, 2010). This is particularly true of the Caribbean where many families speak a form of creole-influenced vernacular or patois which in some instances make children unprepared for school (See Baker-Henningham, Younger & Walker, 2007; Organisation of Eastern Caribbean States (OECS), 2008). In Jamaica, the addition of the letter “h” at the beginning of words beginning with vowels, or in Trinidad and Tobago where there is a strong Hindi influence, words are typically pronounced in the creole-

influenced vernacular. This may be one factor influencing the rate at which children learn phonics at school. Where parents are not equipped to teach their children, the early childhood programmes such as Head Start in the United States, and similarly those operated by the private sector and the Early Childhood Commission in Jamaica (See Watson-Williams & Fox, 2013), and similar bodies across the region, provide early childhood facilities to prepare children for grade 1. Continued research on the Head Start programmes in the United States, as well as the UNICEF sponsored programmes across the region by the Tropical Metabolic Research Institute (Goodman & Dias, n.d.), show that children who participate in an early childhood education programme demonstrate a higher level of academic performance than children who are not exposed to such a programme. Additionally, in Jamaica, the National Parenting Support Commission works to support parents in facilitating quality education for their children. Across the region some of the most recognized foundations contributing to education are the telecommunication giants, LIME and Digicel, and a host of others. Many Caribbean corporate citizens are advancing corporate social responsibility by making massive investments in education. It is important to note that in Jamaica, “The early childhood level caters to children aged 3-5 years and is dominated by a network of privately run institutions, with only 10 per cent of students at this level attending public schools (MoE Education Statistics 2010).” (Watson-Williams & Fox, 2013, p. 14).

In general, if parents and teachers encourage exploration and appropriately praise the child for their curiosity and discovery then they will take the initiative to explore more and attempt new tasks. However, if children are harshly punished or criticized then they will become fearful of punishment and experience guilt for doing something wrong. A positive and adaptive development occurs when there is more initiative over guilt, enabling the “ego to develop the quality of purpose, or “the courage to envisage and pursue valued goals uninhibited by ... the foiling fear of punishment” (Erikson in Ewen, 1998, p. 254).

Teacher Support. “One of the most important aspects of classroom climate is students’ perceptions of social support, which may be defined as the existence and availability of people on whom one can rely for assistance, support, and caring” (Johnson, Johnson, Buckman & Richards, 1986, p. 405). Social support has been shown to be related to academic performance, persistence on challenging tasks under frustrating conditions, resilience in stressful situations, a coherent and integrated self-identity, and psychological health and adjustment (See Johnson et. al., 1986; Rosenfield, Richman & Bowen, 2000). For this reason and others, the perception of teacher support in the classroom is critical for academic success. Support can be provided in two ways through giving intangible or emotional support through encouragement; or in tangible ways through giving help through cooperative learning strategies, providing books, money for lunch or for the bus and so on.

One of the key correlates of perceived social support is self-esteem. How a student feels about him or herself in the classroom is directly and indirectly related to how they relate to their teachers, their peers and their academic assignments (Levitt, Guacci-Franco & Levitt, 1994). However, the degree to which social support predicts self-esteem is unclear. In a pioneering study, Cauce, Felner and Primavera (1982) studied the effects of support on self-concept and academic achievement in adolescents from multiethnic backgrounds who lived in the inner-city. The sample included African-Americans, Hispanic-Americans and Anglo/European-American populations, and were based on student ratings of helpful behavior demonstrated by others in their network. The results showed that support from their network was “not significantly related to achievement or self-concept, and informal support had a negative effect on academic averages. Family support was positively related to academic self-concept, except for African-American females, for whom this relationship was reversed.” (Levitt et. al., 1994, p. 208). A possible explanation may be found

among the reasons cited for underperformance of the Surinamese students in education in the past. It may be that older siblings, particularly girls, may be given more responsibilities at home in terms of childcare and other housekeeping duties while the parents go out to work (See Miller, 2000).

Another study conducted by Rosenfeld, Richman and Bowen (2000) showed the centrality of the teacher in social support networks, and in particular school outcomes. The findings showed that students in middle school and high school who saw their parents, friends and teachers as supportive of them had “better attendance; spend more hours studying; avoiding problem behavior more; having higher school satisfaction, engagement, and self-efficacy; and obtaining better grades” (p. 219). Students who perceived support from all three sources of support were better in every category than students who perceived from none, one or two sources of support. It was interesting to note that students who were considered to be at-risk for academic failure perceived support only from their parents. This suggests that social support is additive in terms of the support perceived by the self, from parents to teachers and peers. Consequently, the relationship between support and self-esteem requires more exploration through the social affirmation framework which advocates for the production of valued selves in the local community.

Figure 2 below shows the structure of self-esteem as it continues to develop through the formal education system when students spend more direct time with teachers. In the middle childhood years, between ages 8 and 11, the emerging crisis is *industry versus inferiority*. This is usually characterized by an “intense curiosity and wish to learn.” (Ewen, 1998; p. 256). This is the period where students are asked to read aloud or to write standardized examinations in Grade 4 and Grade 6 as occurs in Belize, Jamaica, St. Lucia and the British Virgin Islands (See Miller, 1996; Ministry of Education (MoE), 2013; MoE, 2014). This pattern continues into secondary school and university, where terminal exams are administered. Based on the responses of parents, teachers and coaches to their students’ performance, students will continue to pursue their goals and develop the related competencies (See Figure 2 below).

Incidentally, most countries of the Caribbean have achieved their goal of universal primary education (See Miller, 1996; 2000; Mitchell, 2002). In Jamaica, there has been applause for success in the grade 4 literacy test. Rev. Thwaites, Minister of Education, reported that more than three quarters of the students eligible to take the test demonstrated mastery in literacy skills. However, 81% of these were girls, while boys performed at 23% below their female counterparts. In the Numeracy Test, results indicated “that 59 per cent of the total number of students who sat it in June achieved mastery. When the results are broken down, again, more girls (62 per cent) than boys (47 per cent) are mastering numeracy” (Jamaica Gleaner, 2013). However, according to the MoE’s (2014) National Mathematics Programme this 59% is cause for concern as the challenges in numeracy at the lower levels of the education system persist at the higher levels if not addressed. So, we have to revisit the students’ perception of support from their teachers and parents in their mathematical abilities as well as their general self-esteem and its influence on academic performance. Figure 2 below shows the components of general self-esteem.

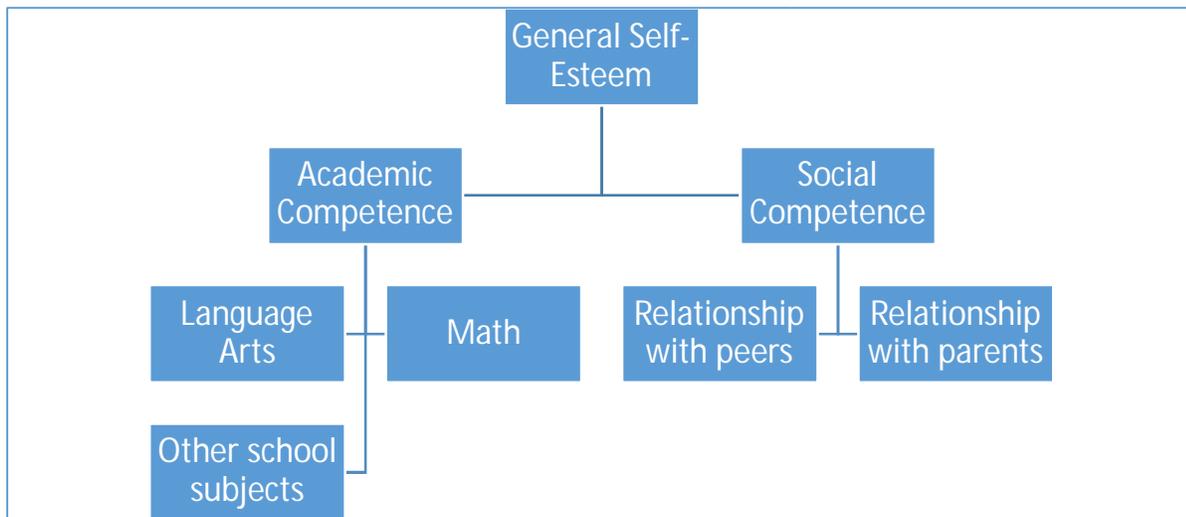
Figure 2. Partial Structure of Self-Esteem in Mid-Elementary School

Figure X. Hierarchical structure of self-esteem in the mid-elementary school years. Academic competence and social competence are two of the four major factors in general self-esteem for children in middle childhood. The other two factors are physical/athletic competence and physical appearance. Adapted from *Development through the lifespan*. 5th Edition by L. E. Berk, 2010, p. 331.

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Based on the structure of self-esteem in middle childhood, it is clear that teachers exert tremendous influence in the way that students develop academic competence. At a time when science, technology, engineering, and mathematics (STEM) are the driving force behind economic growth, this is particularly true in Jamaica where students generally fear mathematics. This will be discussed later, however, the results from the Caribbean Examinations Council (CXC) for mathematics show that for 2001-2012, 23% - 45% of a sitting cohort earned Grades 1 – 3 Proficiency in Jamaica. Additionally, these figures reflect “only between 10% and 21% of the given age cohort” (MoE, 2014, p. 4). So approximately 79% of an age cohort is not being qualified in mathematics on leaving secondary school. Consequently, if teachers are not prepared to support students in their efforts there will be a decline in general self-esteem, and subsequently academic competence. Jamaica, nor the region, can afford the loss of esteem. So, teacher support is critical to building sustainable human capital.

When added with physical competence in sports and physical abilities (not shown), teachers contribute to approximately half of their students’ general self-esteem. Psychological well-being occurs when industry predominates over inferiority, and “the ego learns that important tasks can be accomplished by using intelligence and dexterity (competence)” (Ewen, 1998, p. 256). When students perceive that teachers are supportive, that is: wanting the best for their students, being open, willing to listen, and to provide additional help or resources if necessary, they are more likely to gain the respect of their students and illicit the required industry (see Baker, 1999; Esposito, 1999; Levitt et. al., 1994; Mitchell, 2003). Consequently, when students feel a sense of belonging to the school community they are more likely to work to achieve personal success as well as to protect the reputation of the school.

Underperformance in Education

Educational resilience is a protective factor which guards the self against absolute despair. It is “the heightened likelihood of success in school and other life accomplishments despite environmental adversities brought about by early traits, conditions, and experiences” (Wang, Haertel, & Walberg, 1994, p. 46). At a time when many regional governments are spending less on education and demanding more from their teachers and their students (Miller & Hutton, 2014), boys and girls from the Caribbean have demonstrated educational resilience based on the results of the CXC examinations according to the 2011 Annual Report (CXC, 2011). The following cases highlight the remarkable achievements of students.

Students from Queen’s College Guyana dominated the CSEC regional top awards in 2011. Anuradha Dev continued Queen’s College Guyana’s dominance of the award for the most outstanding candidate overall by achieving 15 Grade Is, with A profiles in all subjects except one B profile in Spanish. Grade I profile in Agricultural Science (Double Award), Biology, Caribbean Studies, History, Chemistry, English A, English B, Geography, Information Technology, Integrated Science, Mathematics, Physics, Social Studies, Spanish, Electronic Document Preparation and Management and Human and Social Biology. Anuradha’s performance also earned her the award for the Most Outstanding candidate in the Sciences.

The other awards went to students from Belize, Jamaica, St. Vincent and the Grenadines. (CXC, 2011, p. 21).

For the second consecutive year, a student from Presentation College, San Fernando, Trinidad and Tobago, has won the Dennis Irvine Award for the Most Outstanding Candidate overall in the Caribbean Advanced Proficiency Examinations (CAPE).

Kerry Singh copped the award with Grade I in 12 units, all with As in the Module grades. Kerry achieved Grade I in Applied Mathematics Units 1 and 2, Biology Units 1 and 2, Caribbean Studies, Chemistry Units 1 and 2, Communication Studies, Physics Units 1 and 2 and Pure Mathematics Units 1 and 2. (p. 23)

Kerry follows in the footsteps of Nicholas Sammy from the same school who won the award last year with Grade I in 14 units. (CXC, 2011, p. 23)

These excellent results demonstrate that boys and girls have the capacity to achieve academic excellence within the constrained resources of the systems. As is happening in Trinidad and Tobago and other countries of the region, also holds true for Jamaica in that, “the high levels of underperformance at both the primary and secondary levels. ... exists alongside pockets of excellence, highlighting the extent of inequality among schools.” (Watson-Williams & Fox, 2013, p. 15). Under the relevant legislation, such as the Education Act of 1965 and the 1982 amendment of it in Jamaica, each country has a mandated period of education for children. In Jamaica, the mandatory ages for schooling are 6 to 12 years for primary education.

Results on standardized exams reveal the weaknesses that persist to the higher levels of the educational system. For example,

In 2011, 69 percent of the 41,668 students who sat the first sitting of the Grade Four Literacy Test achieved ‘mastery’ and therefore, were certified as literate, while the results of 21 percent were classified as ‘almost mastery’ and the remaining 10 percent were classified as ‘non-mastery’ (Ministry of Education, 2011). More recently, nearly 40 percent of the 42,000 students who sat the Grade Six Achievement Test in 2013 performed below standard (Francis, 2013). (Watson-Williams & Fox, 2013, p. 3)

Most children across the region complete primary education and have some secondary education up to grade 9 when they complete the Grade 9 Achievement Test (GNAT) or its equivalent. However, after grade 9 the enrollment falls off sharply, with a significant number leaving the formal education system ill-equipped for work (Mitchell, 2002; Williams-Watson & Fox, 2013). Research conducted by Miller (2000), reviewing the academic performance of students in 22 countries of the region at the primary level, supports the persistent underperformance of students on standardized tests. This persistence has been documented recently by Williams-Watson & Fox (2013).

Many of the challenges are believed to be from difficulties experienced with the language of instruction, familial responsibilities where older siblings are left in charge of younger siblings and so are frequently absent from school, malnutrition and health, teacher training and classroom resources and curriculum (See Miller 2002; Ringeling in Miller, 2000). Additionally, child-shifting, where children are sent to live with another relative or family friend for economic reasons or familial distress, is a common feature of Caribbean families (Ramkisoon, 2007). Whatever the reason may be, students continue to have challenges in the foundation subjects of English Language and Mathematics, yet they consistently perform higher in Information Technology. See Figure 3 below.

Figure 3: Trend in student performance on three key subjects – English Language, Mathematics and Information Technology

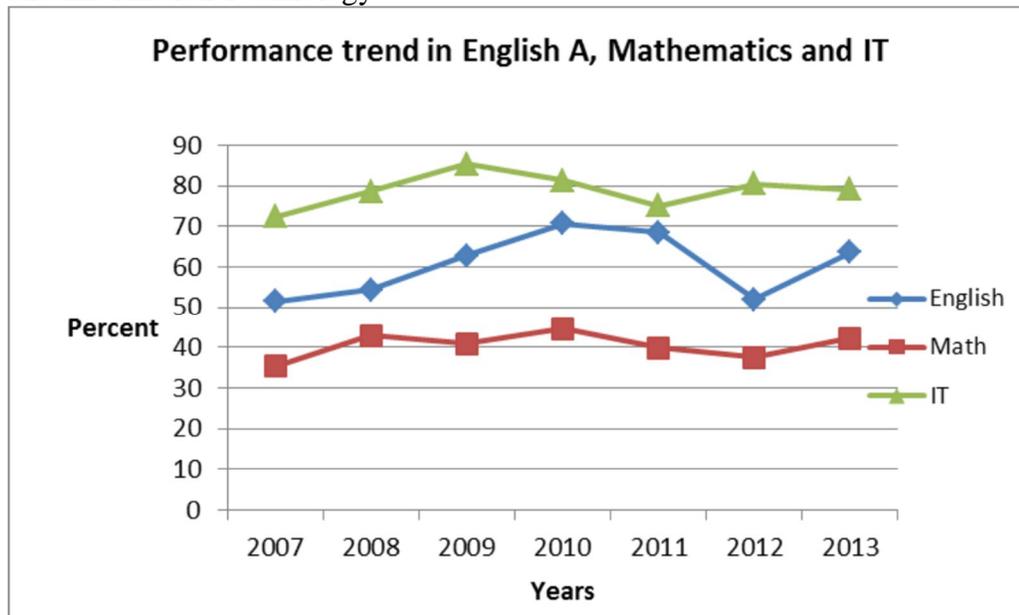


Figure X. Shows the trend in student performance on three key subjects – English Language, Mathematics and Information Technology from 2007 to 2013 by *Caribbean secondary education certificate (CSEC) examination 2013: Analysis of the public schools' performance* [Electronic Version], by the Caribbean Examinations Council, 2013, p. 9. Copyright 2013 by the Caribbean Examinations Council.

The results in Figure 3 above show the trend in academic performance among Jamaican students at the secondary level from 2007 to 2013 in 3 key subjects – English Language, Mathematics and Information Technology (IT). As with the data presented earlier, students are

weakest in mathematics; and these results are for approximately 21% of the age cohort each year (MoE, 2014). Students do better in English, but perform best overall in IT. This reflects the technological age and the ease with which this new generation of Jamaican workers use technology to facilitate human relationships and to complete assignments. So special attention has to be given to issues. However, these concerns are not new as researchers have called for educational reforms for years in order to close the gap between high performing students and schools and low performing students and schools. This is the goal of the Education System Transformation Programme (ESTP). They have even suggested innovative strategies, such as the “application of special facilities such as language and mathematics laboratories to assist in teaching” (Mitchell, 2002, p. 10). It is only through promoting educational resilience that our societies will be able to keep pace with global trends in development.

Educational Resilience

Therefore, as stated previously, educational resilience is “the heightened likelihood of success in school and other life accomplishments despite environmental adversities brought about by early traits, conditions, and experiences” (Wang, Haertel, & Walberg, 1994, p. 46). While, at the time of this writing, there is popularity for the concept of "grit" as an explanation of persistence in the face of obstacles (Tough, 2012), the term "educational resilience" has had a long history of elaboration and research and is the concept that will be used here.

Historically, educational success has been attributed to biological traits such as intelligence, personality and motivation. However, considering the plantation history of these Caribbean states in relation to other regions of the world, Caribbean educational successes must be affirmed. It must be affirmed in light of all the personal and environmental processes that enabled it to develop. Consequently, our understanding of

Education cannot be limited to academics, particularly at the primary and secondary levels. It has to be the total development of the child. Academic learning is not any more important than social and emotional learning, than spiritual learning. I believe that all these things are important to the development of the sort of disciplined, worthwhile citizen that we need for our country because education must have a purpose. . . . It (education) is not an end in itself and so the whole concept of service . . . (S. Samuels, personal communication, June 11, 2007).” (Hutton, 2011, p. 6)

It is the ultimate aim of every education system, regardless of the outcome in academic performance, to equip students to be self-sufficient and responsible citizens (See Anthony, 2002; Miller, 2002; Miller & Hutton, 2014; Mitchell, 2003; Ogbu, 1991; Reyes & Elias, 2011; Williams-Watson & Fox, 2013). Therefore, the subjects that are offered for instruction in the formal secondary school system, and more recently the increased variety in the vocational education system, are aimed at equipping students to become more resilient and productive workers. Figure 4 below shows some of the academic subjects that were offered in the CXC examinations 2014-2015 (CXC, 2015).

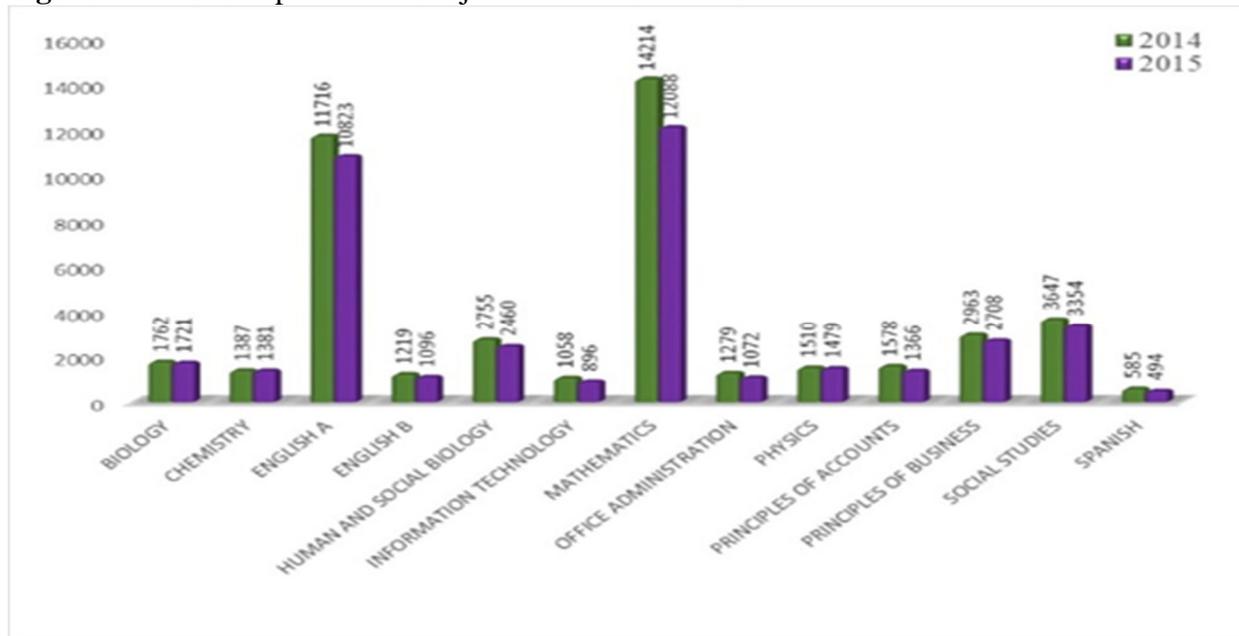
Figure 4: CXC Comparison of Subject Entries 2014-2015.

Figure X. CXC Comparison of Subject Entries 2014-2015.
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It is encouraging to note that in Figure 4, the largest entries of candidates for examinations at this January sitting were in the core subjects of English Language and Mathematics. Following these were business and humanity subjects in Social Studies, Principles of Business, and Human and Social Biology. The foreign languages, offering Spanish, had the least number of candidates at this sitting, with the second least candidates in Information Technology. However, the range of subjects offered provide students with opportunities for certification to explore options for traditional as well as newly emerging careers.

However, classroom instruction is not solely limited to academic subjects, but of necessity also includes instruction in social and emotional skills. As indicated by the preceding quote from Hutton (2011), the future Caribbean labour force has to be deliberately trained to provide good service. As social ills have increased in many Caribbean states and violence has become the way by which some have chosen to resolve conflict, educators are left with little choice but to introduce violence reduction and social competence programmes into the curriculum. These programmes facilitate more effective interaction between students and their teachers, students and their peers, and also students and their parents who need to understand and support the learning that is occurring in the classrooms. Remember that teachers contribute to more than 50% of the general self-esteem of their students. Consequently, if they can praise their students publicly or discipline them with firmness and respect, the student will learn to recognize healthy and adaptive coping strategies in order to complete the assigned educational task. Some of the violence reduction/SEL programmes that have been introduced in the Caribbean are: the Peace and Love in Schools (PALS) programme (Jamaica), the Health and Family Life Education Programme (St. Vincent and the Grenadines), Project Peace (Trinidad and Tobago), Pathways to Peace sponsored by UNESCO, and Change from Within developed by the University of the West Indies (See Coore, 2007).

The effectiveness of such SEL programmes in developing educational resilience has been demonstrated by research. Studies show that students who are exposed to social and emotional

learning (SEL) at any point across the lifespan will improve their life chances, along with the encouraging and empowering environments created in the classroom (Haggerty et. al., 1994; Reyes & Elias, 2011). Research by Bernard (in Waxman et. al., 2003) has also shown that resilient children typically display four personal characteristics: social competence, problem-solving skills, autonomy, and a sense of purpose. Additional research revealed that resilient students are motivated and goal oriented, use time positively, enjoy a healthy family life with available support, and have a stimulating school and classroom learning environment, including exposure to advanced technology and effective leadership (McMillan & Reed in Waxman, Gray & Padrón, 2003, p. 1). Consequently, when students do not have these skills, teachers must be capable of guiding their students on how to manage their emotions and to focus on learning (See Haggerty, Sherrod, Garmezy, & Rutter, 1994; Reyes & Elias, 2011).

Other research has shown the components of educational resilience that develop in passionate learners. In a study of 661 high-achieving African American eighth graders, and 1,894 low-achieving African American students, researchers found that the most successful students were from a higher social class, were younger, and had a higher proportion of working mothers than low-achieving students. In terms of school differences, they found that high-achieving students were also more likely to attend schools that were of higher socioeconomic status, were Catholic, had more curriculum exposure, higher student commitment, and a lower proportion of students in remedial reading than schools attended by low-achieving students. In terms of student academic behaviors, high-achieving African American students reported reading more pages per week, doing more homework, and having higher grades than low-achieving students. (Waxman et. al., 2003, p. 6).

These findings are confirmed by the strategies employed by some of the top achievers in the GSAT examinations for 2014 in Jamaica (Francis & Anderson, 2014). In one instance, the “Top Girl” for the year, who earned full marks in all the sections of the exam, attended a Roman Catholic school in the inner-city. The school also reported that more than 75% of their students scored above average, many earning more than 90%. In another instance, one of the top performing students from a public primary school in St. Catherine, reported that she read a lot of books, far more than was required by the syllabus (Francis & Anderson, 2014). Consequently, the building blocks of educational resilience in reading skills, goal setting, problem-solving and obtaining support from parents and teachers are seen in the earliest stage of the educational career.

Innovative Strategies for Developing Educational Resilience

At a time where more careers are being informed by STEM education, the Caribbean cannot afford to be left behind. And, also at a point in history when education systems in the region are producing students such as Anuradha, Mariesa, and Jonas who received more than a dozen Grade 1s in the CXC examinations, and Kerry, Shastri, Samantha and Jonathan who received at least 8 Grade 1s in the CAPE examinations (CXC, 2011), there is more than enough encouragement for the people of the region to invest in education. The educational resilience demonstrated by these students, and others like them through the years, has prompted several states and territories to find innovative methods to improve the performance of all students. The goal is not to make every student like Anuradha or Kerry, but rather to provide the best possible options for education so that students can improve their life outcomes and contribute to the welfare of their societies. In the following section we highlight some of the innovative strategies being implemented in Jamaica to address some of the systemic issues in education.

In a bold move to improve the numeracy performance of students across the island, Jamaica has adopted a National Mathematics Programme. There are four chief targets of the programme. They are to:

- attain 85% proficiency at Grade 4 by 2018;
- have 100% of the age cohort sitting CSEC by 2018;
- improve the quality of mathematics teacher education and change the negative culture surrounding the teaching and learning of mathematics. (MoE, 2014, p. 6).

These targets will be achieved through the deployment of “More than 146 Mathematics Coaches ... to underperforming schools (120 to primary schools and 26 to secondary schools) over a four-year period, to support 616 under-performing primary schools and 130 under-performing secondary schools” (p. 9). The main function of these Coaches will be to give support to the school-based mathematics teachers (SBMTs). This means that the Coaches will not be teaching math classes, but will be responsible for developing the capacity of mathematics teachers, as well as teachers of other subjects. At the primary school level, each school will have at least one full-time Coach for a year. This will be achieved by “weekly professional development sessions,” “one on one planning and coaching sessions emanating from classroom observations;” and, “support to all teachers ... to access an online mathematics content training programme” (p. 11).

At the secondary school level, “Coaches will be assigned to clusters of five schools for a period of two years” (p. 10). As of September 2014, Mathematics Coaches were deployed to “130 low-performing secondary schools” (p. 11). For each of their five schools, the Coaches will primarily build the capacity of the Heads of Department and develop a math programme for each school. They will also identify the professional needs of the mathematics teachers and design activities to address them. As the programme has not yet been evaluated, and a year has not yet passed, there is no data to show the effectiveness of these strategies.

“Music: Perfect Pitch for a Sound Education,” has been reported as being a successful innovative strategy in improving the literacy outcomes in under-performing schools. Since 2011, the First Global Bank has partnered with the MoE to improve the literacy level of students at six primary schools, including the John Rawlins Success Primary School in Montego Bay St. James, and the Bickersteth Primary and Infant School, also in St. James. The programme introduces music into the Grade 3 curriculum and is taught alongside other key subjects; a strategy that has been in use in the private schools for a long time. All students in this programme learn to play a musical instrument. In agreement with the research that shows that “music enhances a child’s ability to learn” (Davis, 2013), the results from this innovative partnership has shown significant results. An update from First Global to the Jamaica Information Service (Davis, 2013), revealed that

... over 90% of our students improved at least two grade levels in numeracy and literacy. ... Students who could not recognize letters at the start of the project are now reading up to two grade levels above their grade level. ... At least one student improved at least six grade levels in the project. Most if not all the students have demonstrated mastering phonics and listening comprehension in the Grade 3 diagnostic test in 2012. (Davis, 2013).

Assistant Chief Education Officer, Dr. Mary Campbell (Davis, 2013) went on to report the psychosocial benefits of the programme, as all the principals reported that the students were “generally more confident, respectful and independent.” There was also an accompanying improvement in attendance at school. This result suggests agreement with research cited earlier about the centrality of the teacher in the classroom. In that students perceived more support from their teachers and their peers as they performed better in music and improved in their overall academic performance. According to the principal of the John Rawlins Success Primary School, who spoke on behalf of the group, the teachers were enthused about learning the math songs, the

musical jargon, and the implications of using music to improve students' performance in literacy and numeracy. Consequently the teachers transmitted their renewed passion for learning to their students.

The success of the programme caused other teachers from other grades and other schools to desire training in the programme. To facilitate this process, the teachers became trainers, and trained their colleagues on how to implement the lessons using music in the higher grades. Students' evaluations of the programme were generally positive. Donique Henderson, of Bickersteth Primary and Infant School in St. James, said that "It's fun to play because it is easier for us to learn when you put it in songs." Seah Howard, of the John Rawlins Success Primary School said, "I feel like I have achieved a lot. I felt like something just burst out. Like I'm proud of myself because I was practicing and everything; and I was so shy." So the educational resilience being demonstrated by these students is also producing improvements in social competence, with an accompanying ability to access help from their support network. As a result of these successes, First Global expanded the programme by adding grade 4 to follow the current grade 3 students, as well as adding 3 additional schools. They also committed to supplying the equipment and the materials needed for training, as well as to sponsor teacher training workshops. (Davis, 2013).

At the high school level, the Jamaica College, a traditional high school for boys, has demonstrated what is possible when all the partners in the school community are invested in a transformation programme. When Mr. Ruel Reid, the current principal of the school, was recruited by the Hon. R. Danny Williams, Chairman of the Board, and the Board in 2006, it was with the aim of transforming a failing school into "The school of champions." (Reid, 2015, mins. 8:45 to 8:55). In an interview with one of the authors, he stated that

The JC situation was dire; meaning every aspect of the school had broken down. ... One of the first things I had to focus on was the discipline of both students and teachers because ... the culture had just fallen flat. ... Teachers didn't do lesson plans. If they didn't want to go to class they didn't go to class; and the same thing for students... It was a jungle. Everything was dilapidated; it was run down. ... no asphalted roads. There were no gates... It was a mess. (mins. 17:36 to 18:27).

As the need for transformation was already clear, the partners immediately went to work based on a corporate strategy. They carried out a SWOT (strengths, weaknesses, opportunities, threats) analysis and drafted the first strategic plan. Based on a new mission statement, a vision statement, and identified core values, the partners set to work some nine years ago. The first order of business was to introduce a PMS (Performance Management System) for both staff and students. According to Mr. Reid,

... our approach was very complex. ... we managed through the balanced score card approach, instituted character incentive systems for both students and teachers; performance management systems for both students and teachers. That involves a lot of documentation... and after you do the process after a while, you mine your data, you know exactly what is happening and you can intervene. It really becomes data-driven, it becomes evidence-based in our approach. When you define a problem, then that will inform your prescription to solve the problem. (mins. 3:50 to 4:49)

The key partners in this transformation process for the last nine years include the "JC Trust, that owns the buildings ... and provide money for maintenance...; the Ministry of Education for resources ...; the JC Foundation, ... primarily set up to raise funds for the transformational effort...; all the ... Jamaica College Old Boys' Associations (JCOBA), locally and in the diaspora; ...the PTA; the Staff ...; the wider community around us...; and the Media."(min 13:05 to 15:18).

It should be noted that the Board, under their Chairman, was committed to the transformation of the school and raised a record \$500 million for what is seen today. Mr. Reid said that his primary goal was to change the culture at JC. He believed that if they were able to introduce good values to the students that the behaviour change would follow. For example, there were some boys who were feared, even by teachers. So, early on in the transformation process, he requested a list of the approximately thirty trouble-makers in the school. These boys were separated from the general population and introduced to a six-week resocialization programme. It was called the Success Centre. This approach had the desired effect in bringing calm to the school and restoring the trust in the school community; that “management was in control of school again, the behavioural expectations had changed, and there was now accountability for behavior” (mins. 58:00-59:00). The message was clear: “If you cannot all conform, then you will have to transform out” (59:02-59:18). The intervention worked for some, others ultimately had to be expelled. As the school climate has improved and the community partnership bears fruit, the quality of students at JC has also improved.

The same approach that they have taken towards winning football competitions with a team approach, disciplined players who are passionate about winning, and a coach who will inspire them, is the same approach that the JC community has adopted for winning in the classroom. Mr. Reid sees himself as a Technical Director, being as good as the team that supports him. To maintain the transformation process, there is a Corporate Senior Management meeting every Monday afternoon to monitor the plans. At the end of every year, the Management retreats to evaluate their progress and make adjustments. There is on-going staff development. The entire process is managed based on “good planning, management and accountability... incentivizing to motivate teams, motivate students, motivate teachers.” (mins. 21:00 to 21:41).

As was stated earlier, the process for transformation and improving educational resilience is quite complex. Table 1 below shows an excerpt of the Jamaica College’s CSEC results for 2006-2014 (Gleaner, 2015).

Table 1: Jamaica College, CSEC Exams 2006-2014 with CSEC Results 2009-2014

Subjects Taken	2009	2010	2011	2012	2013	2014
GSAT Cohort	Cohort 2004 (%)	Cohort 2005 (%)	Cohort 2006 (%)	Cohort 2007 (%)	Cohort 2008 (%)	Cohort 2009 (%)
Mathematics (Full Cohort)	47	50	60	47	54 (170/315)	82 (233/285)
Eng A (Full Cohort)	76	78	80	72	74 (233/315)	80 (227/285)
Eng B	53	67	64	67	67	72
Biology	70	54	75	51	56	71
Chemistry	65	56	75	51	56	71
Physics	62	60	91	53	48	74
History	46	48	74	63	81	63
EDPEM	100	99	97	89	83	85
POA	42	59	61	62	67	76
POB	90	88	91	95	87	88
Spanish	70	28	72	65	75	54

Information Technology	100	100	100	99	100	99
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Students passing with 5 or more subjects with Maths and English A.

- 2006 was 15%
- 2013 was 39%
- 2014 was 58%
- Improvement 2014 over 2013 is 48%
- Improvement 2014 over 2006 is 290%

Note. Adapted from “. Jamaica College (JC) making good progress in CSEC exams 2006-2014,” by the Jamaica College School Board, 2015, *The Jamaica Sunday Gleaner*, p. E5. Used with permission of the principal given in an interview on May 5, 2015.

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Table 1 shows the improvements in the percentage of students leaving JC with more than 5 subjects since the transformation programme began in 2006. In 9 years, from 2006 to 2014, there has been a significant increase of 290%, from 15% of the GSAT cohort to 58% of the GSAT cohort. In one year, from 2013 to 2014, the improvement was 48%, which the principal credits to the holistic approach undertaken by the school’s partners, which included a special mentorship programme for the 5th Form students. As stated previously, the perception of social support is critical to academic success. So is the ability of the students to manage their emotions and seek help from the sources in their network when they need it. So, in addition to meeting with each year group every Monday morning, the principal started a special mentorship programme, along with seven other men, for the exam students. Each mentor is assigned to a class to relate to them as a father would relate to his son. The men teach them what a father would teach them, and also provide tangibly for their needs when necessary. This tangible support includes lunch money, bus fare, past exam papers and more. The principal reported that the CSEC results for 2014 was in part due to this new mentorship programme. Following on this transformational approach, on the morning of the interview, the school had just conducted a survey to see how many students had internet access, laptop computers and other resources, as well as to establish what the needs were for others.

As one looks carefully at the table, it is clear that the improvements are not always upwards, particularly in the science subjects and the foreign language. The process of developing educational resilience is complex and requires a social partnership amongst all the stakeholders if the results are to be sustained, at Jamaica College, as well as at the other schools in Jamaica and across the Caribbean region. As expressed by Mr. Reid, being a Trust school has facilitated the transformation process of the school as they have a greater influence over the resources and direction of the school. In light of this, the “results are sustainable based on the model I have enunciated... it is sustainable to the extent that we maintain good leadership and management of the school because your stakeholders need to have confidence in your product, ... and we can attract better and better quality students and faculty...” (mins. 46:55 to 49:00). Only time, and the continued improvements in academic performance and overall successes of the students, will reveal how well we are able to build human capital in the country.

Social Affirmation and Educational Resilience

In applying the Social Affirmation Framework to the matter of Caribbean education, and by implication human resource development, we see that only the identities that are valued within these societies will be reproduced. Where there is no affirmation for the commitment, competence and

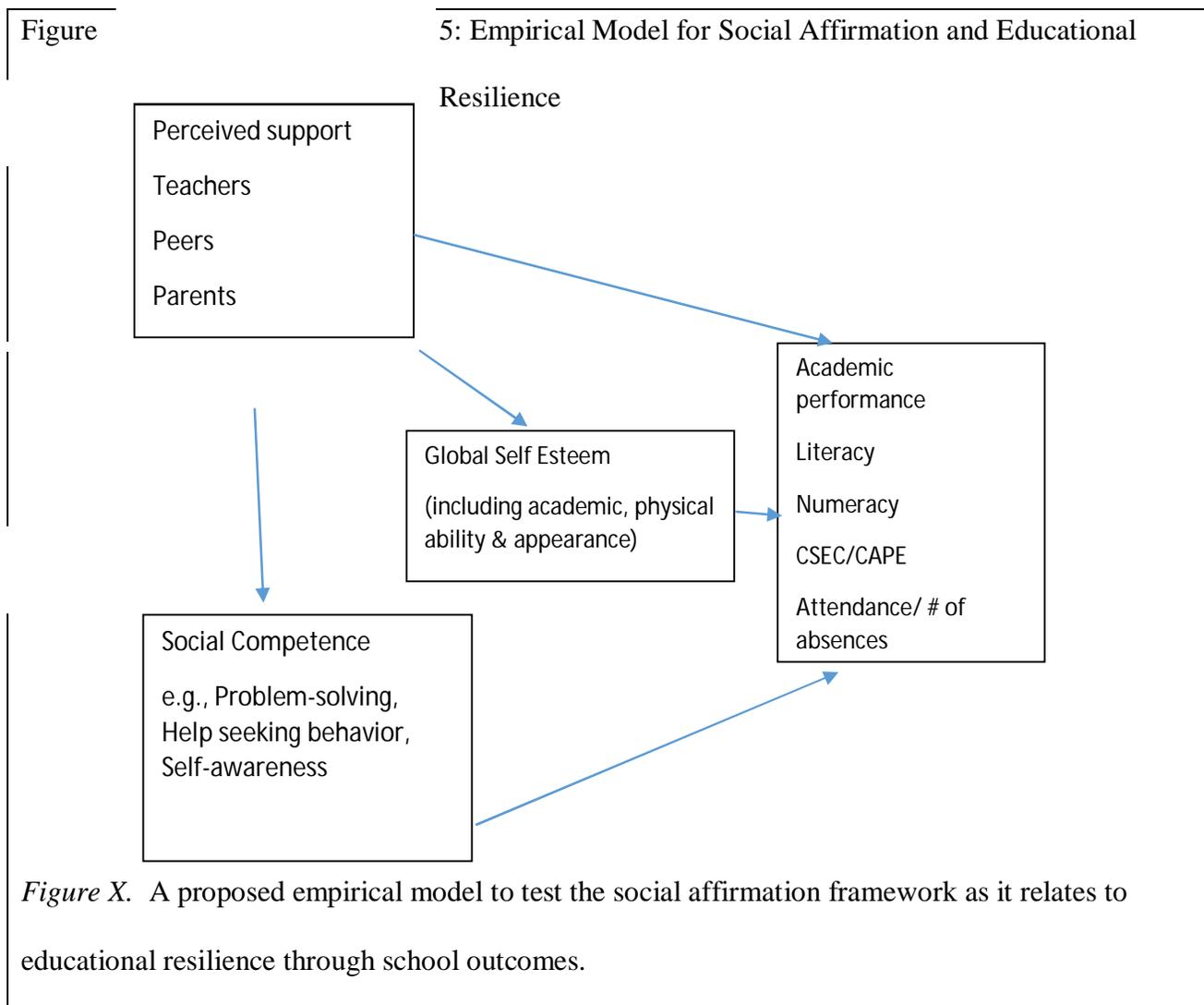
diligence required for scholarship or job performance, then the students and the workers will not display such values. As we have explored the process of education, informally through parents and families, and formally through the education system, we have seen that there are two major psychosocial crises that must be resolved well in order to facilitate learning. These are *initiative versus guilt* and *industry versus inferiority*. If the first is resolved positively then the student learns to be curious and develops a love for learning. If the second is resolved positively then the student develops competence by setting a goal and achieving it through completing assigned tasks.

Consequently, educational resilience is developed in stages as these psychosocial crises are resolved. As students transition to the school environment, they perceive more or less support for learning based upon the approach to their informal lessons at home or in early childhood institutions. When the support is additive and teachers are seen as supportive in the classroom, students have to use their social competences to build self-esteem and to perform to the best of their ability on standardized tests. Based on their results, as well as their parents' and teachers' reactions to their grades, students may pursue education or withdraw into other areas where they feel more competent, such as sports. This additional intelligence is not readily captured in academic testing and so caution must be exercised when considering the underperformance of Caribbean students in education.

How can social affirmation explain the educational resilience demonstrated in high performing students? There is no doubt that educational resilience increases the likelihood of positive life outcomes for students. However, educational resilience is fostered by a complex process involving the tangible and intangible contributions of all partners in the education sector. High performing students are able to perform at a high level because they have more supportive networks and resources, as well as individual competencies that increase their likelihood for success. In light of the social affirmation framework and its usefulness in facilitating this discussion on the achievements of the education system in the Caribbean, and more specifically Jamaica in light of the challenges, we must remember that only the valued selves are reproduced. So, students will take on identities that are accepted and affirmed by those in their local community. For example, the popular culture in Jamaica tends to glorify the image of the thug, the rude boy or the "gyalis." This competes with the values of discipline, honour and commitment that may be the core values of education. The culture is also highly sexualized with images of the female body used to sell many products. So, the students continue to contend with the value promoted in their communities which may be in conflict with the identities of gentlemen, ladies and scholars that are promoted through education.

Historically, there has been a persistent challenge in retaining boys in the education system, particularly at the higher levels. However, JC's transformation programme, and other special programmes targeted at boys, show that more boys are developing educational resilience, giving them the ability to redefine themselves in terms of son, scholar, sportsman, artist, professional and more.

These ideas can be empirically tested. Figure 5 below illustrates a possible first step in testing some of the ideas proposed by the Social Affirmation Framework and how identity, through positive feelings about the self as measured by self-esteem, may mediate the relationship between social support and academic performance and other school outcomes. Additionally, it illustrates how self-esteem and the identity of scholar may also mediate the relationship between social competence and academic performance.



From the paths illustrated above, it is expected that perceived social support will directly and indirectly affect school outcomes. It is also expected that social competence will directly and indirectly influence school outcomes. It is expected that social support will predict social competence at school as help-seeking behavior and self-awareness are critical components of social competence.

The new element in this model to test for the affirmation of the scholar's identity is self-esteem as a mediator between social support and school outcomes, and social competence and school outcomes. It is expected that where these identities are affirmed, that general self-esteem, and the components of it, will be higher than when self-esteem is low.

In closing, we acknowledge that in order to build global organisations locally, we must equip ourselves with the skills necessary to meet global demands. To this end, we need a strong education system implementing innovative strategies that will enhance teaching and learning for the next generation of Caribbean workers. According to Mitchell (2002),

The Caribbean workforce of tomorrow must engage in lifelong education and have the capacity to quickly assimilate new information and techniques, take more autonomous decisions and perform more non-routine and complex tasks with less supervision. The

elements of the education agenda articulated today must fully support this process and as well respond to the changes implied by it. (Mitchell, 2002, p. 12)

If we take this seriously, then we all must take a holistic approach to building human capital through education. As illustrated by the Jamaica College transformation programme, it takes all partners, innovative strategies, and a lot of committed resources, to sustain a vision for the success of Caribbean education.

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