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AN INVESTIGATION INTO THE NOTED DISCREPANCY IN
MATHEMATICS-BASED COURSES IN COMPARISON TO ENGLISH-BASED
AND/OR CULTURAL/ARTS/FOREIGN LANGUAGES COURSES AMONG
STUDENTS AT THE UNIVERSITY OF THE WEST INDIES, ST AUGUSTINE.

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Signature: Afiesha Cooper

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Abstract

The researcher is intrigued by the discrepancy in students’ abilities to perform mathematical calculations in comparison to their abilities to read and understand properly, and construct suitable essays to satisfy the requirements of some courses offered at The University of the West Indies. Similar opinions are echoed by students across campus who claim they excel in their numerical problem solving but struggle with bare essay writing, correct spelling and fluent reading. The opposite is also true for other students who boast extensive vocabularies and are capable of top-rated essays but dread Statistics. This research paper is dedicated to bringing this anecdotal contention to life with numbers. To achieve this outcome, 100 students were sampled from four faculties which contain at its core, mathematics-based and language-based courses; Faculty of Humanities and Education, Faculty of Social Science, Faculty of Science and Technology and Faculty of Engineering. An online questionnaire was distributed via email and social media platforms to garner the information required and 66 female participants responded, compared to 33 male (1 did not identify gender). The survey results indicate that a greater number of students (52%) were more proficient at Mathematics-based subjects, (37%) had greater success in English-based subjects while a small percentage (23%) were proficient in both subject areas. These findings suggest that the noted gender discrepancy in related literature is not as pronounced in the University of the West Indies, St. Augustine.

Key terms: academic proficiency, mathematics-based courses, language-based courses, English-based courses.
For the Launch of Mindset Network at Planetarium, University of the Witwatersrand Johannesburg South Africa, on July 16, 2003 Nelson Mandela was quoted saying, “Education is the most powerful weapon which you can use to change the world” (Mandela). This has become increasingly popular over the past 15 years throughout the internet and its various platforms. Another excerpt Caribbean people closely identify with is Dr. Eric Williams’ 1962 address on the eve of Independence, “The future of the nation is in the book bags of the nation’s children”(Williams, 1981) alluding to the fact that the success of the newly independent Republic of Trinidad and Tobago depended heavily on its students’ academic success. It is for this reason Caribbean parents and teachers alike highlight the importance of excelling in Secondary Entrance Assessment (SEA), Caribbean Secondary Education Certificates (CSEC), then Caribbean Advanced Proficiency Examinations (CAPE), and for some, attaining success in degree programs in higher education institutions. Education is considered one of the most important aspects of improving one's’ standard of living, community and the economy, and its importance is reflected in the increased investment by Caribbean governments to provide assistance through grants, loans and scholarships to aspiring and promising candidates.

From inception, arithmetic, reading and writing were the subject areas that laid the foundation for the Caribbean education system and though it has evolved dramatically, all assessments to this present time, Secondary Entrance Assessment (SEA) all the way to university level, include these basic components. In the Secondary Entrance Assessment, primary school
Aged students are tested for competency in Mathematics, English and Creative writing. At the Caribbean Secondary Education Certificates level, students are tested in a variety of grouped subjects of their choice, however the common denominators in all groupings are Mathematics and English Language. Caribbean Advanced Proficiency Examinations continues this tradition with Communication Studies as the compulsory English-based subject in the school curriculum, except, Mathematics is no longer compulsory and students can choose other subjects in science and business. The anecdotal trend is that students who either did not achieve good grades at the previous level or simply do not favor their experience with mathematics, would opt not to continue with this modus operandi. Students, when given a choice, gravitate away from subjects with which they might have struggled or never got the “knack” for. This observation certainly warrants further investigation.

Nature

There is an alleged discrepancy between aptitude results for number-based courses in comparison to literacy-based courses. Brian Butterworth, emeritus professor of cognitive neuropsychology at University College London contends, “The brain systems for maths and language are quite different, so perhaps it is not surprising that these two capacities are rather independent.” (Butterworth, 3) . Though the scope of this study does not encompass extreme incompetence such as dyscalculia (deficit in numeracy) or dyslexia (deficit in reading ability), it is noteworthy that when ones reads, the ‘ventral stream’ located at the rear of the head and involved in object recognition becomes active. Parietal (on the side) and frontal regions activate as well, as revealed by neuroimaging studies. These brain areas figure out the ‘sounds’ of letters
and the semantics of words (Butterworth, 7). Similarly, Guinevere Eden studied children with precocious reading abilities, showing that some people just have a knack (Catts and Kamhi, 111).

On the other hand, Libertus posits that several other brain areas activate when subjects perform calculations, in particular the intraparietal sulcus, located at the top-back area of one’s head. Melissa Libertus, a postdoctoral fellow in the department of psychological and brain sciences at Johns Hopkins University claims that area appears to be the ‘math center’ of the brain, essentially attributing difficulty in solving mathematics problems to a problem in this part of the brain (Libertus, 901). Additionally, she asserts that people with higher inborn skills perform better at math throughout their lives. Studies on Einstein’s brain proved that regions of his right parietal area were so dense with neurons that one of the major cortical indentations was filled in (Geak, 2) Neuroscientist Stanislaw Dehaene affirms the need for synchronization of eight separate parts of the brain for the different arithmetic operations (Geake, 5). That is, for identifying written digits, the left and right visual cortices (at the rear) are activated; for understanding quantities – the left and right parietal cortices (at top rear side), to solve word problems – the left temporal cortex (above the left ear) and for complex mathematical reasoning – the left and right frontal areas.

*Nature*

Although the human brain is evolutionarily hard-wired for speech and a basic sense of numbers, one must be taught to read, write and do arithmetic to excel in these subject areas (Nunez, 68). Regardless of one's supposed natural abilities, external factors build one’s proficiency in number-based and language-based subjects. The notion that girls are less
intellectual than boys is quickly becoming a thing of the past and it can be noted later on in this research, that this notion has been flawed. Some suggest that one’s mathematical ability is a linked to their genes, whilst other literature argue that with adequate practice and determination one can explain the noted discrepancy in performance. The ability to understand, remember and reason can also influence the performance of anyone, whether it be male or female. It can be assumed that because of social upbring and traditions of long ago where girls were conditioned to learn lessons that can contribute to a home and men were taught to gravitate to more difficult challenges, this can account for the previous intellectual assumption that girls diverge from doing courses that are seemingly more difficult. The cultural attitudes enforced by homes, communities and societies largely contributed to the determining factor of success for any female who attempted the subject of mathematics. But with technological advances throughout the years gone by, females have been breaking the rules as it pertains to being inadequate when it comes to “mathematical challenges” with the use of goal theory. Goal theory research has originally focused on two main achievements: mastery goals and performance goals. Mastery goals are mostly referred to as task-involvement or learning goals which focuses on the development of expertise and task mastery. Performance goals, also referred to as ego involvement or ability goals, focuses on the exhibition of competence relative to others (Urdan and Maehr, 225). Performance goals have more recently been divided into performance-approach and performance-avoidance goals (Elliot and Harackiewicz). Performance-approach goals focus on the attainment of competence relative to others, and performance-avoidance goals focus on avoiding the demonstration of incompetence relative to others. Recently an additional mastery avoidance goal has been introduced where individuals focus on avoiding their ineptitude
based on either their own attainable standards, or the requirements of the task at hand (Elliot and McGregor). It is important to note that this additional mastery avoidance goal is relatively new to the goal theory field and is in most ways being established as a valid and useful construct. Therefore all the above mentioned achievement goals are separated by two dimensions of competence which are approaching success or avoiding failure and also competence definition (Elliot and McGregor).

Gender

The concept of sex differences in mathematical ability is another factor that was uncovered in the undertaking of this research. There is scientific validity in terms of anatomical configurations of the brain capacity. In this respect, females seemingly appear to have more brain space available and devoted to language functions in the left part of the brain, while males have more cortical space on the right side of the brain, dedicated to visual-spatial functioning and analysis (Green, 600). Despite some inconsistencies in results, most of the early studies on mathematics proficiency noted that boys, consistently scored higher than girls on various indicators (Brown and Konyongo 117). Interestingly, the phenomenon in the English-speaking Caribbean, and specifically Trinidad and Tobago is that girls consistently have outperformed boys (Goldberg and Roswell). Girls achieve better results on the Secondary Education Assessment (SEA) taken in standard 5 and achieve better results on the Caribbean Secondary Education Certificate (CSEC) administered by the Caribbean Examinations Council (CXC) and taken in Form 5 (De Lisle, Smith and Jules).
Students in Germany were examined by their performance in mathematics items, in which they compared gender differences with a general mathematics ability. This is the standard model frequently found in the literature and specific mathematics ability. This is the ability that influences performance on mathematics items over and above general cognitive ability (Baumert 145). They found that girls slightly outperformed boys on reasoning ability, but on specific mathematics ability, boys had a significant advantage over girls. It was also observed through student performance on the CSEC exams. A review of the 2000-2002 CSEC ordinary level results for Trinidad and Tobago showed that of the students taking mathematics at the general proficiency level, a greater percentage of boys than girls earned Grades I-III (Brown and Kanyongo, 120)

Relevance to the Caribbean

A review of the literature indicates a lack of research on the specific topic in the Caribbean region and perusal of the scope is quite limited. Most international studies focus on the relationship between brain activity and performance, and others, gender discrepancies in student performance in the areas of Math and English. Hence gender was included as the final factor for analysis in the present study in the Caribbean context. No research found has been based on Caribbean students at higher level education institutions such as the University of the West Indies, noting any linkages of prior subject proficiency to degree choices and current academic proficiency. Specific investigation into the discrepancy between proficiency in Mathematics and English are largely anecdotal and sparsely researched. As such, this research paper will contribute to the existing body of knowledge on the topic of math and English
literacy, bridging the gap from international to local context, as well as reflecting on the role of gender in the marked phenomenon.

Thus, the objectives of this current research are outlined as follows:

1. To evenly sample the student population of four Faculties in the University of the West Indies and evaluate the potential existence of a significant difference between the performance in mathematics-based subjects and language based subjects.

2. To determine the frequency with which students’ math proficiency coincide with literacy proficiency.

3. To compare the academic grades at the CSEC/CAPE level of students to most recent grades attained for registered Mathematics based courses and English based courses.

4. To determine if family members and their previous or current occupations contribute to the performance of a student.

5. To determine if there is a relationship between gender and academic proficiency in Mathematics and English based courses.

The following chapter, Methodology, will outline the process by which these objectives were fulfilled.
**Methodology**

Borg and Gall (351) define research design as the procedures used by researchers to explore relationships between variables to group subjects, administer measures, apply treatment conditions and analyze the data. Against the backdrop of the research problem outlined, the author employ an exploratory research design; as the general research design for this undertaking. The researcher has identified ideas and observations and seeks to understand more. More specifically, the survey method will be employed. This is the best type of research design for the study because the researcher is interested in understanding the academic experience and attitudinal differences of a large population of individuals, students at the University of the West Indies.

Survey research is a quantitative method in which a set of predetermined questions are posed to an entire group, or sample of the population of interest. It is an especially useful approach when the study aims to describe or explain features of a very large group or groups. In this case, a survey method will help the researcher to easily identify statistically the percentage of students who are more proficient in mathematics-based subjects than English-based subjects, those who are more proficient in the latter than the former, and those who tend to excel in both. Using a survey method is beneficial to the study because it is an excellent way to generate extensive information from the target population, whereas traditional methods such as interviews are very time consuming to accomplish.

**Data Collection**

The survey questionnaire for this research was developed online on Zoho Survey through a service trial. Links to this survey was distributed on media platforms such as Whatsapp,
Facebook, and email, in club and faculty group chats which enabled multiple persons to be reached at once. To gain access to some people’s emails and social media, the researcher canvassed student hubs such as Student Activities Center, the Quadrangle, the Alma Jordan Library, Engineering undercroft, and Social Science Computer Lab, asking students to participate by granting permission and access to contact them with the online survey link. The cost of this venture was nil; a notebook was used to gather the contact information of willing participants and the online questionnaires were distributed free of charge. This method was the most time-saving, cost-effective and very convenient to the goals of the study. Because surveys generally target large scale samples, the data collected may be generalized to the entire population.

**Sampling**

The population of interest is the students of four faculties, Faculty of Humanities and Education, Faculty of Social Sciences, Faculty of Science and Technology and Faculty of Engineering. To acquire an unbiased view of responses, a sample of 25 students per faculty was used, culminating to 100 students’ total. Because no student could be coerced into participation, convenience sampling was used, that is, the subjects who were conveniently available and willing to participate were used for the study. They volunteered their contact info in order to be forwarded the survey link to complete the questionnaire. Because response rate was low at first and accumulating slowly, snowballing sampling method was activated, whereby students who participated were asked to refer a friend in their degree programme or faculty to also participate to increase the numbers.
Limitations

Though the subjects volunteered their contact information, the response rate was not only slow, but low. The researcher had no control over when the willing participants would open the link and complete the survey. In fact, observation of the progress report indicated that 264 clicked the link and visited the survey but did not complete it. This could be attributed to the snowballing technique; students from other faculties which are not the foci of the study may have also visited the survey and realized after the fact that their faculties, namely Faculty of Medical Sciences, Faculty of Law and Faculty of Food and Agriculture were not captured in the survey. There was no way for the researcher to make the survey exclusive to the four chosen faculties.

Additionally, the survey was made available through a free trial for 7 days, after which the survey link would expire and the data collected would no longer be available for analyses. This impacted the time-sensitivity of the study, causing the researcher to snowball to increase the number of respondents within the stipulated time-frame rather than wait for the gradual increase. Because simple random sampling was not and could not be utilized for this research undertaking, the findings may not be scientifically valid, that is, if replicated, it is possible different results may be found.
Findings

Objective 1: Mathematics-based performance versus language-based performance.

(all graphs and tables are from the questionnaire)

fig 1.

<table>
<thead>
<tr>
<th>Select the option that best suits you:</th>
<th>Response percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>I am more proficient at Mathematics-based courses</td>
<td>51%</td>
</tr>
<tr>
<td>I am more proficient at English-based courses</td>
<td>38%</td>
</tr>
<tr>
<td>I am more proficient at Cultural arts/foreign languages courses</td>
<td>11%</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Select the option that best suits you:</th>
<th>Response percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>I achieved better grades at my number based courses at CSEC/CAPE</td>
<td>52%</td>
</tr>
<tr>
<td>I achieved better grades at my English-based courses at CSEC/CAPE</td>
<td>37%</td>
</tr>
<tr>
<td>I achieved better grades at my cultural/arts/foreign languages courses at CSEC/CAPE</td>
<td>11%</td>
</tr>
</tbody>
</table>

The first objective of this research was to sample students from the faculties of Humanities and Education, Social Sciences, Science and Technology and Engineering to gather information of a potential difference between the performance in mathematics-based subjects and language-based subjects. Students were asked about their personal preference in relation to which courses they successfully completed based on their past academic grades. Specifically, the question was asked to acquire information as to which academic area they achieved better grades in and what contributed to their specific outcome.
The above fig 1. shows data of students’ proficiency prior to their acceptance into The University of the West Indies. 51% of those same students claimed to be more successful in number-based courses whilst 38% claimed proficiency in English-based courses and the remaining 11% in cultural/art/foreign languages. 52% of these same students achieved better grades in their number-based courses, 37% achieved better grades in their English-based courses and 11% achieved better grades in their cultural/arts/foreign languages courses at the CSEC/CAPE level. Then, further information is gathered about students whose preference is not directly linked to their course of study at The University of the West Indies. Of all the students who were more skilled in Mathematics, 28% of them preferred English-based courses and 15% preferred cultural/arts/language courses. From collected data, it is noted that generally, more students performed better and successfully achieved higher grades in Mathematics-based courses.
Objective 2: Proficiency in both Mathematics-based and English-based subjects.

fig 2. What grades did you attain from the above subjects?

This objective deals with a study of how a student’s proficiency coincide in relation to number-based, English-based and/or cultural/arts/foreign languages. In clearer terms, how proficient are students in more than one of above subjects. Fig 2. above gives information pertaining to the grades that were obtained from the sample of students from their CSEC exams. Without much analysis and by skimming through the above bar chart, it is noted that better grades were achieved in the subjects of English A, English B, Mathematics, Additional Mathematics and Chemistry. In the case of all students in this sample completing both English and Mathematics at CSEC level, the data shows that the general consensus is in favour of
declaring proficiency at both subjects, at that level of study. Number 31 of the research questionnaire asked students if there exists one or more than one field that they are most competent in. 23% of students suggested to be versed in the areas of literacy, numeracy and cultural courses, whilst another 23% suggested to be versed in literacy and numeracy courses only. 4% of students sampled also were skilled in both literacy and cultural/arts/foreign language courses, another 4% in both numeracy and language courses. All other (missing) percentages were for one preference from the above areas or none at all. Even though proficiency in both subjects at CSEC level is shown, from fig 1. under the first objective, the data collected shows that for this sample statistic, outside of the of the CSEC subjects Mathematics and English, better grades were generally attained in the area of number-based courses when all grades were compiled and analyzed.
Objective 3: Comparison of CSEC/CAPE level to grades of Mathematics based courses and English based courses at UWI.

fig 3.1 Faculty of Social sciences/Humanities and Education
Rating of grades for foundation courses at UWI (Hum/ScoSci)

<table>
<thead>
<tr>
<th>Choices</th>
<th>Response percent</th>
<th>Response count</th>
</tr>
</thead>
<tbody>
<tr>
<td>Very poor</td>
<td>4.60%</td>
<td>1</td>
</tr>
<tr>
<td>Poor</td>
<td>8.60%</td>
<td>2</td>
</tr>
<tr>
<td>Good</td>
<td>44.00%</td>
<td>11</td>
</tr>
<tr>
<td>Very good</td>
<td>48.00%</td>
<td>12</td>
</tr>
</tbody>
</table>

Rating of grades for mathematics courses at UWI

<table>
<thead>
<tr>
<th>Choices</th>
<th>Response percent</th>
<th>Response count</th>
</tr>
</thead>
<tbody>
<tr>
<td>Very poor</td>
<td>4.65%</td>
<td>1</td>
</tr>
<tr>
<td>Poor</td>
<td>27.27%</td>
<td>6</td>
</tr>
<tr>
<td>Good</td>
<td>27.27%</td>
<td>6</td>
</tr>
<tr>
<td>Very good</td>
<td>40.61%</td>
<td>9</td>
</tr>
</tbody>
</table>

Data collected shows that the faculties deemed as English-based faculties have been proficient with their course of study and also other fields outside of English. The students’ CSEC and CAPE results show that even though higher grades were achieved in English-based courses, good standing grades were also achieved for mathematics-based courses. Comparing the same students’ grades at CSEC/CAPE to their current grades achieved at The University of the West Indies, students under the faculty of Humanities and Education and Social Sciences seem to be having more difficulty to complete courses outside of their faculty (mathematics-based). More students in these faculties claimed to have performed better at their mandatory English-based courses. It is important to note that for both foundation courses (English-based) and
mathematics-based courses, at least one student received very poor grades and students from both faculties receive very good grades in both areas also.

fig 3.2 Faculty of Science and Technology/Engineering
Grades for foundation courses (FST/ENG)

<table>
<thead>
<tr>
<th>Choices</th>
<th>Response percent</th>
<th>Response count</th>
</tr>
</thead>
<tbody>
<tr>
<td>Very poor</td>
<td>0.00%</td>
<td>0</td>
</tr>
<tr>
<td>Poor</td>
<td>8.00%</td>
<td>2</td>
</tr>
<tr>
<td>Good</td>
<td>72.00%</td>
<td>18</td>
</tr>
<tr>
<td>Very good</td>
<td>20.00%</td>
<td>5</td>
</tr>
</tbody>
</table>

Grades for your mandatory mathematics courses (FST/ENG)

<table>
<thead>
<tr>
<th>Choices</th>
<th>Response percent</th>
<th>Response count</th>
</tr>
</thead>
<tbody>
<tr>
<td>Very poor</td>
<td>4.17%</td>
<td>1</td>
</tr>
<tr>
<td>Poor</td>
<td>4.17%</td>
<td>1</td>
</tr>
<tr>
<td>Good</td>
<td>58.33%</td>
<td>14</td>
</tr>
<tr>
<td>Very good</td>
<td>37.50%</td>
<td>9</td>
</tr>
</tbody>
</table>

Data collected shows that the faculties deemed as mathematics-based faculties have also been proficient with their course of study and also in other fields outside of Mathematics. The students’ CSEC and CAPE results show that even though higher grades were achieved in Mathematics-based courses, good standing grades were also achieved for mathematics-based courses. Comparing the same students’ grades from CSEC/CAPE to their current grades achieved at The University of the West Indies, students under the faculty of Science and Technology and Engineering seem to well-balanced as it pertains to English-based courses.
(mathematics-based). A greater quantity of students in these two faculties claimed to have performed better at their mandatory English-based courses but quite a few more students successfully trumped their mathematics-based courses. It is important to note that for the mathematics-based courses, at least one student received very poor grades and generally, students from both faculties receive very good grades in both areas.
Objective 4: Can family members and their occupations contribute to the performance of a student?

fig 4.

This objective was introduced because of an increasing awareness of the layman terms “like father, like son”. It is noted that students who do extremely well in a subject may have an upper hand by having additional and detailed practice at home. This is commonly seen in homes where the parents are teachers, lecturers and other forms of educators. It can also be seen in homes where parents may not be an educator but pushes their children to excel at their maximum potential. At the University of the West Indies, the sample taken for the research shows, in fig 4, that 83% of the students expressed that their parent(s) occupation do not contribute to the
performance in their academic subjects. On the other hand, 16% said that in fact their parents do play an important role in their field of study. 10% of the above 16% of sampled students gave open ended responses that explained how their parents contributed to their performance. This can be viewed below:

1. They are able to guide me in times of homework and assignments and also give practical examples for better understanding.
2. They are English teachers.
3. My father was a primary school teacher and is now a secondary school teacher and his experience and knowledge helps us with a lot of my courses which are education-based.
4. My parents are versed in both subjects so I am inspired to do the same.
5. My dad used to teach math, he helped me with my studying for it.
6. I get extra lessons home.
7. They instilled in me the importance of being proficient in the subject from a young age.
8. They pay for my fees.
9. They are teachers.
10. My dad and mom both work in mathematical based jobs.

This concludes that the percentage for those whose parent’s occupations assist them in performing better at school is significantly smaller than the general percentage of students who are performing well without assistance from home. The objective has not been nullified though, since it is occurring on a smaller scale.
Objective 5: Is there a relationship between gender and academic proficiency in Mathematics and English based courses?

fig 5.1 (female data)  fig 5.2 (male data)

From literature referred to in the Introduction, researchers have said that students who are more inclined to study mathematics-based courses are usually male and students who are more inclined to study English-based courses are usually females. In this sample, it is seen that in fig 5.1, 21% study in Science and Technology, 15% study in Engineering 32% study in Humanities and Education and 32% of females study in Social Sciences. In comparison to fig 5.2 where 33% study in Science and Technology, 42% study in Engineering, 13% study in Humanities and
Education and 12% of males study in Social Sciences. It can be better seen in the comparison table below:

<table>
<thead>
<tr>
<th>Comparison Table</th>
<th>Female</th>
<th>Male</th>
</tr>
</thead>
<tbody>
<tr>
<td>Science and Technology</td>
<td>21%</td>
<td>33%</td>
</tr>
<tr>
<td>Engineering</td>
<td>15%</td>
<td>42%</td>
</tr>
<tr>
<td>Humanities and Education</td>
<td>32%</td>
<td>13%</td>
</tr>
<tr>
<td>Social Science</td>
<td>32%</td>
<td>12%</td>
</tr>
</tbody>
</table>

From the sample, this claim is true. More female students were inclined to study English-based courses than males and more males were inclined to study more mathematical-based courses than females. One downfall to this test is that even though most males prefer to study mathematics over female, the general consensus suggested that in overall, more students perform better at mathematics based courses but the sample statistic consists of ⅔ of females compared to males. Therefore even though most females prefer English-based courses, it does not necessarily mean that they are not proficient in Mathematics-based courses, and more so, than males.
Conclusion

This pilot investigation into Mathematics versus English proficiency may be concluded with the following:

1. More students are proficient in Mathematics-based subjects than they are in English based subjects. This can possibly be explained by the Caribbean’s unique array of colloquial and dialect which may conflict with student’s understanding of standard English language.

2. A minority, 23% are proficient in both Mathematics-based subjects than English-based subjects.

3. The majority of students who were proficient at the CSEC and CAPE level continued to excel in the subjects of proficiency at the university level with only a small percentage struggling in subject areas they were once proficient in.

4. Success of the parents does not necessarily determine the success of the child except in 16% whose parents’ jobs as educators (or in the specific field) directly correlated with their proficiency in the subject area.

5. The gender discrepancy in proficiency in mathematics-based courses and English-based courses continues to be debatable; though the majority of males gravitated to mathematics-based courses than females, females contributed to 66% of the sample and 51% of the entire sample claimed they were more proficient at Mathematics-based courses. At the core of the gender debate is the ideology that males are biologically equipped for mathematics while girls are better at English. However, this may very
well be attributed more to nurture than nature, since boys are socialized for jobs in hard sciences and engineering as opposed to girls who are groomed for jobs related to ‘soft sciences’, and this phenomenon has evolved over the years with male marginalisation in education (Miller, 1986).

As previously noted in the Limitations of this study the methodology used can affect the scientific validity of the results. Convenience and snowballing sampling are not controlled procedures and external factors, unaccounted for by the researcher can deliver skewed results. It is quite possible that if the study is replicated there may be different findings. However this investigation does open the door for future research to critically analyse the phenomenon identified. it is recommended that future research designs incorporate random sampling, to achieve a more controlled, representative sample that will better reflect the population of The University of the West Indies.
Works Cited


Borg and Gall, 1989:351


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