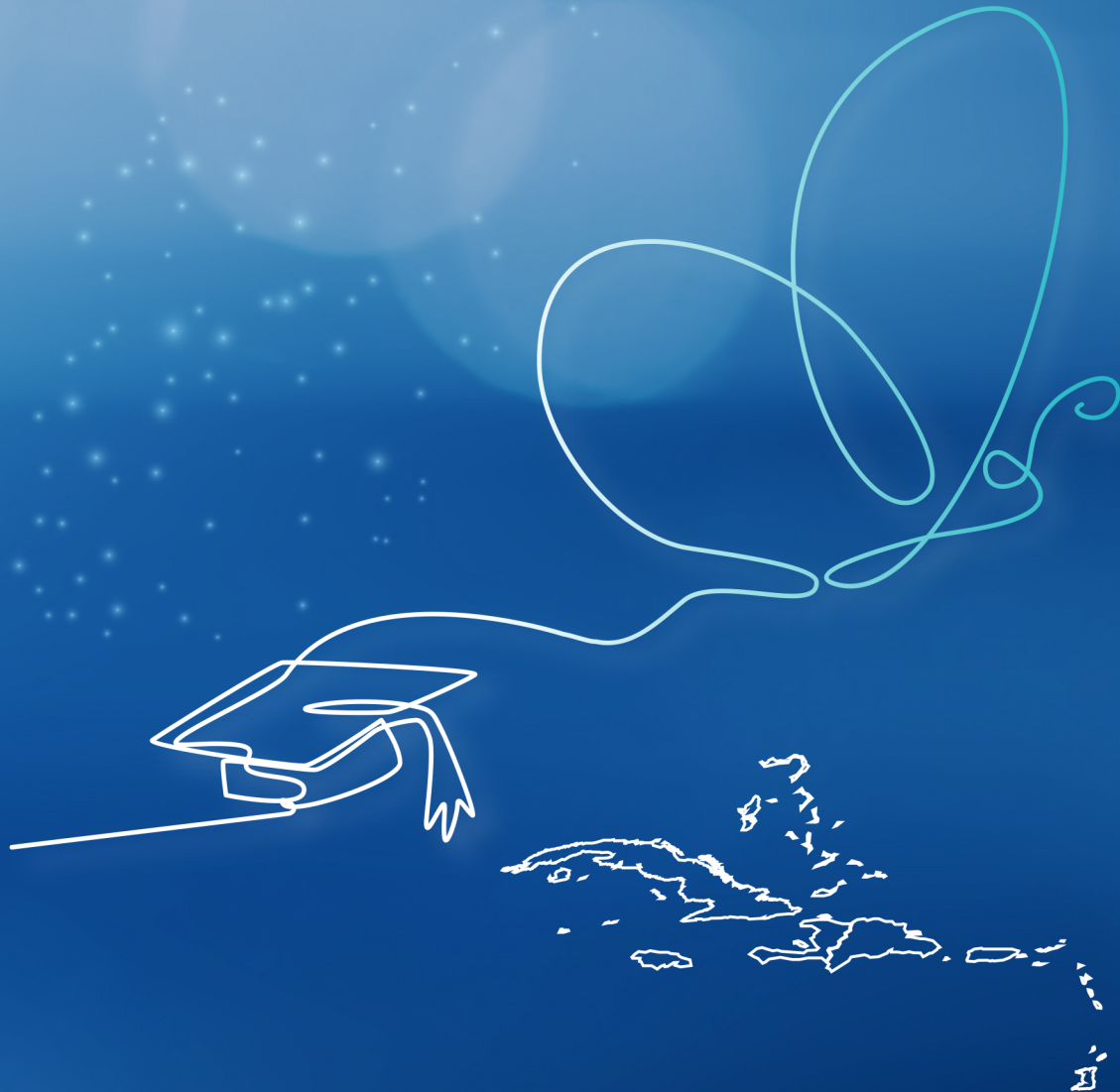




# CJED

CARIBBEAN JOURNAL  
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## General Issue

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## About the Journal

The *Caribbean Journal of Education and Development* (CJED) is a peer reviewed, refereed journal which provides a forum for original contributions highlighting both empirical and conceptual research on theory and practices, policies, processes, relevant to the Caribbean and the Caribbean diaspora. We welcome papers that engender critical debate about issues of social, economic, cultural and political development within the education sector in the Caribbean region and beyond, including:

- Examinations of controversial issues from a sociocultural, historical, or philosophical perspective
- Reports of research, employing a variety of research methods
- Papers that focus on learning in both school and non-school settings
- Critical analyses of education and schooling
- Case histories of students, teachers, and administrators
- Case studies of institutions
- Analyses of good practice
- Critical inquiry into all aspects of education and schooling
- Discussions of the experiences of Caribbean teachers, teacher educators, students, and parents in the diaspora
- Literature reviews
- Integration of technology

The CJED is disseminated to an international audience active in education policy and practice as well as those who are participants in the education development process in the Caribbean. These include educational researchers, policy makers, teachers, teacher educators, the commercial and industrial world, and scholars with research interests in all levels of the education system both formal and informal.

The journal operates on a rolling publication model from September to June each year. A standout feature of this model is that once an article is accepted, copyedited, and approved by the author, it is promptly published online. This allows authors to cite their work immediately and ensures that it is accessible via platforms like Google Scholar and CrossRef.

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## Table of Contents

<b>Introduction</b>	<b>i</b>
Lois George	
<b>Exploring Mathematics Anxiety and Achievement: Insights from a Coeducational Secondary School in the Turks and Caicos Islands</b>	<b>1</b>
Christina Anderson-Waugh and Lois George	
<b>A Global Study of Debate Extension Service Organizations (DESOs): Challenges and Opportunities</b>	<b>16</b>
Jevon Henry and Germaine Barrett	
<b>Come Get These Students: An Exploration of Teachers' and Administrators' Experiences in an Inclusive Secondary School Setting in Urban Jamaica</b>	<b>29</b>
Shereca McGowan-Hunter	
<b>Opportunity or Threat: Investigating Faculty Readiness to Adopt Artificial Intelligence in Higher Education</b>	<b>47</b>
Grace-Anne Jackman, Ian A. Marshall and Troy Carrington	
<b>Exploring Early-Career Academics' Experiences with Mentoring at a Higher Education Institution in Jamaica</b>	<b>71</b>
Therese Ferguson and Ann-Marie Wilmot	
<b>Using Social Media to Enhance Project-Based Learning in Caribbean Higher Education: A Case Study</b>	<b>88</b>
Nicole Ola Cameron	
<b>Exploring the Interconnectedness of High School and Community: A Naturalistic Inquiry</b>	<b>114</b>
Dominic Siami Egure, Melissa Bingham, Kolawole Michael Afolabi, Tami Woods, Tina Linn, Katherine Curry and Jentre Olsen	

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<b>Creating a Course Syllabus and Lesson Plan Using ChatGPT: Some Considerations</b>	<b>132</b>
Debra-Ann Davidson	
<b>It Starts at Home: Home Language and Literacy Practices in Jamaica</b>	<b>153</b>
Shawna-Kaye D. Tucker, Victoria A. Murphy and Hamish Chalmers	
<b>Book Review — A Child at a Time: Understanding Temperament by by Professor Loraine D. Cook, published in 2024 by UWI Press</b>	<b>BR1</b>
Sharline Cole	
<b>Book Review — Reimaginative Leadership - Concepts and Applications by Professor Canute S. Thompson, published in 2024 by UWI Press</b>	<b>BR4</b>
Bolapeju M. Agboola	

## Introduction

This volume of the Caribbean Journal of Education and Development (CJED) is dedicated to Dr. Carol Hordatt Gentles, outgoing Chief Editor of CJED and formerly of the Caribbean Journal of Education (CJE). Her visionary leadership over the past seven years, including the historic merger of CJE and the Journal of Education and Development in the Caribbean, has been pivotal in establishing CJED as a vibrant, open-access platform for rigorous, relevant, and reflective scholarship in Caribbean education. It is therefore fitting that this issue begins with a tribute to her scholarship, mentorship, and lasting contributions to the field.

CJED is a peer-reviewed, refereed journal committed to advancing knowledge at the intersection of education and development across the Caribbean and the wider diaspora. The journal provides a forum for original empirical and conceptual work that stimulates critical debate and policy reflection. Our scope includes analyses of educational practices and processes, explorations of sociocultural, historical, and philosophical perspectives, and examinations of the experiences of teachers, students, and communities in diverse contexts. In doing so, we seek to highlight education as both a driver and mirror of the broader social, cultural, economic, and political development of the region.

This second issue of Volume 1 showcases the breadth of that mission. It includes nine articles and two book reviews, authored by 24 contributors from local, regional, and international jurisdictions. The contributions engage with topics as varied as mathematics

anxiety and achievement, the challenges and opportunities of debate extension organisations, inclusive schooling practices, faculty readiness for artificial intelligence in higher education, and the mentoring of early-career academics. Other articles examine the pedagogical potential of social media, the interconnectedness of high schools and communities, and the role of generative AI in curriculum development. Collectively, they highlight the richness and diversity of perspectives that CJED seeks to nurture.

We extend sincere gratitude to our peer reviewers, whose careful and generous feedback sustains the high quality of the journal, and to the authors, who entrust us with their work and contribute to advancing scholarship in Caribbean education and development. We also acknowledge the invaluable support of our editorial team and the Publications Unit of the School of Education, The University of the West Indies, Mona.

As CJED continues to grow, it does so on the foundation laid by Dr. Hordatt Gentles and the wider community of scholars who have contributed to its evolution. We hope that this volume will inspire continued dialogue, research, and action towards strengthening education as a transformative force for Caribbean development.

**—Lois George**

# Exploring Mathematics Anxiety and Achievement: Insights from a Coeducational Secondary School in the Turks and Caicos Islands

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## Abstract

Mathematics anxiety (MA) is currently recognised as a significant area of study within the field of mathematics education. This cross-sectional survey research explored the prevalence of MA, its impact on mathematics achievement, and resulting MA-mathematics achievement profiles among 70 Form 4 students (aged 15–16) in a coeducational secondary school in the Turks and Caicos Islands (TCI). Data were collected using the Modified Abbreviated Math Anxiety Scale (mAMAS) and a mathematics achievement test. Descriptive statistics, ANOVA, and Spearman Rank correlations were employed for analysis. Results indicated mostly moderate anxiety levels, with 16% reporting high MA. There were no significant differences in mathematics achievement across different MA levels, and a small, non-significant negative correlation was observed between MA and achievement. Various profiles emerged, highlighting a complex relationship. Further research is warranted to explore the relationship between MA and mathematics achievement, as well as other factors that may more strongly influence students' mathematics achievement than MA. These foci may be helpful to educational stakeholders such as teachers and policymakers in planning to improve student mathematics achievement in the TCI.

*Keywords:* mathematics anxiety, mathematics achievement, secondary school

## Background

In the Turks and Caicos Islands (TCI), mathematics examination results have consistently been poor, both internally and externally, for at least a decade ("CSEC maths passes down but English pass rate up", 2019; Statistics Authority Turks and Caicos Islands, 2017; Taylor, 2023). Given that passing mathematics is crucial for the future education and employment opportunities of many students, this persistent underperformance is a significant concern for educational stakeholders. To address this issue, the TCI Ministry of Education has implemented various strategies, such as adopting Singaporean mathematics

curricula and conducting professional development sessions for teachers (Malcolm, 2023). However, the issue of unsatisfactory mathematics performance persists. While many factors influence individual mathematics achievement, no empirical research has been conducted on this topic in TCI to date. This study, therefore, aims to fill that research gap and on this basis is significant.

Among the myriad factors linked to mathematics achievement, studies have revealed that mathematics anxiety (MA) has a major influence on a person's mathematics engagement and achievement (Beilock & Maloney, 2015;

Caviola et al., 2022). MA is a dynamic construct (Rubinsten et al., 2018) that conveys the notion that people experience varied feelings of tension, helplessness, and fear when engaged in mathematics-related activities, whether in daily life or academic situations (Ashcraft, 2002; Ramirez et al., 2018; Richardson & Suinn, 1972). This definition of MA has been adopted for this research.

In recent years, MA has drawn considerable interest and has been recognised as a significant area of study in the field of mathematics education (Barroso et al., 2021; Radević & Milovanović, 2023). Although substantial research on the topic of MA exists, most studies have been conducted in developed countries or the Global North (Cipora et al., 2022). This disparity is not wholly surprising, as it is common knowledge that researchers in the developed world have greater access to research funding; the most recent scholarly literature on which to base their work; as well as knowledge, expertise, and current innovations in research compared to their counterparts in the Global South (Mahajan et al., 2023). Therefore, it is understandable that researchers in developed countries are able to undertake a larger number of studies (many of which are large-scale); publish in top journals; and drive the agenda as to what is current and important in a research field. Furthermore, Nakamura et al. (2023) note that “research produced by the Global South is often seen as peripheral, and Southern researchers struggle to find their expertise recognised by the Global North” (p. 1). A cursory inspection of the reference list in research focused on MA confirms that few studies from research undertaken in developing countries are referenced in work published by Northern researchers.

There has also been a greater recognition and discussion of (as well as emphasis on) the issues of diversity and inclusion in research (Maas et al., 2021). In this regard, Barroso et al. (2021) point out that studies on MA involving samples from developing countries have seen a rise in recent years. Nevertheless, in certain regions, there remains room for additional scholarly

investigation. For instance, the Caribbean region and adjacent territories such as the Bahamas and the Turks and Caicos Islands (TCI) have received limited attention in studies concerning MA. Previous research efforts in the Caribbean and its environs have primarily focused on specific demographic groups, including primary and lower secondary Jamaican students (George & Dowdie, 2021; Mitchell & George, 2022), preservice teachers from Trinidad (Atwell-Chin Hong, 2021; Jaggernauth & Jameson-Charles, 2015), and a national sample of Belizean students and teachers (Richland et al., 2020).

Cultural context has been deemed to be an important factor in mathematics education in general (Presmeg, 2007) and MA in particular (Richland et al., 2020). In this regard, Richland et al. (2020) note in relation to the Latin American and Caribbean (LAC) countries that participated in the 2012 Programme for International Assessment (PISA):

The nature of the relationships between mathematics anxiety and performance may be culturally specific. The LAC included in the OECD data collection were among the highest internationally in mathematics anxiety, and the lowest in overall achievement, suggesting that mathematics anxiety may be an important consideration in addressing achievement in this region (p. 2).

The longstanding issue of unsatisfactory mathematics achievement in the TCI, the small number of studies on MA conducted in the Caribbean and neighbouring jurisdictions to date, and the need for inclusion in research underscore the significance of the current research which involves a sample of upper-secondary students from the TCI, a developing country. While research undertaken in the developed world may yield similar results to that of samples and localities in developing and underdeveloped countries, this will only emerge when research in these contexts is conducted and published.

The current study is also significant since students at the upper secondary school level have been the focus of only a few studies internationally (Asikhia, 2014; Demedts et al.,

2022; Gopal et al., 2020; Luu-Thi et al., 2021; Yáñez-Marquina & Villardón-Gallego, 2017). The studies involving this student group have also had diverse foci, such as the relationship to self-efficacy, validating a research instrument, and exploring an intervention for mathematics-anxious students—and there is scope for further investigation to enhance the existing complement of research. These considerations affirm that the current research, in an underrepresented developing country context and sample, is both noteworthy and timely.

Stemming from the previously mentioned research gaps, this study aims to investigate the distribution of MA, the relationship between MA and mathematics achievement, and the individual MA–mathematics achievement profiles that emerge from the data. Exploring these research concerns in underrepresented contexts such as the TCI, is an essential first step in understanding the MA phenomenon in that context, and so this research has both international and local/regional relevance. By establishing the distribution of MA in the sample, we can better understand the scope of the problem and its potential impact on academic performance. Additionally, this research serves as a baseline for future research and intervention efforts aimed at addressing the issue of MA. Furthermore, while the relationship between MA and mathematics achievement has been extensively investigated, most of the inquiries use analyses that provide only an aggregate, seemingly uniform portrait of the data. While this general result is beneficial, Ramirez et al. (2018) note that “as an individual-difference trait, math anxiety is not something researchers can systematically manipulate” (p. 148). Therefore, an examination of individual student data in the development of profiles of MA–mathematics achievement could also be instructive to researchers and practitioners in understanding the MA–mathematics achievement link and developing interventions. This exploration may further uncover the dynamic and nuanced connection between the variables of MA and mathematics achievement and add another dimension to the scholarly research in this domain.

The research questions, therefore, are:

1. What is the distribution of MA levels (low, moderate, and high) among the Form 4 students?
2. Is there a statistically significant difference in the mathematics achievement of Form 4 students who report low, moderate, and high levels of MA?
3. What is the relationship between Form 4 secondary students’ MA and their mathematics achievement?
4. What profiles of MA and mathematics emerge from the sample data?

Given the large body of prior research on the incidence of MA and the relationship between MA and mathematics achievement, we hypothesise that most students in this sample would exhibit moderate anxiety and that the percentage of students self-reporting high anxiety would fall between 6 and 15%.

## Literature Review

### Prevalence of Mathematics Anxiety

Varying estimates of MA prevalence have been reported at the secondary school level across different jurisdictions. In this regard, Cipora et al. (2022) point out that measuring MA using diverse questionnaires and the absence of clearly defined criteria for identifying individuals with high MA hinder a definitive conclusion regarding prevalence. Dowker et al. (2016) also opined that disparities in the prevalence of MA may depend on the sample involved in the study. Additionally, Presmeg (2007) asserted that culture affects how mathematics is taught and learned; as a result, mathematics is a cultural product. Therefore, the findings obtained from one locality may differ in another. Nevertheless, finding the prevalence of a phenomenon is an important starting point for populations and localities which have not been the focus of extensive research.

Most studies used valid and reliable self-report scales to obtain MA measures. When survey data were used for data collection, scores were

typically divided into three or four categories, which represent levels of MA ranging from low to high. For example, in research conducted in Jamaica, in the Caribbean region, George and Dowdie (2021) explored the prevalence of MA among 467 secondary school students. When three groups (low, moderate, and high) were used, most students ( $n=236$ ) reported moderate levels of MA, and approximately 11% of the students fell in the category of high MA. Zakaria et al.'s (2012) study involved 195 secondary students (Form 4) from Malaysia and categorised MA using three MA levels. They found approximately equal numbers of students ( $n=65, 66, 64$ ) in each of the three MA bands, and approximately 33% of the sample experienced high MA. This result suggests that MA was not normally distributed for the sample as many psychological constructs/variables are (Mann, 2020). The results of Zakaria et al. (2012) differed considerably from that of the Jamaican population, but aligned with that of a study involving 367 Kenyan secondary school students (Khatoon & Mahmood, 2010). They found that 34.3% of their sample reported high MA. In their study, MA was measured using an adapted 14-item Mathematics Anxiety Scale created by the researchers.

The 2012 Programme for International Student Assessment (PISA) reports another distribution of MA among secondary school students. It found that approximately six out of every ten students in high school contend with the issue of high MA (Organization for Economic Co-operation and Development [OECD], 2013). PISA 2012 involved 65 countries worldwide. PISA's approximation falls well outside of Ashcraft et al.'s (2007) theoretical estimation that 17% of a given population would exhibit high levels of MA when assuming a normal distribution of MA scores.

Some studies deviate from using three or four MA categories to explore prevalence. For example, Moyo (2023) focused on exploring individual items within the scale, which revealed that many of their Zimbabwean sample experienced high MA although a specific aggregate percentage was not presented.

The literature reviewed confirms that there does not appear to be a consensus relating to the prevalence of MA. However, large numbers of students at the secondary school level self-report high MA. One reason for this may be that students are introduced to increasingly challenging topics in mathematics at the secondary school level, which in turn impacts the mental and emotional aspects of their well-being (Luu-Thi et al., 2021; Termizi & Mahmud, 2022). Gopal et al. (2020) suggested that students' low mathematics self-efficacy was a key factor related to their high MA.

In terms of the differences in students' mathematics achievement based on their MA level, very few studies have focused on this concern. Some studies have reported statistically significant differences in MA based on achievement levels (Al Mutawah, 2015; Devine et al., 2018; Lee, 2009; Roos et al., 2015; Zakaria et al., 2012). For example, Zakaria et al.'s (2012) study found that students' mathematics achievement significantly differed by MA levels ( $F = 35.20, df = 2, 194, p < 0.05$ ). The result showed that students who exhibit low levels of anxiety are high achievers, while those who exhibit high levels of anxiety are low-achieving students. The authors opined that this disparity may be due to high achievers having "a strong understanding of mathematics and more confidence than low achievers" (p. 1831).

## **Mathematics Anxiety and Mathematics Achievement**

Despite the educational level and age group, studies conducted on students' MA and their mathematics achievement have revealed that there is a link between the variables, with most studies reporting a negative correlation between MA and their mathematics achievement (Foley et al., 2017; Namkung et al., 2019; Termizi & Mahmud, 2022). This correlation means that students with lower mathematics achievement levels showed higher MA and vice versa.

Termizi and Mahmud (2022) conducted a quantitative study which investigated the relationships between Form 4 students' MA and their mathematics achievement. The respondents

in the study comprised a total of 56 students from a high school in the Sepang district of Selangor, Malaysia. The results revealed that there was a weak and non-significant negative correlation ( $r = -.23$ ) between the two variables. The results also revealed that the students who perceived themselves to be low achievers had the highest levels of anxiety. Similarly, data from the 2012 Program for International Student Assessment (PISA), which tested the mathematics academic achievement of 15-year-olds worldwide, showed that in 63 of the 64 education systems that participated in this assessment, MA was negatively related to mathematics achievement (OECD, 2013). These correlations support the findings of Namkung et al.'s (2019) meta-analysis study, which found significant, moderate negative correlations ( $r = -.36$ ) between MA and achievement for secondary school students.

The association between students' MA and mathematics achievement has also been linked to a positive correlation, which is in contrast to the usual findings. In a recent study involving upper secondary school Vietnamese students, Luu-Thi et al. (2021) found a significant, weak positive correlation between the level of MA and mathematics achievement ( $r = 0.064, p < 0.05$ ).

### **Frameworks Linking Mathematics Anxiety and Mathematics Achievement**

Three frameworks have been used to present the relationship between mathematical achievement and MA: the Deficit Theory, the Cognitive Interference Theory and the Reciprocal Theory (which combines the concepts of the Deficit and Cognitive Interference theories). The Cognitive Interference or Disruption model is the most widely held theory in the field (Ramirez et al., 2018). It posits that MA, especially at high levels, negatively influences mathematics achievement by temporarily reducing the working memory needed for an individual to engage successfully in mathematics activities/problems (Ashcraft & Kirk, 2001; Justicia-Galiano et al., 2017). Working memory refers to the brain's ability to temporarily hold and manipulate a small amount of information needed for a given cognitive task (Baddeley et al., 2014).

The Deficit or Reduced Competency Theory contends that past experiences with low mathematics achievement and memories of those experiences cause future MA to be higher (Carey et al., 2016; Maloney, 2016). Another dimension to this is that students who have reduced mathematics abilities avoid mathematics tasks such as homework and classes, thereby losing opportunities to improve their mathematics knowledge and skills (Hembree, 1990). Ramirez et al. (2018) state that this avoidance may exacerbate their math skill deficits and contribute to MA.

According to Carey et al. (2016), there is a bidirectional association between mathematical achievement and MA: as MA rises, math achievement falls, and vice versa. Regardless of the theoretical stance that a researcher adopts, there is a consensus that a robust relationship exists between students' MA and their mathematics achievement.

## **Methods**

### **Sample**

This research adopted a quantitative, survey approach to examine different elements of MA and its relationship with mathematics achievement. Non-probability, convenient (volunteer) sampling was used in selecting the research sample, which consisted of 70 students (29 males and 41 females) aged 15–16 years. The researchers invited all the Form 4 students ( $N = 180$ ) to participate in the study. However, we received written parental informed consent and child assent from approximately 39% of the Form 4 students at the research site. The small sample size restricted the generalisability of the findings to the broader Form 4 student population, and those who volunteered may have possessed specific characteristics. Despite this research limitation, this study contributes to the limited body of studies conducted in the Caribbean region. The researchers were granted institutional ethical approval to undertake the research.

## Research Context

This research was conducted in Providenciales TCI, which is a non-self-governing British Overseas Territory Southeast of the Bahamas archipelago and North of the island of Hispaniola (Haiti and the Dominican Republic). Eight inhabited islands comprise the TCI, with Providenciales being the largest among them.

## The Research Site

This research was conducted at a coeducational secondary public school on the island of Providenciales. In the TCI, a public school refers to a primary, secondary, or tertiary school that is available to all children; operates with the aid of government funds; and is overseen by the Ministry of Education, Youth, Sports and Library Services and the Department of Education (Ministry of Education, Youth, Sports & Library Services [Turks and Caicos Islands], 2018).

In Providenciales, there are six secondary schools, two of which are public and four private. Regarding the two public secondary schools in Providenciales, one school has students from Forms 1-3 (aged 12–14 years), while the other has students from Forms 4-5 (aged 15–17 years). After completing Form 3, students transition to Form 4 in either a public or a private school. The researchers were interested in investigating elements of MA in a sample enrolled in upper secondary school. Therefore, only one public school was available as a possible research site. The researchers were permitted to undertake the research in this institution.

## Data Collection

### Mathematics Anxiety

The Modified Abbreviated Math Anxiety Scale (mAMAS) is a valid and reliable instrument for measuring MA in both children and adolescents (Carey et al., 2017). It comprises nine items with a 5-point Likert scale as follows: 1–Low anxiety, 2–Some anxiety, 3–Moderate anxiety, 4–Quite a bit of anxiety and 5–High anxiety (see Appendix 1). The mAMAS was administered electronically over 4 days to the respondents by their assigned

mathematics teacher via Google Forms during the students' regular mathematics class hours.

### Mathematics Achievement

A teacher-constructed end-of-term mathematics examination consisting of objective-type and constructed-response items was used to measure students' mathematics achievement. Therefore, for this research, mathematics achievement were the scores students obtained on this test. The test items were based on the mathematics content taught in Term 1 of the academic year in which the research was conducted. The constructed-response items were sourced from past Caribbean Secondary Education Certificate (CSEC) mathematics examinations offered by the Caribbean Examinations Council (CXC).

The CXC is an examination board that conducts examinations and awards certificates and diplomas based on the results of these examinations in 16 Caribbean countries. Secondary school students typically take the CSEC examinations at the end of high school. These examinations are standardised and have been long established to be valid and reliable for assessing students' mathematics knowledge, comprehension and reasoning ability (Griffith, 2015). For the 60 objective-type items, to establish content validity, a table of specifications was used in the development of the test. Feedback on the items was also provided by mathematics leaders in the school. The examination was administered face-to-face at school under examination conditions. The duration of the examination was two hours.

## Data Analysis

For the MA data, for each respondent, the score related to the level of MA selected by the respondent was assigned to each of the nine items. These scores were added to obtain a total MA score, which ranged from 9–45. For the mathematics achievement data, each student was assigned a score out of 100.

Before analysing the data per the research questions, we performed tests to check that the data satisfied the normality, linearity, and homoscedasticity assumptions to determine whether parametric or non-parametric tests were

appropriate. The linearity and homoscedasticity assumptions were met; however, the normality assumption was not. Therefore, non-parametric tests were used where applicable.

Research Question 1 examined the distribution of MA among the sample. The first step in the analysis was to assign each respondent to one of three groups. This assignment was based on their total MA scores as follows: low anxiety (9–20), moderate anxiety (21–32), and high anxiety (33–45). This approach follows previous research (e.g. Mitchell & George, 2022; Carey et al., 2016). A bar graph was created to present the distribution of MA scores. For further analysis, we calculated the means and standard deviations for each item.

An analysis of variance (ANOVA) was used to ascertain whether there was a statistically significant difference in the mathematics achievement scores of students who reported low, moderate, or high levels of MA. For the third research question, Spearman's Rank-order Correlation analysis was performed to explore the relationship between MA and mathematics achievement among the sample. This non-parametric test was employed because the mathematics achievement data were not normal. We created a cross-tabulation with the three categories of MA used for Research Questions 1 and 2 related to low and high mathematics

achievement to examine what profiles of MA and mathematics achievement emerged from the sample data. A student was placed within the low achievement group if they scored less than 60% on the end-of-term examination, which is the pass mark at the research site.

## Results

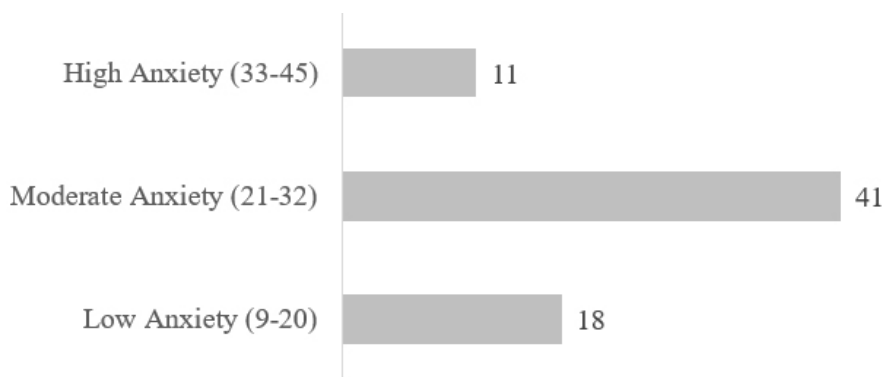
### Research Question 1: What is the distribution of MA (low, moderate, and high) among the Form 4 students?

Figure 1 presents the distribution of MA scores across three levels for the sample. The graph showed that moderate and high levels of MA were reported by the most (59%,  $n = 41$ ) and least (16%,  $n = 11$ ) number of students, respectively. The modal category (moderate anxiety) had more than twice the number of students than the category of low anxiety and more than three times that of the high anxiety band.

Beyond the aggregate results, the mean and standard deviation for the individual items (see Table 1) were analysed to ascertain the key contributors to the different MA levels. Based on the 5-point Likert scale: 1–Low anxiety, 2–Some anxiety, 3–Moderate anxiety, 4–Quite a bit of anxiety and 5–High anxiety, the higher the mean, the higher the level of MA a respondent reported experiencing.

**Figure 1**

*Distribution of Students' MA Scores*



**Table 1***Mean and Standard Deviation for the mAMAS Items*

Item No.	Item	M	SD
1	Having to complete a worksheet by yourself	2.44	1.270
2	Thinking about a test the day before you take it	3.50	1.327
3	Watching the teacher work out a math problem on the board	1.71	1.105
4	Taking a math test	3.86	1.219
5	Being given math homework with lots of difficult questions that you have to hand in the next day	3.14	1.447
6	Listening to the teacher talk for a long time in math class	1.77	1.182
7	Listening to another child in your class explain a math problem	2.01	1.324
8	Finding out you are going to have a surprise math quiz when you start your math lesson	4.09	1.349
9	Starting a new topic in math	2.37	1.299

Table 1 shows that items related to taking a mathematics test (Items 2, 4, 8) had the highest mean values. The item "Working on difficult mathematics problems" (Item 5) also had a mean above three, similar to Items 2, 4, and 8. However, it was lower than these items (3.14) associated with these test-related situations and when engaged with challenging mathematics content. Item 3 (watching the teacher work out a math problem on the board) and Item 6 (listening to the teacher talk for a long time in math class) registered the lowest means and the only items with a lower mean of less than 2, which suggests that students experienced little to no MA during these learning-related situations. The standard deviation of all of the items was greater than 1.00, suggesting a substantial dispersion of the scores around the mean and variability in responses.

**Research Question 2: Is there a statistically significant difference in the mathematics achievement of Form 4 students who report low, moderate, and high levels of MA?**

A one-way between-groups analysis of variance (ANOVA) examined students' mathematics achievement based on their levels of MA. The results showed that there was no statistically significant difference among the three groups:  $F(1.339) = 2, p = 0.269$ . The mean score differences between groups were minimal. The effect size, measured by eta squared, was 0.038, suggesting that 3.8% of the variance in students' mathematics achievement could be attributed to their MA levels.

### Research Question 3: What is the relationship between Form 4 secondary students' MA and their mathematics achievement?

The Spearman Rank Order Correlation test revealed a small, non-significant, negative relationship between MA and mathematics achievement ( $r_s(68) = -.21, p = .089$ ).

### Research Question 4: What profiles of MA and mathematics emerge from the sample data?

Table 2 shows the distribution of MA and mathematics achievement levels for the sample. Interestingly, no clear pattern of MA and mathematics achievement emerged from the data. For each MA level, there were varying levels of performance. For example, there were instances where students with high MA levels achieved high scores in mathematics, challenging the notion that high MA correlates with low achievement. There were an equal number of high and low-achieving students for students who self-reported low MA. Overall, this data highlights the complexity of the relationship between MA and mathematics achievement among Form 4 students. This individual-level data is likely to prove helpful to guidance counsellors and teachers as they seek to plan targeted interventions for different students.

**Table 2**

*Distribution of MA and Mathematics Achievement Levels*

MA	Mathematics Achievement		Total
	Low	High	
Low	9	9	18
Moderate	12	29	41
High	4	7	11
Total	25	45	70

## Discussion

This research investigated the prevalence of MA in a sample of students from the TCI at the upper-secondary level; whether there was a statistically significant difference in the mathematics achievement of students who report low, moderate, and high levels of MA; and the correlation between MA and their mathematics achievement. It found that 16% of the respondents reported high MA, and most students reported a moderate level of MA. The latter finding aligns with our hypotheses, as well as with Demedts et al. (2022) and research involving Jamaican high school students who also responded to the mAMAS scale (George & Dowdie, 2021). In keeping with Cipora et al. (2022), who note that there is no consensus related to the prevalence of MA because different self-report measures are used in investigating MA, our result differs substantially from Zakaria et al. (2012) and Khatoon and Mahmood (2010) who also conducted research among secondary school students in developing countries. Almost one-third of their sample reported high MA, and there did not appear to be a modal MA category.

Ramirez et al. (2018) posit that differences in how individuals interpret their mathematics achievement and experiences inside and outside of school may account for the variability in MA that they report, and the results related to MA and mathematics achievement. Ramirez et al.'s interpretation explanation is based on "existing appraisal theory...which argues that emotional outcomes and attitudes are based on the interpretation of events, physiological cues, personal behaviour, and internal states" (p. 151). It may also explain the seemingly conflicting results of this research and others, that some students excel in mathematics despite experiencing high levels of MA (Devine et al., 2018; Lee, 2009), while many low-achieving students report low levels of MA. We argue that these results are not contradictory, but instead highlight the nuances of how MA manifests among individuals within the same school and sometimes even within the same classes taught by the same mathematics teacher.

Form 4 in the TCI and the Caribbean are in the first year of preparation for high-stakes tests taken at the end of high school in Form 5. Previous literature has suggested that high levels of MA at the upper secondary level may be attributable to an increase in the difficulty of mathematics that students encounter (Termizi & Mahmud, 2022). Considering the result that most of the MA students reported were linked to testing situations, perhaps the anticipation of the high-stakes test and its implications for future work and studies could be a factor for students with high MA. This hypothesis would need to be empirically investigated.

The result that moderate MA was reported by most of the students also coincides with the notion that psychological constructs are generally normally distributed, which means that the largest number of respondents would be located in the centre of the distribution (Mann, 2020). Figure 1 shows that although the MA distribution was slightly skewed, moderate MA was the modal MA band.

In relation to the second research question, this research found no statistically significant difference in mathematics achievement among the low, moderate, and high MA groups. Most previous studies have reported contrasting findings (Roos et al., 2015; Yavuz, 2018; Zakaria et al., 2012). Furthermore, the present research, in keeping with most previous studies (e.g. Barroso et al., 2021; Zhang et al., 2019), found a negative correlation between MA and mathematics achievement ( $\rho = -.205$ ,  $n=70$ ,  $p = 0.089$ ). However, the relationship was not significant. These results underscore Cipora et al.'s (2022) assertion that the relationship between MA and mathematics achievement varies across samples and the need for research from diverse contexts. The small, non-significant, negative relationship between MA and mathematics achievement found in this research was not able to support or refute any of the theoretical frameworks linking MA and mathematics achievement.

## Conclusion

This study investigated the distribution of MA, the relationship between MA and mathematics achievement, and the individual MA–mathematics achievement profiles of a sample of Form 4 students from the TCI. A key result of this research concluded that moderate MA was the modal MA level. However, a substantial proportion of the sample (16%) reported that they experienced high MA, which is concerning. Furthermore, the results showed that there was no statistically significant difference in the mathematics achievement of Form 4 students who reported low, moderate, and high MA. Non-significant results were also obtained in relation to the relationship between MA and mathematics achievement. This result is noteworthy, since many studies report significant results relating to the MA–mathematics achievement relationship (Barroso et al., 2021). Consistent with most previous research, however, this study found that the relationship was negative. Another interesting and notable result of this research was that no clear pattern of MA and mathematics achievement emerged from the data. For each MA level, there were varying levels of performance. This result confirms Cipora et al.'s (2022) assertion that the connection between the variables of MA and mathematics achievement is both dynamic and nuanced, and provides empirical evidence of this. This is a noteworthy contribution to the empirical literature, considering that only a small number of studies have explored this dimension of the MA–mathematics achievement relationship.

The results of this research have implications for practice and future research. TCI, like many other countries, has raised concerns about students' achievement in mathematics. Exploring variables which may be associated with achievement is, therefore, imperative in addressing the issue. Internationally, MA has been found to be a key variable related to students' mathematics achievement. However, for the TCI sample, it did not emerge as a significant variable. Therefore, within that research context, additional research is needed to investigate other factors which may have a more robust relationship with students'

mathematics achievement. No clear pattern of MA and mathematics achievement relation emerged from this research. The majority of students who reported high MA ( $n = 7$ ) were high achievers, and nine low-achieving students experienced low MA. Future research, perhaps of a qualitative nature, could be conducted to gain further insight into results like these where the specific contributory factors, socioenvironmental or otherwise related to MA, could be explored. This information would be valuable in developing interventions for students with high MA, whether they were low or high achieving students.

This research was undertaken in a small developing country where research related to MA had not been previously conducted. This quantitative research ended up being small-scale, which is a key limitation of the research. This was due to the low informed consent and assent responses, rendering the results non-generalisable to the research population. This low response rate is concerning and may be indicative of the low priority that empirical research may hold in that jurisdiction or the unfamiliarity with it. These speculations would need to be confirmed in future research. Another limitation is that only one data collection instrument was used in the research, which limited triangulation of results. As previously stated, future research could include qualitative data collection methods such as interviews or focus group discussions in research results. Notwithstanding the aforementioned, there is merit in conducting research using diverse samples and jurisdictions to establish a comprehensive, inclusive, and current portrait of MA (Dowker et al., 2016; Szczygieł & Pieronkiewicz, 2021). While the research community embraces the notion of inclusion, there is an onus on the under-researched to engage in and report high-quality research. This study has added such research to the existing studies on key elements related to MA, such as prevalence and its link to mathematics achievement. It has also expanded the small number of existing studies that have been conducted within the Caribbean and neighbouring territories.

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## Appendix 1

### Mathematics Anxiety Questionnaire

This questionnaire is designed to find out about Form 4 students' math anxiety. You are kindly requested to answer all the questions honestly. The information you give will be treated with confidentiality and only used for compiling relevant research reports. This is not a test, and hence there is no wrong or right answer.

#### Section A

Name: \_\_\_\_\_

Sex: Male [ ] Female [ ] Other [ ]



Age: \_\_\_\_\_

Class: \_\_\_\_\_

#### Section B

Please give each sentence a score in terms of how anxious you would feel during each situation. Carefully read each sentence and, using the scale at the top, select the number that **best** describes how you feel.

#### Modified Abbreviated Math Anxiety Scale

						
	Low anxiety	Some anxiety	Moderate anxiety	Quite a bit of anxiety	High anxiety	
1 <i>Having to complete a worksheet by yourself</i>	1	2	3	4	5	
2 Thinking about a test the day before you take it	1	2	3	4	5	
3 Watching the teacher work out a math problem on the board	1	2	3	4	5	
4 Taking a math test	1	2	3	4	5	
5 Being given math homework with lots of difficult questions that you have to hand in the next day	1	2	3	4	5	
6 Listening to the teacher talk for a long time in math class	1	2	3	4	5	
7 Listening to another child in your class explain a math problem	1	2	3	4	5	
8 Finding out you are going to have a surprise math quiz when you start your math lesson	1	2	3	4	5	
9 Starting a new topic in math	1	2	3	4	5	

# A Global Study of Debate Extension Service Organizations (DESOs): Challenges and Opportunities

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## Abstract

Debating is often seen as an extra-curricular activity, with debate clubs in secondary and tertiary level institutions being the main organizational unit. However, some organizations operate beyond individual schools and offer broader support to debate activities. This includes organizing tournaments, training coaches and adjudicators, executing debate workshops/camps, managing national debate teams, and promoting debate in non-school environments. These can be called Debate Extension Service Organisations (DESOs), are typically non-governmental organizations that vary in terms of structure, services, staffing, and funding. Generally, they aim to create positive change in the lives of their programme participants and to promote debate as a useful tool for society. This study uses a sequential mixed method approach consisting of a survey and a focus group discussion to explore the challenges confronting such organizations, and examines the extent to which they are similar across places, in addition to considering various solutions to such challenges. From this, it is noted that the strategies to overcome the challenges may be at least somewhat transferable, though contextual nuances remain relevant. It was found that the challenge of greatest concern to the organizations was funding, while participant buy-in was of least concern. Other concerns of staff turnover, public support, and organization capacity were moderate. Despite the concerns, the organizations remained optimistic in achieving their goals and believed that they would remain in existence.

*Keywords:* debate, extension services, non-governmental organizations, non-profit funding, volunteers

## Introduction

Debating is commonly thought of as an extra-curricular activity pursued by a minority of students at different stages in their academic studies (Okebiro, 2018). Debating also takes place in other settings—such as in the lead-up to political elections, where candidates or political commentators express and contest their views on particular issues (Larkin & Were, 2013). Debating in these settings often has specific rules regarding

time limits per speaker; the questions or issues to be asked; and how the candidates engage with each other. Outside of these settings, debates may also take place informally with less precise rules in social settings such as bars and shops, or in other media such as on talk show radio.

It is far less common to think of organizational structures pertaining to debating which transcend these types of contexts. As an organizational

unit, debate clubs within schools may be the most familiar type of structure. While there are particular events (such as various regional or world championships), organizational structures which provide continuous support for debating at levels beyond a particular institution or activity are often overlooked in research. The organizations being referred to in this study are those which transcend a single educational institution and include those offering debate outreach or social intervention programmes; umbrella organizations which support multiple debate societies; debate in non-school settings; or those which provide national support or coordination of debate activities. This study frames these organizations as being Debate Extension Service Organizations (DESOs). While the concept of extension services is most commonly associated with agriculture, it is a quite useful description here as it refers to the extension of support services for a particular activity across several locations.

Several such organizations exist, typically as non-governmental organizations (NGOs). These are also, by extension, non-profit organizations. This study assumes that productive debating at the institutional level or in societies generally, where the influence of these organizations permeate, benefit in some way from the work these organizations do. As an activity, it is important to note that the benefits of debate are widely documented in research. This is particularly established in school settings, but research also exists in non-school settings. It is considered that through debating, students can develop strong communication skills, become more confident, learn to collaborate with peers, and become creative thinkers (Venkovits, 2018). While these skills are also enhanced when members of the broader society participate in debate; at that level, meaningful debate can help to foster constructive dialogue and enhance civic discourse in society.

Several DESOs exist around the world: they share similar challenges and coping strategies. While DESOs provide support to debating activities in the classroom and beyond; as non-profits and NGOs they are vulnerable to multiple challenges. According to Okine (2022), non-profits and

NGOs supporting education in Ghana often suffer from disjointed relationships with the Ministry of Education and education policy more broadly, despite their support of social change. There are similar findings in South Africa, where it was found that NGOs which offer social services often suffer from not being properly integrated in the institutional framework of development planning (Nwauche & Flanigan, 2022). This research, conducted in the Caribbean, aims to bring an understanding of the challenges facing these particular NGOs and also seeks to examine the possible solutions they have attempted and the extent to which those solutions may be transferable to organizations worldwide.

## Research Aims and Significance

This study explored the challenges confronting DESOs globally across a range of organizations, to better understand them, and to determine the extent to which the challenges faced were similar or dissimilar across place and organizational structure. The strategies employed by DESOs to address their challenges and the extent to which these strategies may be transferable were also investigated.

Overall, this study looked at the organizations which provide support services for debate at a level of analysis which may be generally unseen, despite being very important.

The research questions were:

1. What are the challenges faced by DESOs globally and how similar are they across organizations?
2. What are the strategies employed by DESOs to overcome the challenges they face and in what ways are they transferable across organizations?

The significance of this study is derived from the unique role that DESOs play. According to the OECD (2018), in contributing to the Sustainable Development Goals (SDGs), it was suggested that three vital competency areas for young people were: (1) creating new value; (2) reconciling tensions and dilemmas; and (3) taking responsibility. The benefits derived from debating are congruent with these areas. It has

been highlighted that the integration of these elements into school curricula is often a slow process, despite the urgency of the need. DESOs work predominantly (though not exclusively) with young people and help to fill the gaps in the competencies highlighted. If institutionalized, DESOs may ultimately play a crucial role in achieving sustainable and inclusive education by encouraging the integration of debate and discussion activities in the classroom. Other similar NGOs providing extension services in sectors such as healthcare, may also find the ideas discussed herein to be valuable and transferable.

## Literature Review

This section reviews existing literature on the benefits of debate both in and out of the classroom setting and then explains the concept of extension service organizations. This allows for a justification as to why the organizations being studied fit that type of organizational description. The review closes with a discussion of the challenges which generally affect these organizations.

## Benefits of Debating

Research examining the benefits of debate is perhaps the most widely documented area in debating. The benefits of debate as a co-curricular activity as well as directly in the classroom setting are well established.

Ali et al. (2020) suggest that debate as a co-curricular activity increases the confidence of participants and also leads to better social adjustment in society at large. They note that teachers have an important role in motivating students and parents, encouraging students to take on co-curricular activities such as debate which emphasizes the expression of ideas. This idea is congruent with Okebiro (2018) who suggests that parents and teachers should encourage students to join debate clubs, particularly for the psychological benefit of personality development—which can benefit career prospects. Beyond this, Ali et al. (2020) also recommend that

governments support environments in all schools which facilitate debate and other literary co-curricular activities.

Snider and Schnurer (2002) have long advocated for the use of debate, not just as an extra-curricular activity but rather to be widely applied across the curriculum. They establish that a variety of debate methods can be used across a wide range of subject areas to enhance teaching and learning. Najafi et al. (2016), through qualitative and conceptual exploration, outline a number of benefits that students derive from debating in the classroom, such as increasing the speed of learning; enhancing evaluation ability; fostering entrepreneurial skills; promoting good mental health; and developing verbal skills. Venkovits (2018) agrees with the benefits of debate in the classroom, particularly noting the benefits of oral communication, research, collaboration, and critical thinking. Importantly, Venkovits (2018) noted that to properly use debate in the classroom, teachers must be trained in debating as a teaching method so that they can properly apply and effectively assess its use in the classroom.

Ramlan et al. (2016) conducted empirical work on the benefits of using debate in the classroom, particularly in the teaching of medicine. The self-reported perceptions from students noted that they considered debating to have a positive impact on confidence, critical thinking, and knowledge—with the strength of the impact being in that order.

Fallahi and Haney (2007) used debate as a teaching method for psychology students to discuss controversial topics, particularly affirmative action and sexual diversity. While the majority of the students had not debated previously, the vast majority indicated by survey that they understood the debate process and found it easier to discuss the topics in a debate, rather than in an open discussion. The benefit here was that students did not have to reveal their personal opinions; which the majority of those surveyed said could have caused fear, anger, or frustration. Of the students surveyed, 80% indicated that debating the issues had shifted their viewpoint.

As a student-centred approach, debating empowers students by giving them agency to engage in constructivist learning. It is argued that in post-colonial contexts such as in the Caribbean, teachers should urgently employ critical pedagogy as an alternative to hegemonic instructional practices which often limit student participation. It is observed that Caribbean classrooms are still heavily teacher-centred and often limit students' self-efficacy (Bailey, 2019). When students are encouraged to participate in debates, they get the opportunity to engage in challenging ideas and become more active participants in their learning. Moreover, using Jamaica as a case study, it was found that class participation reduces the risk of school dropout and that collaborative learning in the classroom increases overall academic achievement (Martin et al., 2017). These practices of participation and collaboration are established as being inherent to debates (Snider & Schnurer, 2002; Venkovits, 2018).

Owing to the empowerment and increased self-efficacy promoted by debate in the classroom, it is believed that the skills fostered by debating are transferable. For the individual who participates in debates (which is not limited to students) the skills learned can be of benefit personally, educationally, and professionally (Gardiner, 2017).

### **Extension Service Organizations**

DESOs are generally non-governmental organizations. They provide outreach service through debate activities both in school and non-school environments. Extension service is most frequently associated with the agricultural sector (Davis & Place, 2003). In the context of Semiarid East Africa (e.g. the Sahel), Davis & Place (2003) note that funding for agricultural extension by the governments across the region had been reduced. The alternative approach to extension services which emerged was the creation of non-governmental organizations (NGOs). Davis & Place (2003) cautioned that NGOs were not to be considered a magic bullet or a complete replacement for state involvement in extension services, but that they should work

together in coalition. Anderson (2003) also examined the provision of extension services to farmers and noted that there were numerous challenges with accountability, political commitment, tracing impact, and the broader policy environment. In summary, extension services seek to fill a gap and encourage sustainability and development of the agricultural sector and rural development. Recommendation is made for a more decentralized approach with private involvement (Anderson, 2003). Zivkovic et al. (2009) also point to models where state support for extension services is supplemented by private actors.

Outside of agriculture and rural development, the concept of extension services is almost non-existent. Stoecker (2014) speaks to extension educators in a fairly expansive manner—to include those who work with businesses, governments, farmers, and non-profits. It is suggested that, for universities who support community development, it is important for faculty members to develop relationships with extension educators. This is because the extension educators are intermediaries between the needs of the community and the research of the university. Borrowing this concept of extension services and applying it to debate is quite apt, as debate activities (in schools and in the broader society) often lack the organizational skills and training required for them to be optimized. For example, debate coaches are often teachers in secondary schools who volunteer their time to facilitate debate clubs, but they may not have professional training in debate formats or the organization of debate activities and their role may often not be a permanent responsibility. DESOs are able to provide support services in these spaces in a consistent manner, even when there are personnel changes.

The idea of DESOs as extension service organizations is also congruent with, and adds to, the suggestion of Davis (2009) that the modern concept of extension has evolved from a focus on providing farmers with technology and training to a concern with facilitation, learning and helping with the formation of groups, and collaborating with partners. In the context of

debate activities, DESOs provide avenues to facilitate debate by supporting the learning of persons engaged in debating, the formation of groups for debate, and wider collaboration with partners in the support of promoting debating. In this regard, the organizations referred to herein as DESOs are indeed providing extension services. Specifically, these are organizations that are extending support to numerous debate clubs in schools and debate activities in wider society. They also provide these services where there is generally a lack of centralized state funding for debate activities. However, they often work collaboratively with governmental and non-state institutions. They maintain close relationships with the schools and communities within which they work and therefore serve as an intermediary between the needs of the communities and policymakers.

### **Challenges Faced by Debate Extension Service Organizations**

Most non-profit organizations operate within a space referred to as the social or third sector, which is neither public nor private. This comes with its own challenges and perhaps some are even more pronounced in the case of the DESOs.

Wright (2015) explored the challenges facing non-profit organizations in Canada and identified issues with legal environment, organizational capacity, financial viability, advocacy, service provision, infrastructure, and public image as areas of concern.

Whereas matters regarding the legal environment may not be of immediate importance to DESOs since they would not typically require special regulatory licences or infrastructure, and given that they are more service oriented than production based, some of the other core issues noted are indeed relevant.

On the matter of financial viability, Wright (2015) speaks to this being influenced by the extent of philanthropic and volunteer culture, in addition to the financial management skills within the organization. Helmig et al. (2004) also suggest that since non-profit organizations do

not raise equity in the way private businesses would, they end up competing for whatever amount of charitable funds have been set aside elsewhere in the economy.

The organizational capacity issues involve staffing and the ability to engage in strategic planning (Wright, 2015). For service-oriented organizations, these capacity matters are congruent with service provision. The matter of staffing, while somewhat related to organizational capacity, often has unique challenges for the debate organizations concerned as they are heavily dependent on volunteers who are generally young, and often assist the organization after university, as they transition to professional life. Crockwell (2015) found similar challenges with non-profit organizations and suggests that especially within rural areas matters with training staff, volunteer dependence, and boards are even more pronounced. It is often the case, therefore, that staff turnover is high.

For DESOs, participant buy-in regarding the services being provided is also important. Supplying services without generating sufficient demand would be ineffective. Many NGOs provide services for which the buy-in from participants exists and is overwhelming, such as those offering assistance with the provision of food or housing. Debate, however, while quite beneficial, may not readily have willing participants, whether for lack of participants' understanding of the potential benefits or stereotypes around debating. Therefore, it is important that stakeholders such as parents and teachers help to encourage debating (Ali et al., 2020; Okebiro, 2018). The stakeholders that can encourage debate and get buy-in can also be extrapolated to include the state or DESOs which can provide support to teachers and parents.

Public image or public support is also very important and is congruent with the ideas of advocacy suggested by Wright (2015), though the public support received and the advocacy offered could have some divergence. More specifically, given the nature of debate organizations, communication and advocacy is

often innate in their operations, however, this does not necessarily translate into public support. This aspect has to do with public receptiveness. In that regard, Helmig et al. (2004) points to marketing as a key challenge for non-profit organizations. Here, marketing is more than just advocacy, but is targeted at meeting the needs of the audience so as to gain support.

## Methodology

Conceptually, the literature establishes that debate-type activities support the development of crucial skills among participants. These skills are congruent with enhancing educational outcomes and are also useful outside of the classroom in fostering good civic discourse and democracy. However, despite the potential benefits, debate is not often central to curriculums and may not always be promoted in society at large. This represents a gap between support for debate and the need for the development of those skills. Therefore, it can be conceptualized that given that the aforementioned outcomes are desirable but that support for debate as a vehicle for attaining these outcomes is lacking, the overall attainment of those outcomes will also be lacking. DESOs serve as an intervening factor which support the debate activities that can lead to those desirable outcomes. These outcomes will be enhanced if DESOs are well functioning.

Therefore, DESOs aim to fill a critical gap, but the challenges faced by these organizations and the strategies to overcome their challenges are not well studied. Having operationalized the concept of DESOs and conceptually established the role they play in improving education outcomes, collecting and analysing data on these organizations becomes important. Through understanding the challenges faced by these organizations and the opportunities which exist to overcome their challenges, knowledge is produced about how to improve them. By improving DESOs, they may more effectively support debate activities which will enhance the educational and wider societal outcomes outlined in the literature.

Understanding support for debate activities is an area not widely studied that is also fairly exploratory in nature, so primary data collection was considered necessary. The research design used was sequential mixed methods. As such, two instruments were used to collect data, with the second being informed by the first.

The researchers began by conducting an extensive search of organizations that fit the criteria of DESOs—primarily that they offer support services to debate activities which transcend a single institution, whether in school or non-school settings.

Through thorough web searches and snowballing from known DESOs, 48 such organizations around the world were identified. This constituted the sample frame. All organizations were contacted, primarily by email; introducing the study and inviting participants to complete a survey, informing them of a follow-up focus group discussion which would occur afterwards. This research design was deliberate as the survey allowed for individual responses. While one of the aims of the study was to explore the extent to which the challenges faced by these organizations were similar, opening with a collaborative data collection method could be biased towards encouraging group think. Therefore, the focus group was used only after the individual survey responses were received.

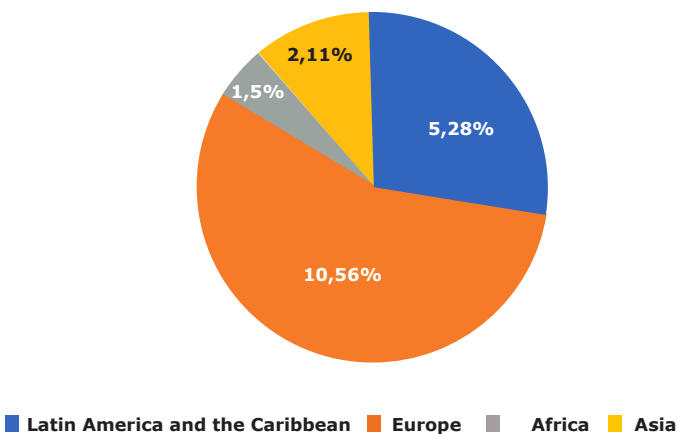
All participants were presented with an explanation of the purpose of the study and informed consent was sought. All participants were asked to explicitly indicate consent on the surveys and consent was further sought at the start of the focus group session regarding participation and permission to record the session. All participants consented. It was noted that the personal identifying information of the individual who participated in the data collection process would be kept anonymous, but that the name of the organization may be used in the study. It was not considered reasonable to promise to keep the organization anonymous since there was often only one organization that fit the criteria for a DESO in several countries.

Data was collected over a period of 1 month, early September to early October 2023. The first 3 weeks were concerned with getting survey responses, with constant reminders and the use of participants who knew debate administrators at other organizations to bring the communications regarding the study to their attention. Ultimately, 18 of the 48 organizations responded to the study. It was very possible that several of the 48 organizations identified were no longer functional. The survey results were analysed (predominantly using descriptive statistics), to examine the distribution and spread of perceptions reported by the DESOs. Congruent with the sequential mixed methods design, these results were used to inform the questions explored in the focus group discussion.

Week 4 involved the second form of data collection, which was a focus group discussion. A survey was circulated to the 18 organizations who participated in the survey with time slots for the discussion, noting that it would not be feasible to get all participants together at once.

**Figure 1**

*Geographic Distribution of Organizations*



Five organizations participated in the 1-hour focus group session, which was conducted by Zoom and moderated by the two researchers. Consent was sought for the session to be recorded. The focus group discussion interrogated the areas of consensus and divergence identified from the questionnaire. Content analysis was used for the focus group data, with thematic units largely informed by the questionnaire results.

## Findings and Discussion

This section predominantly outlines the findings from the quantitative aspect of the survey and includes possible explanations (based on the survey comments and focus group discussion) for the tendencies noted in the analysis of the survey data.

### Description of the Organizations

Of the 48 organizations contacted, 18 completed the survey. The 18 organizations were headquartered in 18 different countries, across 4 regions, as outlined in Figure 1. The organizations predominantly operated by providing services nationally; however, two may be described as multinational in their service provision.

For the focus group discussion, the five organizations that participated consisted of three based in Latin America and the Caribbean, and two based in Europe—one of which was multinational.

The participating organizations have existed for as little as 4 years to a maximum of 28 years, with the average being 15.6 years. All the organizations were formally registered organizations, 17 directly and 1 as a department within a registered foundation.

The remainder of the description below pertains to questions which were asked regarding services provided, funding sources, beneficiaries, staff size, and compensation. Organizations were able to indicate multiple options for each category. For example, an organization could have received funding both from the state as well as from private businesses.

The organizations generally indicated similarities in service provision. This was reflected in 17 of the 18 organizations noting that they organized debate competitions and trained coaches/judges; with 16 also noting that they managed national teams. In terms of offering special projects for profit, 11 organizations noted that they were involved in this activity, and 10 indicated that they conducted outreach projects with other populations such as vulnerable groups. One organization organized political debates and one predominantly provided outreach to national organizations.

The funding sources for the organizations showed a mix of responses. Twelve organizations depended on private individual donors; 11 depended on funding generated from the execution of for-profit projects; and 10 received funding from business sponsorship. Only 8 organizations received government funding, while 2 received funding from European Union projects and from member donations or fees.

The beneficiaries had some areas of convergence. All 18 organizations indicated that they provided support to schools and students, and 11 provided services to the public sector. Unattached youth were beneficiaries from 8 of the organizations; while 7 organizations served the general adult population, 6 served businesses, 3 served the elderly, and 1 predominantly supported national debate organizations.

In terms of staffing, there was a mix of sizes and compensation. Six of the organizations had no more than 20 staff members, while 5 had 21–40 staff members. The other 7 organizations had over 41 staff members. Regarding compensation, the most dominant response indicated by 8 organizations was that a few staff members were paid but the majority were volunteers. Only 3 organizations indicated that the majority of their staff were paid competitive salaries—with 2 claiming that staff members were all volunteers, and 2 claiming that all were volunteers, but may be paid for work on for-profit projects undertaken by the organization. One organization indicated that the core staff were paid competitive salaries and the others received a stipend.

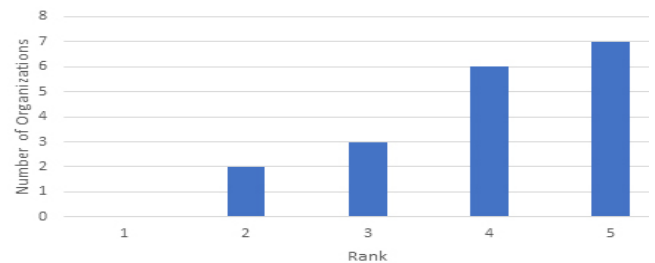
## Challenges Faced by the Organizations

From Likert-scale questions, the figures below show the perceptions of organizations around the extent of the challenges they faced, where 1 indicates where an issue was not a problem and 5 indicates where an issue was a major problem. Figures 2–6 show the results of the ranking of the severity of the effect of challenges faced by the organizations. The challenges reflected here are funding, staff turnover, participant buy-in, public support, and internal organizational capacity.

The data herein suggests that on average, funding was the most severe challenge faced by all the organizations, regardless of location and size. Staff turnover and public support were the next greatest challenges with equal mean scores. Importantly, these scores were almost

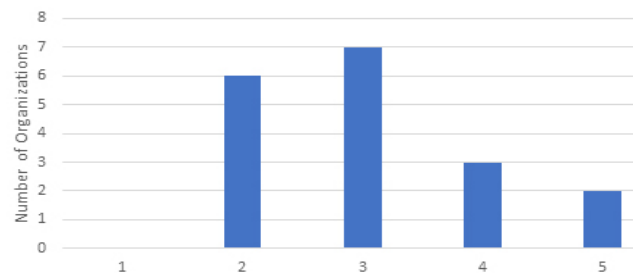
**Figure 2**

*Severity of Funding as a Challenge*

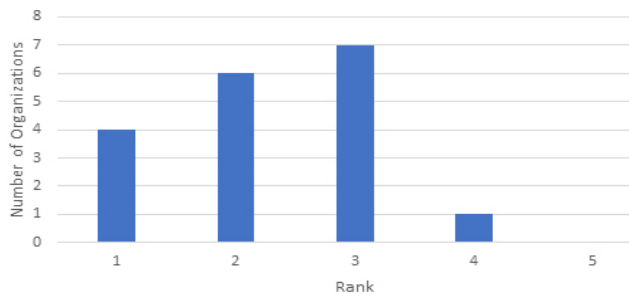


**Figure 3**

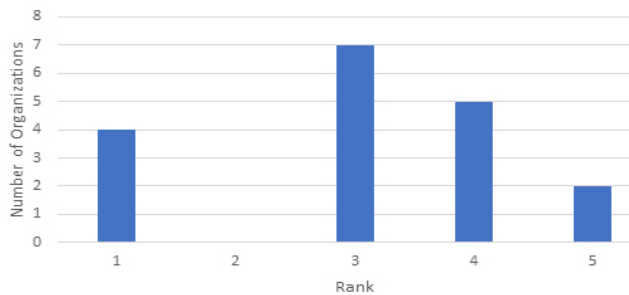
*Severity of Staff Turnover as a Challenge*



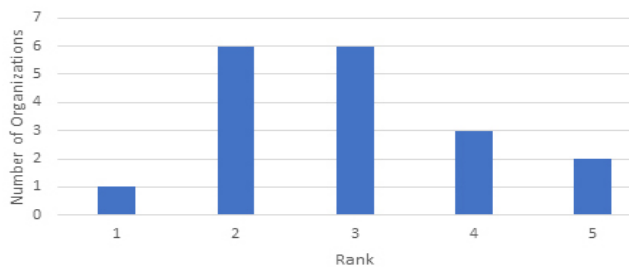
**Figure 4**  
*Severity of Participant Buy-In as a Challenge*



**Figure 5**  
*Severity of Public Support as a Challenge*



**Figure 6**  
*Severity of Internal Organizational Capacity as a Challenge*



an entire point below the mean score for funding, depicting the severity of the matter of funding. Public support, however, had the highest standard deviation. This was perhaps due to different societal and cultural contexts regarding responsiveness to debate. Internal organizational capacity was next the highest concern, also with some notable standard deviation, suggesting that there were indeed variations in the perceptions of capacity across the organizations. Participant buy-in was the challenge of least concern and also depicted the lowest deviation. It is therefore generally thought that participants were interested in the services offered by the organizations.

**Discussion of the Challenges and Strategies Implemented**

The funding situation faced by DESOs varies significantly by the stage of the organizations’ development. It was identified that DESOs, in their early stages, generally engage in almost exclusively volunteer work, before they become able to collaborate with other NGOs or attract small grants for project-based work. Even when they are able to secure funding for projects, these tend to not be sufficient to cover the organizations’ everyday operational expenses. This therefore leads to most DESOs offering private services (such as training for business executives) to generate funds to cover their charitable work. This means that most DESOs ultimately adopt a social-enterprise type model. Eventually, successful DESOs often seek to get the attention of ministries of education and governments, and seek institutionalization for more consistent sources of funding, such as having their work become part of education policies or laws.

Several of the organizations indicated that it was difficult to get to the point of having consistent state funding, though some noted that the state was slowly becoming more supportive of debate. Only a few states seemed to have fully embraced debating and have created policies around the integration of debating in schools. This means that the majority of the organizations relied on non-state

Table 1 shows the mean severity and standard deviation of each challenge.

**Table 1**

*Mean and Standard Deviation across Severity of Challenges Faced by Organizations*

Measure	Challenges Faced				
	Funding	Staff Turnover	Participant Buy-in	Public Support	Internal Organizational Capacity
<b>Mean</b>	4.00	3.06	2.28	3.06	2.94
<b>Std. Deviation</b>	1.03	1.00	0.89	1.30	1.11

funding in the form of doing special projects such as offering corporate training and being part of European Union (EU) projects if eligible. Some organizations have therefore engaged in grant writing activities and have sought collaboration with other NGOs and state agencies. Sponsorship from private donors seems to be effective when organizations can establish a relationship with them for recurring funding. Sponsorship from private businesses can be competitive and it is sometimes difficult to have congruence with their objectives. At least one organization used cloud funding and another created roles in their organizational structure dedicated to areas such as business development.

Staff turnover was mostly managed by ensuring that staff and volunteers appreciated the value in their work. In many cases, staff members were former debaters motivated to help other debaters, but organizations still noted that they tried to screen volunteers to ensure commitment. The organizations often presented themselves as being more than just debate-oriented. Therefore, staff and volunteers engaged in a wide range of skills development, such as project management, financial management, information technology, and so on. In doing so, the organizations offered a wide range of avenues for professional development in addition to opportunities to network. To increase the perceived value of the experience some organizations made their job titles attractive, for

example, by renaming "Public Relations Assistant" to instead be "Public Relations Specialist".

Given that participant buy-in was the challenge of least concern, not many strategies were used. For the most part, the organizations established strong relationships with schools and had a point person within the schools. Some organizations also had membership systems. Through the use of social media, prizes at events, and other such incentives, participant engagement was encouraged. At the university level it seemed to be more difficult, especially in places where a debating culture did not readily exist.

Organizations have relied on traditional media and social media to reach the public. Some have collaborated with other NGOs on projects of public concern, at least one organization has been involved in electoral debates, and undertaken work with government ministries. Through hosting public debates, the organizations get supported by showcasing to the public what meaningful debates look like. Some have also publicized events such as "Debater of the Year", and in one case the organization was able to get the head of state to declare a "National Debaters' Week" as an annual activity. This represents one type of institutionalization of debating but there are other possible forms. Another organization was able to get legislative sanctioning of debating in schools across the country they serve. This may be considered an ideal for some DESOs; however, with regards to work in school environments,

the majority of these organizations seem to be currently seeking support for greater integration into the formal school curriculum.

In terms of internal organizational capacity, several organizations have been engaged in business-type training, such as in the area of project management. At least one organization had established relationships with a business school. Many of these organizations actively train debate coaches and facilitators, thereby building a pool of persons who can assist with the work being done. As the organizations tend to be heavily dependent on volunteers, there are challenges with regards to ensuring reliability and accountability when tasks are delegated to these unpaid individuals. There appears to be benefit to organizations offering support to debate activities across a wide range of forms, and not just traditional debate formats; for example, including model United Nations debates. With a wide approach, a broad perception of capacity is created, which increases the possibility of collaboration with other organizations and widens the range of private projects which may be accessible. Ensuring that even one or a few core personnel are paid, even part-time, is also important to task completion, as bottlenecks can reduce the capacity to engage in more activities.

### **Perceptions of Success**

The organizations generally believed that they were being successful in carrying out their functions, despite the challenges faced. None of the organizations considered themselves to be unsuccessful. Similarly, none of the organizations believe that they will not survive the next five years.

Overall, while several of the organizations have had setbacks (especially in light of the COVID-19 pandemic, which affected service delivery and funding), there was a high level of optimism. The organizations genuinely believed in the value of their work and were motivated to find creative solutions to overcome their challenges.

### **Conclusion**

The organizations researched provided extension services, often with little funding from the government, but operated in support of an activity with the potential to enhance educational outcomes in the classroom and foster civil discourse in the wider society. This research established that such organizations can be considered Debate Extension Service Organizations (DESOs), serving as intermediaries between debaters and debate clubs, and the wider grouping of educational and societal policymakers. Some of the DESOs also provide support services for debating at higher multinational levels.

The DESOs involved in this study were confident in the success of their work and its longevity. They seem to have little issue with the demand and support from the public and the beneficiaries of their work. The support and recognition of the work done by DESOs as well as their eagerness to continue to provide support for debate activities suggests that there is value in the work that they do. In some contexts where educational practices have not been significantly reformed to encourage active student participation and empowerment, DESOs promote pedagogical innovation which enhances teaching and learning.

The Caribbean region presents a clear case of need in this regard, as evidence suggests that the region's colonial history still has lingering effects in terms of the dominance of hegemonic educational practices, and that moving towards a more student-centred approach presents an opportunity to empower students (Bailey, 2019). Moreover, given that evidence from Jamaica suggests that class participation reduces dropout rates and that collaboration increases academic achievement (Martin et al., 2017), the work of DESOs should be promoted. In the same Jamaican context, there is a new National Standards Curriculum (NSC) which is anchored by attainment of four competencies: critical thinking; creativity; collaboration; and communication (Mayne & Dixon, 2020). Skills development across these domains are inherent to debating (Snider & Schnurer, 2002; Venkovits,

2018). However, it was found that while teachers understood the new curriculum, even teachers in training were not currently being taught how to use it. Therefore there is a gap between the competences the curriculum ought to promote and actual classroom practices (Mayne & Dixon, 2020). DESOs, though faced with several challenges, can seek to bridge this gap.

Funding is the issue of greatest severity and a number of strategies have been employed by the organizations. One popular strategy is operating a social enterprise-type model where for-profit services are used to finance charitable work. While this has worked for several DESOs, the offerings must be tailored to the demands of the local environment. DESOs can ultimately benefit from becoming recognized by the states in which they operate, leading to institutionalization in the education framework. Gradual efforts to increase state support and funding are being made, often by first working with particular ministries, agencies, or other NGOs and then getting the attention of the wider public and state. Dependence on project funding only generally leaves gaps in covering operational expenses.

It is recommended that DESOs be cognizant of their stage of development and the resulting opportunities which are available to them. In the earlier stages, DESOs should seek to establish strong relationships with stakeholders such as schools and other NGOs. If DESOs are unable to get official state recognition in the early stages, the social enterprise model can serve as a guide. Partnerships with more established and widely recognized NGOs are also recommended, to get the attention of the public and the state. Since DESOs tend to be more sustainable when they get official endorsement and funding from government ministries (such as those responsible for education), this should be an important pursuit for DESOs and can be attained by inviting representatives to events to showcase the work they are doing and the skills being developed by the students. Furthermore, it is recommended that DESOs ensure that volunteers value their work, both in terms of professional development as well as potential earnings from working on funded projects. Sustainable DESOs can support sustained enhancement in critical skill areas.

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# Come Get These Students: An Exploration of Teachers' and Administrators' Experiences in an Inclusive Secondary School Setting in Urban Jamaica

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## Abstract

The purpose of this study was to explore the experiences of teachers and administrators within an inclusive secondary school setting in urban Jamaica. The study presented here is part of a larger qualitative case study focusing on six teachers and four administrators, all working in an inclusive setting. Participants were selected using purposive, convenient, and unique sampling. Semi-structured interviews and an observation were conducted. The findings revealed that the inclusive classroom is fraught with many challenges; effective inclusion is hindered due to various factors; teachers within the inclusive classroom respond negatively and need professional development in order to meet the varying needs of special educational needs (SEN) students. It is recommended that greater sensitization, mentorship, and ongoing professional development be provided for teachers; while administrators need to invest fully in inclusion and help to foster a culture of inclusion in principle and in practice.

*Keywords:* inclusive classroom, differentiation, special educational needs

## Introduction

The topic of inclusive education has evolved over the years and has occupied the attention of many within the education sector. Consequently, there has been an increasing demand for inclusivity in educational practices, this however, has concomitant challenges. This study is part of a larger study focusing on the experiences of administrators and teachers with inclusive education in an urban secondary school in Jamaica.

According to Ainscow and César (2006), inclusive education is the biggest challenge facing schools worldwide. The challenge is multifaceted and according to Ainscow and César (2006) it is compounded by the fact that there are different perspectives worldwide on what an inclusive education looks like.

The term "inclusive education" has multiple definitions, foremost of which is the education of all students regardless of factors such as disability, race, age, and ethnicity (Blackman et al., 2019). However, for the purpose of this research the definition that will be used is that proposed by Leatherman (2007), inclusive education allows for the full-time placement of learners with special educational needs within mainstream classes with their typically developing peers.

Special educational needs in this study therefore refers specifically to students with diagnosed intellectual disabilities such as dyslexia, dysgraphia, autism, anxiety disorder, oppositional defiant disorder, and attention deficit hyperactivity disorder (Task Force on Educational Reform, 2004).

Inclusive schools typically provide support for SEN students as they function within the general classroom setting alongside their peers. Specialist teachers trained in special educational needs work alongside the general classroom teachers to provide support for students with varying needs. Additionally, students with special needs are expected to have Individualized Education Plans which are usually created from the special needs department and activated through the general education teacher supported by the special education teacher. The type of support needed could include accommodations ranging from allowing extra time to complete a task, providing a scribe, or modifying the tasks students are to complete, particularly for assessment purposes. Modifying the tasks for students could include adjusting the level of challenge that is expected of the student.

Inclusive education within Caribbean regions such as Jamaica cannot be divorced from a colonial past which enforced a culture of exclusion based on race and status (Blackman et al., 2019; Brissett, 2019). Peters (2004), as cited in Brissett (2019), notes that students with intellectual disabilities in early post-colonial Jamaica were described as “ineducable” and were taught in separate institutions as a form of charity. Nationally and internationally there is a focus on the educational and human rights of children to be maintained. These rights include the right to receive an education and more so without prejudice. In light of the current focus on the educational and human rights of children with special needs, there has been a thrust for Jamaica to fulfil its obligation to international human rights advocates such as the World Declaration on Education for All at the Jomtien 1990 World Conference (UNESCO, 1991); the Universal Declaration of Human Rights (United Nations, 2015), and the UN Convention on the Rights of the Child (UNICEF, 2017). Jamaica’s Task Force on Educational Reform (2004) stipulates that “all children, young people and adults have the human right to benefit from an education that will meet their basic learning needs in the best and fullest sense of the term” (p. 11). In fulfilling its obligations, Jamaica has

published documents and created structures such as the special education unit within the Ministry of Education, tasked with providing support for schools and parents with children who have special needs as well as the students themselves. Additionally, the Disabilities Act of 2014 seeks to outline ways to support persons with disabilities. More recently, the draft Special Education Policy proposed in 2016 focuses on the promotion of inclusive education; access to, and equity in education for all students with special educational needs (Ministry of Education and Youth, 2022; Williams, 2019).

A recommendation from the Task Force of 2004 on Jamaica’s education system urged the inclusion of “special needs students in the regular classroom setting with the appropriate support services and instructional materials for the different groups of learners including resource rooms where necessary” (Task Force on Educational Reform, 2004, p. 124). Subsequently, the “Patterson Report” of 2021, which provided a comprehensive analysis of Jamaica’s education system nearly two decades later, endorsed the inclusion of children with special needs in regular classrooms where possible and the incorporation of inclusive education in teacher training institutions (The Jamaica Education Transformation Commission, 2021).

Moreover, Jamaica’s National Education Strategic Plan 2011–2020 had as an objective the promotion of inclusive education for all school-aged children in Jamaica, particularly those with special needs who were classified as underserved in the education system (Ministry of Education, 2012). However, the plans proposed in the National Education Strategic Plan have not yet materialised. This is compounded by the fact that Jamaica has no formal definition of inclusive education in policy and legislature, as noted by Gayle-Geddes (2020). Nevertheless, the Special Educational Policy, though still in its draft stage, can be considered progressive in its attempt to provide legislative support for the amendment of Jamaica’s Education Act and Disabilities Act (Ministry of Education and Youth, 2022). There is also progress in the policy’s aims to provide special needs coordinators; student support

teams (to include educational psychologists, learning materials, and shadows); examination accommodations; and teacher training (Gayle-Geddes, 2020).

Notwithstanding the progressive steps towards implementing inclusive education, a recent study from Spencer-Ernandez and Edwards-Kerr (2017) indicated that there were approximately 102,000 SEN students in Jamaican public schools, with insufficient specialist teachers to aid students in optimising their full potential. More recent data from the Ministry of Education for the academic year 2018/2019 indicate that there were 10,063 children with disabilities from the pre-primary to secondary level in Jamaica, with 4,746 of these being children with intellectual and learning disabilities—there being only 6 inclusive schools islandwide to serve these students (Gayle-Geddes, 2020).

Jamaican teachers and administrators are familiar with the language of inclusion, but the difficult task of moving from talk to action, from paper to practice, has not been entirely accomplished. Jamaican teachers with SEN students therefore end up “teaching to the middle” primarily because, as Tomalin (2019) asserts, Jamaican teachers (typically those recently graduated from teachers’ colleges) feel ill-prepared to teach SEN students in an inclusive setting. According to Hertberg-Davis and Brighton (2006), administrators are critical to the successful implementation of strategies within inclusive classrooms, as teachers rely on them for resources and emotional support when employing inclusive strategies such as differentiation.

This study explores the experiences of teachers and administrators within an inclusive secondary school setting in urban Jamaica. The study aims to develop a critical understanding of how teachers respond to teaching students with diagnosed special educational needs such as dyslexia and attention deficit hyperactivity disorder in an inclusive setting, and how administrators see their roles and responsibilities as leaders within this setting. The research sought to address the questions:

1. How do teachers and administrators describe inclusive education?
2. What are teachers’ views about teaching in an inclusive classroom?
3. How do administrators describe their roles and responsibilities in an inclusive setting?

## Literature Review

Inclusive education is a response to educational reforms worldwide which place significant emphasis on equity and access for all. These tenets are reinforced by Sustainable Development Goal number 4 (SDG 4) which calls for “inclusive and equitable quality education” while “promot(ing) lifelong learning opportunities for all” (UNESCO, 2015, p. 7). It is within this context that the ensuing discussion examines four themes emerging from a review of the literature on inclusive education.

## Culture and Context

Culture and context are significant factors in determining how humans generally behave. Gregory (2018) postulated that a country’s historical, political, and economic context determines the extent to which it is successful at inclusion. The experience of colonialism has affected how Caribbean countries view and approach education—and by extension, inclusion (Blackman et al., 2019; Quamina-Aiyejina, 2000). Its colonial past has left the Caribbean with a segregated education system derived from the separation of state and religion (Blackman et al., 2019). Hierarchical in its structure, this system privileges those of higher social class and status over those of lower social class (Ibrahim-Joseph & Lavia, 2019; Blackman et al., 2019). This has resulted in schools that are deemed prestigious or “choice schools”, a notion that goes to the very root of disparity and inequality. It is against the backdrop of this colonial legacy of division and segregation that inclusive education is to be established. Quamina-Aiyejina (2000) painted a dismal picture by suggesting that in the case of Jamaica and Trinidad, “inclusive special needs education appears to be impossible to achieve”

(p. 17) and that the “Caribbean needs to find other ways and means to come closer to the aims and objectives of inclusive education” (p. 17).

Moreover, according to Ibrahim–Joseph and Lavia (2019), for inclusion to become a reality in Trinidad and Tobago (a Caribbean island with a colonial past and education system similar to Jamaica), the vestiges of the colonial past will have to be removed so that the relationship between teacher and student can be less colonial (where the teacher is superior and the student inferior), and one where there is mutual respect and shared power between the teacher and student. The authors posit that the sustained success of inclusion depends on shifts in pedagogical practices and an awareness that teachers’ cultural identity is as important and relevant as their professional identity (Ibrahim–Joseph & Lavia, 2019). The culture of a country (like that of a school) is important in determining how well new reforms are accepted and integrated with educational reforms such as that of inclusive education. Avramidis and Norwich (2002) noted that school culture is significant in determining how teachers respond to inclusion practices and the level of success that can be achieved. In responding to inclusive practices, teachers’ perceptions of inclusive education are of significance.

### **Teachers’ Perceptions of Inclusive Education**

Central to the literature on inclusive education is the perception of teachers about inclusion. Teachers’ perceptions are particularly critical, as they sit at the seat of power within the inclusive classroom as implementers of the written curriculum from which students are taught. Teachers’ perceptions of inclusion determine the success of inclusive practices within the inclusive classroom (Barco, 2007; Cambridge–Johnson et al., 2014; Rajovic & Jovanovic, 2013). Positive perceptions are predicated on many factors, including teachers having had active experiences with inclusion; professional development (generally and from university–based programmes); limitations in funding; and administrative support (Avramidis et al., 2000; Cambridge–Johnson et al., 2014; Gregory, 2018).

Specific to the Caribbean, Tomalin (2019) revealed in her small–scale quantitative study on Jamaican teachers that teachers’ positive perceptions were attributed to having hands–on experiences with inclusion and through modelling with a co–teacher. Additionally, Blackman (2017) found that Barbadian teachers generally had positive perceptions of inclusive education though they noted the challenges in teaching and managing children with special needs.

While the literature reveals teachers’ positive perceptions towards inclusive education, the predominant perception is negative. Glasgow–Charles et al. (2017) found that teachers in Trinidad and Tobago had negative perceptions towards inclusive education because professionally, they felt ill–prepared; lacked training in special education; and had limited knowledge about disability. Additionally, according to Glasgow–Charles et al. (2017), the teachers had personal reasons for their negative perceptions, such as increased workload; concerns about the school’s image, and about the severity of the students’ special needs. Similarly, in their qualitative study on Trinidadian teachers, Conrad et al. (2019) revealed that the teachers felt compelled to teach to the test to ensure that students were placed in prestigious or choice schools. In their opinion, inclusive education affected overall scores, especially since their worth as teachers was dependent on the outcome of their students. Tomalin (2019) on the other hand, found that among Jamaican teachers a negative social climate resulted in negative perceptions about inclusion. Nevertheless, many of the perceptions that teachers held towards inclusive education were based on the leadership of their schools.

### **Leadership and Inclusion**

The merit of an inclusive school system is largely dependent on the leadership of the schools. Leadership within schools refers to “those with pedagogical, resource allocation, and decision–making abilities and responsibilities” (Conrad et al., 2019, p. 41) who make inclusive education possible and effective. In reference to the Barbadian education system, Marshall (2017) posited that inclusive education is systematic in nature and therefore requires an

instructional leader to drive the process. This is problematic from an operational perspective because it includes the preparation of the principal and teacher, and the perception of stakeholders. The operationally problematic nature of inclusive education requires principal training to dispel the narrow and restrictive view of inclusion that leaders typically have (Marshall, 2017). Furthermore, Marshall (2017) posited that there needed to be a paradigm shift in how principals approach inclusive education.

Similarly, Conrad et al. (2019) also noted in their qualitative study on primary schools in Trinidad that teachers felt “frustrated that instructional, support, and administrative leaders did not see the disconnect between limited resources, training, and a mission for equitable education in facilitating effective inclusive education” (p. 42). Furthermore Brissett, as cited in Blackman et al. (2019), noted that principals’ “understanding of inclusion influences their practices, attitudes, beliefs, policies, and support for this approach” (p. 249). Blackman et al. (2019) discovered that there was a disconnect between the support teachers perceived that they received from their principals to implement inclusion and the support the principals perceived that they provided. The principals believed that they were offering valuable support by overseeing the administrative aspect of paperwork and scheduling meetings, while the teachers’ perception was that they received little to no support. This sense of disconnect between the perceptions of teachers and principals explains the challenges to inclusive education among teachers and educators. It is through the leadership of schools that support for teachers within inclusive schools can be achieved. One chief support that administrators can provide for teachers in inclusive educational institutions is professional development.

### **Professional Development**

The need for professional development by way of in-service training features heavily in the literature on inclusive education. Collins (2015) noted that professional development was needed to ensure that teachers were equipped with the capacity to adequately embrace inclusion. This

concept was endorsed by Tomalin (2019) who conducted a 2-week training session with five Jamaican teachers aided by an experienced inclusive teacher and mentor. This training session resulted in an improvement in teacher self-efficacy. Arguably, inclusion has forced teachers to recognise and accept responsibility for every child in their care (Gregory, 2018). These responsibilities may have been ignored in traditional classrooms, but with inclusion, teachers have to learn and relearn the skills needed to effectively use inclusion strategies within inclusive settings.

Spencer-Ernandez and Edwards-Kerr (2017) noted that within the Caribbean region governments have sought to use legislation, laws, and policies to protect the SEN population and to transform the education system so that it can offer support to the SEN populations across the region. The support needed to transform the education system noted by Spencer-Ernandez and Edwards-Kerr (2017) is the training of SEN teachers through professional development and pre-service training. The authors noted that in 2017 Jamaica needed 167 trained SEN teachers in order to meet the growing specialist teacher demand. Additionally, “the data for all countries indicate that there is an overwhelming need for the provision of additional (SEN) teachers to provide the services necessary for students to maximize their potential in an inclusive education setting” (Spencer-Ernandez & Edwards-Kerr, 2017, p. 8).

### **Summary**

The inclusion of students with special educational needs in mainstream classrooms reflects a fundamental shift in traditional ways of educating students with special needs by honouring their human right to access quality education in an equitable manner consistent with their peers. Consequently, many scholars have conducted studies and have written extensively on the topic. The literature presented here highlights that culture and context are significant to the practice of inclusion in schools; there are both positive and negative perceptions of inclusive education; leadership is significant in

inclusive schools; and, professional development is needed for teachers within these settings.

The literature outlines several features of the inclusive classroom, but there is limited research on inclusive education in secondary schools; the focus being mainly on primary and elementary schools. Additionally, most research was found to be focused on public or government-owned schools and not on the experiences of independent or private school teachers. This study fills these gaps by highlighting the experiences of teachers at the secondary level. This is critical as students at this level are typically being groomed to enter the workforce and SEN students in an inclusive setting need to be equipped with the requisite skills to become functional citizens. This research on the experiences of teachers and administrators in a private/independent educational institution provides a point of reference when comparing how resources are used in meeting the needs of inclusive classrooms.

## Methodology

The research was conducted using the qualitative research paradigm, which is exploratory in nature and focuses on deepening the understanding of human interactions. It is also a constructivist paradigm (Creswell, 2014), thereby facilitating deeper meaning-making which allows for the exploration and construction of meanings from participants' own experiences. In the case of this research, the multiple perspectives of the teachers and administrators with inclusive education were explored, as afforded through the qualitative paradigm.

Qualitative research procedures "seek to understand social action through a more complex, nuanced and subtle set of interpretive categories" (Feagin et al., 1991, p. 17). These interpretive categories were applied to this research as they provided rigour and gave credence to the multifaceted nature of life and humanity. Moreover, qualitative research usually "brings us closer to the real human beings and everyday life" (Feagin et al., 1991, p. 23). It is this connection to the real world of teachers and administrators in an inclusive setting that

this research sought to explore. Finally, it is the "richness and subtle nuances of the social world that matter and that the qualitative researcher wishes to answer" (Feagin et al., 1991, p. 23). The richness that emerged from the data allowed for greater meaning making and exploration, in addition to the subtleties that were unearthed through the process of this research.

Case Study was used as the research design which, according to Saldana (2011), is a study focused on a single unit and as such enables in-depth and comprehensive study of the phenomenon being researched. Similarly, Feagin et al. (1991) define case study as an "in-depth, multi-faceted investigation, using qualitative research methods of a single social phenomenon. The study is conducted with great detail and often relies on the use of several data sources" (p. 2). Additionally, the phenomenon in question can vary from an organization to a city and perhaps an entire group (Feagin et al., 1991). The aim therefore of this research was to focus on the administrators and teachers as a unit from an organization which enabled me to focus on the areas relevant to the study. Through this approach, a deeper understanding of the experiences of teachers and administrators in an inclusive setting was achieved. This is especially applicable, as a case study typically "seeks to capture people as they experience their natural, everyday circumstances" (Feagin et al., 1991, p. 2), thereby offering insights and perspectives for exploring the phenomenon in question.

## Site

The site of the research was a privately-owned school in urban Jamaica with a population of approximately 700 students. The school provided an inclusive setting which catered to the needs of learners from different cultural and linguistic backgrounds, with different diagnosed special educational needs ranging from less acute to mild. There was an Enrichment Department/ Special Educational Needs Department with approximately six teachers trained in special educational needs. The population of SEN students was a growing one which accounted for approximately 20% of the school's population.

The SEN students were taught alongside students in the regular education or mainstream classrooms. The teachers in the Enrichment Department provided support to regular education teachers and SEN students in different ways. The Enrichment Department used the IEP for each child to provide support to the general classroom teacher. The specialist teachers either supported students during scheduled subject classes (depending on the stipulations of the IEP) or had students meet in “pull out” sessions where students are taken from among the general population of students to be taught separately in the Enrichment Department. The department ensured that the individualized needs of the students were catered to based on the IEP (e.g. modification of assessments, providing extra time, providing a reader or scribe).

### Sample Selection

Approximately six teachers and three administrative members were used in total, with one participant interviewed as both teacher and administrator. The sample size was kept small, in keeping with Creswell’s notion that “overall ability of a researcher to provide an in-depth picture diminishes with the addition of each new individual” (Creswell, 2014, p. 209). The aim, therefore, was to keep the sample size small and manageable (under 20 participants), as recommended by Crouch and McKenzie (2006). Purposive sampling was used, and of the nine participants, four administrators were purposively sampled in order to gain their perspectives on inclusion. One administrator was interviewed first as a subject teacher and then as a follow-up in his capacity as programme administrator. Purposive sampling also applied to the mathematics teacher and the modern languages teacher in order to gain multiple perspectives from a core subject (mathematics) and a second language perspective. Convenient sampling was used which, according to Merriam (1998), aligns with the emergent nature of qualitative study as one does not know at the start all the persons who will be interviewed. The geography teacher, the English teacher, and the mathematics SEN specialist teacher were all conveniently sampled,

as other prospective participants did not follow through with the process for various reasons. Unique sampling was employed in the case of the English SEN specialist. Her insights were useful in providing different perspectives on the topic, especially because she had previously taught in the United States of America as well as in Jamaica—therefore enabling different perspectives.

**Table 1**

*Information on Teachers who Participated in the Study*

Teachers	Subject	# of Years Teaching	# of Years at the Inclusive Site
Ms. Janet	SEN Specialist (English)	8	4
Ms. Molly	SEN Specialist (Mathematics)	7	7
Ms. Margaret	French Teacher	7	2
Ms. Amy	Mathematics	14	7
Mr. Leroy	Geography	6	2
Ms. Fiona	English	37	14

**Table 2**

*Information on Administrators who Participated in the Study*

Administrators	Role	# of Years in Education	# of Years at the Inclusive Site in Current Role
Mr. Leroy	Programme Coordinator	6	8 months
Mr. Lennox	Principal	Over 20 years	10 years (4 years as principal)
Ms. Sally	Programme Coordinator	20	11
Ms. Lucy	Programme Coordinator	5	2

## Data Collection Procedures

Semi-structured interviews were used as the primary source of data collection. Data were collected from ten semi-structured interviews with teachers and administrators, in keeping with the emergent nature of qualitative research (Merriam, 1998). The interviews lasted for approximately 30 minutes, and were conducted in person and through the virtual conferencing platforms, Zoom and Google Meet.

One in-person observation was conducted using a Grade 7 session of one of the English SEN specialist support sessions. Only one observation was conducted, as the data collection period occurred during the COVID-19 pandemic when teachers were instructed to conduct online classes and provide asynchronous instructions. During the observation, I assumed the role of observer as participant in the observation which lasted for approximately 30 minutes. In my role as observer as participant, I was able to observe the participant in her natural setting while she offered support to the lead/regular education teacher with the SEN students present.

## Data Analysis Procedures

The process of data analysis began with me preparing the interview transcripts, ensuring that the recordings were accurately transcribed, removing all identifying features, and numbering each line. Similarly, the field notes were reviewed for readability while removing all identifying features of students, teachers, and the site. Field notes and transcripts were read over iteratively and simultaneously as a part of the coding process. I adopted the concept of memoing from the work of Kalpokaite and Radivojevic (2019). Memoing and coding were done simultaneously as the data were analysed.

The coding process was done manually. Inductive reasoning was applied in the act of constructing meaning from the data. The initial coding process created several leads for further analysis. The coding process was an ongoing one which involved repeated reading and coding iteratively, while simultaneously checking all data collected. Codes were grouped into clusters and then categorized based on similar characteristics

to note emerging patterns (Saldana, 2011). After coding the data, four themes and accompanying assertions emerged.

Themes and assertions were inductively drawn from the codes and categories created. Meaning was constructed and reconstructed in line with the constructivist philosophy inherent in qualitative research. The findings are presented here through thick descriptions.

## Trustworthiness

Trustworthiness was achieved using Reflexivity and Lincoln and Guba's trustworthiness criteria: credibility, transferability, and dependability. Credibility was assured through triangulation across the interviews and the observation conducted. The variety of persons interviewed allowed for triangulation to occur as data were corroborated across interviews and with the one observation. Transferability was assured through the use of a detailed account of my findings in the form of thick descriptions. Member checking was used as each interviewee read the transcript of their interviews and confirmed the accuracy of information that was presented.

Reflexivity was employed in the form of notes and reflective journal entries about the research process. To ensure credibility and trustworthiness of the overall research process, source citing was used for the literature where studies previously conducted were used to corroborate my findings.

## Ethics

Ethical considerations were observed by firstly seeking permission to gain access to the site through the principal of the school. Informed consent forms were distributed to teachers and administrators and signed copies were returned and retrieved via email or in person, expressing permission for participants to participate in the study. Participants were informed through the informed consent forms and during the interviews that their information would be used only for the purposes of the study and that their identity would be kept confidential. Additionally, they were informed that pseudonyms would be used to refer to them in any report that would be produced about the study. They were informed that they had the right to withdraw at any time

if they felt the need to do so. This was done in order to preserve the integrity of the process of data collection and ultimately the credibility of the findings.

## Findings

The findings from the data collected in the semi-structured interviews and observation for this study are presented in four assertions. The assertions are: the inclusive classroom is fraught with challenges for both SEN students and teachers; teachers within inclusive classrooms respond negatively to inclusion; teachers within an inclusive setting need professional development in order to meet the varying needs of SEN students; and, effective inclusion is hindered due to various factors on the part of the teachers and the school administration.

### **The inclusive classroom is fraught with challenges for both SEN students and teachers**

Challenges with inclusive education vary, manifesting in many ways for teachers and for students. Students experience academic and emotional challenges, while teachers experience the challenge of using differentiation in planning and delivery to cater to the needs of their SEN students.

Students with SEN experience challenges with their own academic disability, which affects the quality and quantity of the work they produce. According to Collins (2015) children take into the classroom different experiences, different expectations, and challenges that can prevent them from learning. These challenges are sometimes compounded in the inclusive classroom especially for the SEN students with their own unique challenges, including difficulty with their ability to function due to poor executive function, where the brain does not function well cognitively and also in the area of memory retention (Zelazo et al., 2017). This impacts children with certain learning challenges (such as dyslexia, dysgraphia, autism, anxiety disorder, and attention deficit hyperactivity disorder), which may manifest in their academic performance and even their behaviour (Zelazo et al., 2017).

According to Miss Janet, the English specialist support teacher, SEN students struggle because of their own acute awareness of the academic challenges which affect the learning experiences for them. Miss Janet noted that

“they already know that they’re coming from behind...because they know that some of these teachers know their weaknesses...they’re trying their best not to shut down...but they’re already in there fighting”.

The struggle with academic disability was evidenced also in an encounter shared by Miss Janet:

Again, the regular ed teacher is up there, but I saw that the student was struggling, and I went over and I said, you know, “What’s going on?” And he was like, “I hear what she’s saying, but I’m not getting what she’s saying”. And so I said, okay. And I heard the catch in his voice.

She noted that for these students, their challenges were directly related to their disability. This notion was supported by Miss Molly who explained that “there’s this term called executive dysfunction, where you are just literally unable to organize yourself in a way to serve your own self, to thrive”. This executive dysfunction limits SEN students’ ability to support their own academic goals and was evidenced in an observation of a Grade 7 class where Miss Janet was offering support as the specialist. A SEN student, Lue, seemed to have been struggling to organize himself:

Lue walks to the front of the classroom and he stoops over the electrical outlet with a laptop charger in his hands. He stands there for a few seconds before bending over. He seems to be fumbling with the electrical outlet to plug in the laptop charger. He walks back to his seat. The specialist motions to him and he shrugs his shoulders. She points to a spot to the left side of the classroom close to the back where there seems to be an electrical charging outlet. He goes back up to the front of the room and takes the charger. He goes to the spot where the specialist had pointed and plugs in his laptop. The specialist teacher assists him in getting a chair to place his laptop. He goes back to his seat and sits with his head down. He has a phone in his lap. He bends over, apparently typing on it. (Observation, 30.11.2020)



However, despite the necessity of differentiation in an inclusive setting to meet the needs of SEN students, it is challenging and “adopting differentiation in everyday practice is not an easy task” (Valiandes & Neophytou, 2017, p. 124). Additionally, though differentiation has merits, its challenges and complexities create a struggle for teachers in everyday practice, as many struggle to move from the theory of differentiation to its practice (Valiandes & Neophytou, 2017). Teachers and administrators who participated in the research admitted to the challenge that differentiation poses in the classroom. Administrator, Miss Lucy noted that:

it is tough to differentiate for the needs of all students in a class. It is a lot of work and our teachers, continuously, you know, just lament the amount of stress and the amount of labour and work. It is tough to differentiate. Differentiation is great in theory, and there’s so many theory books on it. I don’t think that many, many teachers have gotten the practical of how to really implement that fully in their classroom. And so when you have a classroom of 25 students, and you talking about differentiation and inclusion there may be a problem there.

Though difficult, differentiation is the main recommendation proffered to effectively meet the needs of SEN students in an inclusive setting. Therefore, according to Miss Molly, failure to differentiate results in an overall failure in these classrooms. “I know that differentiation requires a lot of work, but ultimately we’re here for students. So if we’re not meeting students’ needs, we are failing”.

### **Teachers in Inclusive Classrooms Respond Negatively to Inclusion**

Cambridge–Johnson et al. (2014) noted that effective inclusion is dependent on how teachers respond to inclusion. They cited that teachers have both positive and negative attitudes to inclusion and these attitudes were due to many variables (Cambridge–Johnson et al., 2014).

Teachers who respond negatively to SEN students tend to feel as though these students

do not necessarily belong in the classroom—either because they feel ill-equipped to meet their varying needs or because they believe that the gifted students can be overlooked. According to Miss Janet, some teachers have the mindset that, “this is not my problem, because that’s not why I’m here. I’m here to teach this, this, this, and yes, that student is in there, but, come get the students or something”. Similarly, according to Miss. Lucy:

You also have teachers who will come to you and will lay out their hearts on why is this student in my class? Are we a special needs school and what do you expect me to do? What wizardry do you expect me to perform?

While some teachers’ negative response may be due to the perception that SEN students are not their problem, there are those who are concerned for the gifted students who may be overlooked when all attention is focused on the SEN students. Miss Amy noted, “I think we focus so much on the kids who have a lot of difficulties, you know, the disabilities if you want to call it that. And so, the gifted kids tend to just, I guess, get overlooked.”

A generally negative response to SEN students is also a negative response to inclusion as a model. Piten et al. (2018) noted that there are many reasons for teachers’ negative response to SEN students, stemming mainly from them feeling ill-equipped to deal with SEN students, especially those with severe learning challenges.

### **Teachers in an Inclusive Setting Need Professional Development in order to meet the Varying Needs of SEN Students**

Professional development is critical to meeting the needs of SEN students within an inclusive setting. Rajovic and Jovanovic (2013) cited inadequate professional development of teachers as a barrier to effective inclusion. Teachers in the study noted feeling ill-equipped to meet the challenges of the inclusive classroom because they did not believe they had the

requisite skills to truly cater to the needs of SEN students. Mr. Leroy admitted that, "I don't feel I have the requisite skill sets to deal with students with special educational needs. There are persons who go to school for 3-4 years just to target and to focus on dealing with special education needs". Additionally, Miss Amy also shared the perception of Mr. Leroy. According to her, "as much as I am a teacher, as much as they would tell us that we are special needs teachers, I wouldn't consider myself a specialist and because of that sometimes I do feel a little ill-prepared to teach SENs".

Moreover, the lack of preparedness and skills can manifest in situations that are potentially dangerous for both teachers and students; and with the appropriate skills these moments can be minimized. Miss Lucy recounted an incident where an SEN student created an uproar and both teachers and students were scared until the head of the specialist unit arrived.

And one day someone made him upset and he said, "I want to blow off all your heads with a shotgun." And everyone was afraid. The enrichment head came in, had a conversation with them and said absolutely nothing like that is in his actual will to do. "You guys are fine." And she was confident and it was true, you know, and she was able to say that it's in his report. He says these types of things all the time, but teachers and students were on edge. And so I think as administration, you know, those things caught teachers by surprise. That was scary.

It is this feeling of being ill-prepared or ill-equipped to meet the needs of SEN students within an inclusive setting that highlights the need for teacher professional development. In this regard, Mr. Lennox sees his role as principal to be important in "respond(ing) to the needs of the students, whether that is professional development training" or otherwise. Similarly, administrator Miss Lucy noted that as administrators they needed to "think about what are the professional development sessions that we may need to have". It is this upskilling that Mr. Leroy considered to be paramount to meeting the needs of SEN students in an inclusive setting:

It becomes very important that the teachers are upskilled in these areas, whether it means you're going to provide scholarship opportunities for them to pursue studies, to understand the needs of special education students, or you're going to send them on certain mini-training sessions, whatever the case may be. But once a needs assessment has been done, you realize that a large proportion of your population has special educational needs, and 90% of your teaching staff are not equipped to deliver a special educational needs curriculum.

Professional development is an important part of building the capacity of teachers to meet the needs of SEN students, while also enhancing their skills and confidence to truly meet the needs of SEN students in the inclusive classroom. Collins (2015) postulated that professional development is a requirement for supporting inclusive professional practices.

### **Effective inclusion is hindered due to various factors such as time constraints and the availability of resources**

Teachers and administrators in an inclusive setting contend with a number of challenges to effective inclusion which can compound the issues teachers have with applying inclusive practices.

Teachers are often constrained by time factors which affect how effective they can be in meeting the needs of SEN students. Teachers find it difficult to cover the content while balancing the slower pace that is required for some SEN students to grasp the concepts being taught. Valeo (2008) noted teachers' frustration related not only to curriculum issues within an inclusive setting but also to issues related to time constraints. Miss Janet noted that as educators within this setting "we're not able to do all that we can based on the time limit that we have". Additionally, Miss Margaret noted that her challenge is making time to allow SEN students to fully grasp the concepts being taught.

I don't always get the time to pinpoint. And sometimes we don't have the time because if I call and I know that so-and-so is going to struggle, but I still have to, and I have to wait for him and re-explain and go on and on.

The literature on inclusive education cites lack of resources as a significant barrier to inclusive education. Mentz and Barrett (2011) noted that in Jamaica lack of funding has affected the availability of resources to meet the needs of inclusion in publicly-funded schools. Miss Janet made a comparison between the specialized resources in the United States where she worked and the site of the study which, though a privately-funded school with many resources for students, resources are lacking for the SEN students.

When I taught overseas, say for instance, in reading, we would have levelled books and stuff like that. And we'd have these reading groups and again, it was mixed. So John would have the same say, it was the *Three Little Pigs*, but we would find these levelled books. And so John would have a level, then Mary Sue would have a level you know, and they all, because the cover of that book would have the same thing, but if you flip it open...

In her role as administrator Miss Sally acknowledged that unavailability of resources does affect the efficacy of inclusive education, especially as SEN support is not a financial priority. She noted that "approaches to teaching and learning of SEN students can be expensive as teachers will need training, resources will be needed, and so the amount of investment (human resources or otherwise) is not a priority".

The increase in the number of SEN students has impacted the availability of resources, which in turn has affected the efficacy of the inclusion being offered to SEN students. According to Miss Lucy, "SEN students have been neglected and shortchanged. That's a big conversation that we've been having as our SEN students increase. And so, budget-wise, at our last coordinators' meeting, they spoke about the need to have actual SEN support".

Similarly, Mr. Leroy acknowledged that from an administrative viewpoint, human resources were lacking, which prevented true inclusion as "quite a number of our teachers do not necessarily have the skill-set and the resources that are required to effectively model an inclusive classroom, and I think that's a fundamental challenge that administrators are facing".

The lack of human resources is evident in the Special Needs Department itself according to Mr. Leroy, "they (the Special Needs Department) have already recognized that that team cannot manage the gamut of special education needs and the challenges that come with it."

Effective inclusion can be hampered if the factors that promote inclusion are not in place and are not activated to meet the varying needs of SEN students.

## Discussion

### Challenges to Inclusion

The findings show that on the administrative level there are effective practices being employed to meet the needs of SEN students within the inclusive setting. These practices include collaboration and tracking of SEN students. Collaboration among administrators is useful in fostering teamwork, thereby creating a strong support system for teachers to rely on. Tracking of SEN students' progress is also an effective strategy noted by McLeskey et al. (2012) as one of the successful criteria for inclusive schools. Tracking allows for anomalies to be identified in students' academic performance as soon as they arise, so that appropriate interventions can be taken.

The findings also point to inefficiencies in relation to the allocation of resources to meet the needs of the inclusive school. The lack of human and material resources affects the efficiency of the inclusive programme, as with more personnel to support regular teachers there would be less instances of negative responses. Funding was also lacking in the area of professional development, specifically for training in the area of special educational needs.

The findings indicated that inclusion was not being practised holistically within all departments, as the Mathematics Department practiced streaming of students, which was contrary to the principle of inclusion and contradicted the claim of being an inclusive school. Inclusion has to be practised holistically and understood as such by all teachers for success to be achieved (McLeskey et al., 2012). This need for streaming mathematics

students could be linked to the traditional mindset of administrators, whereby high grades are indicative of success. Evans (2001) noted that in Jamaican schools, streaming or tracking students according to their academic ability was a major feature of the education system. According to Evans (2001), so commonplace was streaming that neither teachers nor parents thought critically about this academic grouping of students according to ability.

Jamaica's social and historical educational context perpetuates a sense of exclusion. This is evidenced in early post-independent Jamaica where special needs students were excluded from receiving formal education as they were considered "ineducable" (Peters, 2004, as cited in Brissett, 2019) and the hierarchical structure of the Jamaican education system. Quamina-Aiyejina (2000) noted that with Jamaica's colonial legacy, inclusion of special needs in education may be impossible to achieve if there are no attempts to commit to the aims and objectives of inclusive education. These socio-historical realities highlight the need for inclusive practices to be more than rhetoric, but to be actively practised.

### **Challenges Faced by SEN Students**

The findings are significant in understanding the academic and emotional challenges faced by SEN students. Academically, many SEN students are challenged by executive dysfunction, which can manifest in poor academic performance and poor behavioural conduct. Emotionally, SEN students feel out of place and as such do not always exert confidence and may even be self-conscious. Although a few will own and accept their challenges, not all do so in an emotionally healthy way—isolating themselves, not interacting, or displaying disruptive behaviours.

The negative responses to inclusion, demonstrated by teachers as well as members of the wider society, compound the challenges experienced by SEN students. A negative perception of inclusion is a common feature of inclusive education. Tomalin (2019) noted the social climate as being the source of the negative attitudes towards inclusion in Jamaica.

The inclusive school setting used in this research indicated that some teachers felt that their SEN students did not belong in their classroom and should be removed. Swinton (2012) purports that the need for belonging is greater than the incorporation of inclusive practices generally and even legislatively. If one accepts Swinton's views, inclusive schools should go beyond the day-to-day practice of inclusion as expected in policy and focus on the students' emotional needs so that they feel as though they belong. According to Swinton (2012), this feeling of belonging requires a change of heart on the part of teachers to meet the emotional needs of their SEN students.

### **Professional Development**

Teachers did seem challenged with differentiation and could benefit from professional development in this area. The feeling of being ill-prepared to meet the demands of the inclusive classroom requires attention if both teachers and students are to thrive in this environment. The findings also indicate that while the IEPs are used by specialist teachers and administrators, the recommendations are not consistently used by teachers in noting the accommodations needed to meet the needs of SEN students. The culture of support for SEN students through the Special Educational Department is evident, but this does not prevent teachers from feeling overwhelmed by their SEN students; thus the need for consistent upskilling through professional development.

Teachers were mainly challenged with differentiation and professional development would help them to use it in their lesson delivery. Despite the necessity of differentiation in an inclusive setting to meet the needs of SEN students, it is challenging and "adopting differentiation in everyday practice is not an easy task" (Valiandes & Neophytou, 2017, p. 124). Additionally, though differentiation has its merits, teachers struggle to move from the theory to the practice (Valiandes & Neophytou, 2017), therefore resulting in its limited or inaccurate use.

Professional development is a distinct

need in the inclusive classroom, as teachers complain of feeling ill-equipped to meet the needs of SEN students. This feeling is also connected to some of the negative perceptions that teachers have towards inclusion. Though professional development is needed to improve the practice of teachers in meeting the needs of SEN students (Mukhopadhyay, 2012; Piten et al., 2018; Spencer-Ernandez & Edwards-Kerr, 2017), limited resources allocated for training hinder its implementation (Cambridge-Johnson et al., 2014).

## Recommendations

### Sensitization

In order to encourage a greater appreciation for inclusion in its true sense there needs to be sensitization of teachers on the legal and professional obligations of inclusion, especially in light of the implications of Sustainable Development Goal #4. Teachers need to understand that failure to embrace inclusion or to incorporate inclusive strategies is an infringement of the human rights of the child and a forfeit of the SDG #4 goal for inclusive, equitable, and quality education for all.

### Mentorship/Collaboration

Teachers who find inclusion and differentiation difficult and are frustrated with their students' special educational needs should be provided with mentorship from colleagues who are evidently coping well so they can pass on best practices to the teachers who are evidently challenged and provide scaffolding support for teachers in differentiation.

### Professional Development

Professional development in the areas of inclusion and differentiation should be ongoing—at least once per term. A known challenge of implementing inclusion is moving from theory to practice (Valiandes & Neophytou, 2017). With reinforcement, hands-on experiences will be gained that can only benefit teachers (Tomalin, 2019).

## Practice Inclusion in all Subjects

Streaming for mathematics should be discontinued so that true inclusion can be practiced in all subject areas; this can only lead to success. As noted by McLeskey et al. (2012), a welcoming and supportive environment for all students that encourages high levels of achievement for all without exclusion is critical for successful inclusion.

## Culture of Inclusion

A culture of inclusion should be fostered among all stakeholders. The shared understanding that everyone belongs in the classroom should minimize teacher resistance or thoughts of removing SEN students from classes.

Negative labels should be removed and a greater appreciation of students as individuals with needs like everyone else should be fostered. According to McLeskey et al. (2012), this is one factor that leads to success of inclusion. Additionally, the sense of belonging that is critical to inclusion (Swinton, 2012) will also be cultured.

This should lead to the normalization of adoption of the recommendations in the IEP, not just by the Special Educational Needs Department, but at the individual teacher level. Resources for inclusion should also be prioritized, thereby fostering an ethos of inclusion in all aspects of school life.

## Conclusion

Inclusive classrooms are designed to cater to the needs of SEN students who are typically placed at a disadvantage in other spaces. It is the recommended environment to ensure that the needs of all students are met and to foster equitable educational experiences for all. Jamaica's Ministry of Youth and Education's slogan, "every child can learn, every child must learn" represents its commitment to inclusion, which is also articulated in its mission statement of providing quality education in inclusive environments. However, despite the rhetoric of inclusion, this study (which focused on the experiences of teachers and administrators within an inclusive setting in urban Jamaica) revealed

some of the challenges surrounding inclusion of students with special educational needs. Mutual acknowledgement of these challenges from administrators and teachers is crucial, alongside a well-coordinated effort to ensure that inclusion of SENs is evidenced in the collective daily practices of teachers and administrators.

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# Opportunity or Threat: Investigating Faculty Readiness to Adopt Artificial Intelligence in Higher Education

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## Abstract

Artificial Intelligence (AI) is increasingly being integrated into higher education, providing opportunities to enhance teaching and learning through personalised instruction, automated assessments, and data-driven insights. However, faculty members' readiness to integrate AI into their teaching practices plays a critical role in its effective implementation. While global studies have primarily examined AI adoption in higher education, research on faculty readiness within Caribbean institutions remains limited, presenting a significant gap in the literature.

This study used the Unified Theory of Acceptance and Use of Technology (UTAUT) model to assess the influence of perceived benefits, facilitating conditions, and attitude towards AI on adoption readiness. A quantitative survey was administered to a sample of 78 faculty members from The University of the West Indies, Cave Hill campus, collecting data on their AI experience and perceptions.

The findings indicate that perceived benefits of AI and institutional support are significant predictors of faculty readiness, while attitude towards AI does not significantly influence adoption. The study also identifies limited AI expertise, lack of training opportunities, and concerns about AI's ethical implications as key barriers to readiness to adopt.

These results highlight the need for structured AI training programs, enhanced institutional support, and clear policies to facilitate AI adoption among faculty. The findings have broader implications for universities in developing regions, emphasising the importance of targeted faculty development to ensure effective AI integration in higher education.

*Keywords:* artificial intelligence, generative AI, higher education, faculty readiness, UTAUT

## Introduction

### Background and Context

The integration of Artificial Intelligence (AI) into various sectors has influenced industries and services worldwide, enhancing operations and decision-making processes. In Higher Education Institutions (HEIs), AI-based tools and applications have been introduced to support teaching, learning, and administrative functions

(Rodway & Schepman, 2023). AI offers various capabilities, including automated curriculum design, assessment grading, personalised student feedback, and adaptive learning platforms. These advancements can streamline administrative tasks and provide more tailored learning experiences, thereby improving student engagement and instructional efficiency (Gupta & Bhaskar, 2020; Krstić et al., 2022).

In recent years, there has been a growing interest in leveraging AI to refine teaching and learning practices in HEIs. AI-powered tools have the potential to enhance instructional practices by providing real-time analytics, adaptive learning environments, and automated support systems (Hwang et al., 2020; Krstić et al., 2022). For instance, AI-driven adaptive learning platforms can modify instructional content to suit individual student needs, providing instant feedback to optimise learning outcomes (Krstić et al., 2022; Lee & Qiufan, 2021). Similarly, intelligent tutoring systems can support diverse learning styles through customised learning paths and adaptive assessments (Kelleher & Tierney, 2018; Moura & Carvalho, 2023).

As AI adoption continues to expand globally in higher education (Keith & Waldron, 2024; Papaspyridis, 2020; Voskoglou & Salem, 2020), faculty readiness remains a critical determinant of its successful implementation. The integration of AI-driven technologies into university instruction is not merely a matter of availability but depends significantly on faculty members' willingness, confidence, and institutional support. Effective AI adoption requires universities to address several key areas that influence faculty engagement and preparedness.

First, faculty must be aware of how AI can function as both an administrative and pedagogical tool, facilitating tasks such as grading automation, curriculum planning, and personalised student feedback. Research indicates that faculty familiar with AI applications are more likely to integrate these technologies into their teaching effectively (Harris, 2024). However, without a clear understanding of AI's capabilities and limitations, faculty may remain hesitant to explore its potential benefits.

Second, faculty perceptions of AI's benefits and challenges significantly influence their willingness to adopt AI in education (Luckin & Holmes, 2016; Ofosu-Ampong, 2024; Unterhalter, 2019). While AI can improve efficiency, automate time-consuming tasks, and provide data-driven insights, concerns persist about data privacy, ethical dilemmas, and potential threats to academic integrity. Ofosu-Ampong (2024) highlights that addressing faculty concerns

regarding AI's ethical implications and ensuring transparency in AI-assisted assessments are critical steps toward fostering a positive attitude toward AI adoption. Without clear guidance and institutional reassurance, faculty may resist AI implementation due to uncertainty about its longterm impact on pedagogy.

Third, the successful adoption of AI in higher education hinges on both the willingness and readiness of faculty members to embrace these transformative technologies (Ofosu-Ampong, 2024). As key stakeholders in the educational process, faculty acceptance and integration of AI into teaching practices are pivotal for effective implementation (Alnasib, 2023; Chatterjee & Bhattacharjee, 2020). By fostering a supportive environment and providing adequate training, institutions can enhance faculty readiness, thereby facilitating the successful adoption of AI in higher education (Harris, 2024).

Finally, clear institutional policies on AI adoption are essential to ensure structured and responsible implementation in higher education. Universities must establish guidelines that address AI governance, ethical considerations, data privacy, and academic integrity while also providing clear directives on AI's role in assessment and content creation (Chan, 2023).

As a regional HEI, The University of the West Indies (The UWI) must proactively engage with AI, as it serves a diverse student population across its five campuses. To remain competitive in a globalised education landscape, UWI must implement policies that support AI adoption by both faculty and administrative staff. The UWI (2024) produced a draft policy on AI, signalling a growing institutional commitment to ethical AI integration. This study contributes to these ongoing efforts by examining faculty readiness and providing insights into the factors influencing AI adoption in Caribbean higher education.

## **AI Adoption in the Caribbean Higher Education Context**

While AI adoption is a global trend, the Caribbean is still in the early stages of integrating AI into education. Walcott (2024) showed that AI education in Barbados is primarily focused

on tertiary institutions and adult learners, with limited structured AI training at the primary and secondary levels. The Government of Barbados recognises AI's role in education but faces challenges related to bias in AI algorithms, faculty training gaps, and the absence of a formal regulatory framework. Professor Sir Hilary Beckles, Vice-Chancellor of the UWI and Chairman of the Caribbean Examinations Council (CXC) has emphasised the need for a sophisticated policy framework to prevent AI-driven biases in assessments (*Barbados Today*, 2024). The Barbados Accreditation Council (BAC) has highlighted limited AI literacy training for faculty as a key barrier to adoption (BAC, 2024). Additionally, the Central Bank of Barbados has stressed the urgency of establishing AI governance policies to guide ethical and effective AI integration in education (Central Bank of Barbados, 2024).

Given these factors, understanding faculty readiness for AI adoption in Caribbean higher education is critical. Faculty members are key stakeholders in the instructional process, and their attitudes, preparedness, and institutional support significantly influence AI integration in university settings. This study, therefore, provides one of the first empirical investigations into faculty readiness to adopt AI in a Caribbean HEI. The findings hold regional significance, as universities in the Caribbean face unique structural, financial, and policy-related challenges that impact AI adoption.

## Literature Review

### Defining AI and Generative AI

Artificial Intelligence (AI) is a broad field of computer science that focuses on creating systems capable of performing tasks traditionally requiring human intelligence, such as problem-solving, decision-making, and data analysis (Russell & Norvig, 2021). AI technologies encompass a range of machine learning algorithms, natural language processing (NLP), and automation systems that are increasingly used in education, healthcare, finance, and other sectors (Luckin, 2017).

Since the release of ChatGPT in late 2022, Generative AI (GenAI) has gained popularity as a specific subfield of AI. GenAI refers to AI models designed to synthesise new content, including text, images, music, and programming code. Unlike traditional AI, which analyses and processes existing data, GenAI generates new content, including text, images, music, and code based on learned patterns from training data (Ebert & Louridas, 2023). Popular Gen AI applications include ChatGPT, DALL·E, and Bard (now Gemini), which are widely used in educational contexts for automated essay feedback, content summaries, and creative problem-solving exercises (Yu & Guo, 2023).

For the purposes of this study, we primarily focus on faculty readiness for AI in higher education, with an emphasis on AI in general, rather than specifically on GenAI. While GenAI tools are highly visible and have gained significant attention in recent educational discussions, this study did not limit its scope to any particular type of AI. Instead, it focused on AI adoption broadly, encompassing various applications such as adaptive learning systems, predictive analytics, automated assessment tools, and AI-driven content generation.

## Artificial Intelligence in Education

AI's role in education is multifaceted, supporting teaching, learning, and administrative functions (Luckin, 2017). Researchers emphasise AI's ability to enhance instructional design, automate routine tasks, and provide personalised learning experiences (Miao et al., 2021). Additionally, AI can support faculty by reducing workload, particularly through grading automation, attendance tracking, and curriculum planning (Alnasib, 2023; Papaspyridis, 2020; Voskoglou & Salem, 2020).

While some scholars argue that AI can improve student engagement and learning outcomes, others caution against overreliance on AI-driven instruction (Huang et al., 2019; Xu, 2020). Xu (2020) suggests that educators who integrate AI into their classrooms may see significant benefits, including enhanced student

engagement and academic performance through personalised feedback, adaptive learning pathways, and data-driven decision-making. AI can also help automate administrative tasks, enabling educators to focus more on differentiated instruction and targeted student support. However, concerns remain about AI's ethical implications, particularly regarding bias in AI models, data security, and academic integrity (Kasneci et al., 2023).

## **AI and Sustainable Development Goal 4 in Education**

Sustainable Development Goal 4 (SDG4) aims to ensure inclusive and equitable quality education and promote lifelong learning opportunities for all (United Nations, 2015). A core tenet of this goal is to enhance accessibility and equity in education, particularly for students facing socio-economic challenges. Several researchers have argued that AI, given its potential to enhance adaptability and accessibility in learning, presents a valuable opportunity for HEIs seeking to advance the aims of SDG4 (Browne & Shen, 2017; Eager & Brunton, 2023; Ilie & Rose, 2017; Jennings, 2019; Keith & Waldron, 2024).

In line with SDG4, researchers highlight AI's potential to bridge educational gaps, support underserved populations, and improve student learning outcomes (Browne & Shen, 2017; Eager & Brunton, 2023). AI-powered adaptive learning platforms, intelligent tutoring systems, and real-time assessment tools have been identified as key innovations that support equitable access to quality education (Keith & Waldron, 2024). By leveraging AI tools for customised content delivery, automated assessments, and real-time feedback, HEIs can make inclusive and equitable education a tangible reality for students regardless of socio-economic constraints.

In middle- and low-income countries, AI holds particular significance due to challenges such as limited educational resources, teacher shortages, and inconsistent instructional quality (Ilie & Rose, 2017). AI-driven language translation tools, automated grading systems, and personalised learning assistants can

expand educational opportunities for marginalised communities, addressing disparities in teacher availability and instructional quality (Jennings, 2019).

## **The Caribbean Context**

According to the SDG4 Regional Monitoring Report, Latin America and the Caribbean (LAC) face growing disparities in tertiary education quality, primarily driven by socio-economic inequalities (UNESCO, 2021). HEIs play a critical role in reducing these disparities by leveraging AI technologies to streamline administrative processes, personalise student learning, and enhance assessment practices (Luckin & Holmes, 2016; Unterhalter, 2019). AI-driven solutions such as automated grading systems, intelligent tutoring platforms, and predictive analytics for student success have the potential to improve educational equity and institutional efficiency across the Caribbean.

Despite the increasing global focus on AI's role in higher education, regional studies remain limited. Recent Caribbean-based research has explored specific applications of AI in higher education, yet much of this work remains fragmented. Cross et al. (2023) examined how medical schools can integrate ChatGPT into their pedagogy, while Roberts et al. (2024) investigated AI's role as an assessment tool in HEIs. Keith and Waldron (2024) provided a broader exploration of AI's intersection with SDG4, highlighting the potential for AI technologies to drive innovation and inclusivity in Caribbean HEIs.

Adding to this body of work, Walcott (2024) provides a regional analysis of AI education in Barbados, focusing on how AI initiatives are being implemented in tertiary institutions and the policy challenges associated with AI adoption. Walcott (2024) highlights gaps in faculty training, limited AI literacy among educators, and the absence of a structured AI governance framework within Caribbean HEIs. These findings reinforce the urgent need for institutional policies and capacity-building initiatives to ensure that AI adoption supports both equity and quality improvements in Caribbean higher education.

While these studies contribute valuable insights, a comprehensive investigation into faculty perceptions, institutional readiness, and policy development surrounding AI integration in Caribbean HEIs is still needed. Addressing these gaps will be essential to ensuring that AI technologies are deployed effectively and equitably across the region.

## Models and Theories of Adoption

Several theories and models have been developed to explain the intention of potential users to adopt innovative technologies such as AI. Some noteworthy frameworks include:

- Technology Acceptance Model (TAM) (Davis, 1989), which explains how users' perceptions of usefulness and ease of use influence their decision to adopt technology.
- Unified Theory of Acceptance and Use of Technology (UTAUT) (Venkatesh et al., 2003), which integrates multiple technology adoption theories to provide a comprehensive framework for understanding the acceptance and use of technology.
- Theory of Planned Behaviour (TPB) (Ajzen, 1991), which emphasises that behavioural intentions toward technology adoption are shaped by attitudes, subjective norms, and perceived behavioural control.
- Diffusion of Innovations (DOI) (Rogers, 2003), which outlines how innovations spread within a population and identifies key factors influencing the rate of adoption.

## Theoretical Framework: UTAUT in Higher Education

The UTAUT framework (Venkatesh et al., 2003) serves as the primary theoretical model for this study. The model consolidates elements from existing well-known models, such as the Technology Acceptance Model (TAM), the Theory of Reasoned Action (TRA), and the Innovation Diffusion Theory (IDT), to provide a comprehensive framework and a

holistic understanding of the factors influencing individuals' acceptance and use of technology. Its strength lies in its ability to explain up to 70% of the variance in behavioural intention toward technology adoption, as compared with other alternative models and theories, when applied to the same dataset, which could only account for 17-53% of the variance in the variable, behavioural intention (Venkatesh et al., 2003). This high explanatory power establishes the UTAUT model as particularly valuable for interpreting users' intentions to embrace modern technologies, such as AI.

The UTAUT framework has been used to understand technology adoption in higher education. For instance, Lewis et al. (2013) utilised the UTAUT model to examine factors influencing professors' intentions to use both established and emerging technologies in their classrooms. Their study identified performance expectancy, effort expectancy, social influence, and facilitating conditions as significant determinants of technology adoption among faculty members.

Similarly, Al-Riyami et al. (2023) investigated faculty members' behavioural intentions toward adopting Fourth Industrial Revolution (4IR) related technologies in HEIs. Applying the UTAUT framework, they found that performance expectancy, facilitating conditions, effort expectancy, social influence, and attitude toward using technology significantly impacted faculty members' intentions to use 4IR-related technologies. Notably, performance expectancy had the strongest influence, accounting for 43% of the variance in behavioural intention.

Furthermore, Da Silva Soares et al. (2025) recontextualised the UTAUT framework to explore higher education staff's acceptance of technology-enhanced feedback and marking tools, such as online embedded rubrics. Their qualitative study highlighted the relevance of performance expectancy, effort expectancy, social influence, and facilitating conditions in shaping faculty attitudes toward adopting new assessment technologies. The authors also suggested adaptations to the UTAUT model to better fit the higher education context.

Collectively, these studies underscore the applicability of the UTAUT model in assessing factors that influence faculty adoption of emerging technologies in higher education.

## Factors Influencing AI Adoption

Several factors influence the adoption of AI by faculty in HEIs, including the perceived benefits of AI, faculty attitudes towards AI, and facilitating conditions created by the institution's administration. Perceived benefits refer to faculty members' optimism about how AI can enhance education at both the micro and macro levels. Faculty attitudes towards AI, whether favourable or unfavourable, can significantly affect their willingness to incorporate it into their teaching practices; and facilitating conditions encompass the enabling environment, including human and physical resources (Ayanwale et al., 2022).

Studies have consistently shown that attitude towards AI is a significant predictor of its adoption or use (Sánchez-Prieto et al., 2017; Scherer et al., 2019; Teo et al., 2008). Specifically, attitudes towards AI influence both the intention and the extent of its use in the classroom (Alnasib, 2023). Chatterjee and Bhattacharjee (2020) affirmed the importance of attitude and behavioural intention regarding the adoption of AI in higher education. Similarly, other studies (Islahi & Nasrin, 2019; Wang et al., 2021) have concluded that attitude significantly affects the adoption of AI, with university faculty being influenced by their attitudes towards its potential to enhance student learning.

Moreover, AI in higher education is associated with numerous perceived benefits. It has been suggested that AI can reduce workload by assisting with administrative tasks such as automatic grading and feedback (Baker et al., 2019; Owoc et al., 2021); essay scoring (August & Tsaima, 2021); and plagiarism detection (Braiki et al., 2020). Additionally, AI can enhance the learning experience by performing tasks that would otherwise require human effort, such as personalising learning, automating grading, tracking student progress, and providing real-time feedback (Pedró, 2020).

Notwithstanding the perceived benefits of AI, research has also identified demographic factors such as gender, age, academic rank, and years of teaching experience as key influencers of AI adoption in education. Studies suggest that male educators are more likely than females to adopt technologies in their classrooms. This inclination may be attributed to higher levels of anxiety among female educators towards technology adoption in general (Alnasib, 2023). Moreover, Weger et al. (2022), whose research focused on the adoption of AI-enabled autonomous systems technology, also reported that women were less likely than men to adopt technology.

Regarding age, there are mixed findings. While younger individuals are often more inclined to adopt novel technologies due to their ability to learn interaction patterns and openness to experiment (Parasuraman & Colby, 2015), limited studies have focused on the rate of adoption by faculty in higher education. Alnasib (2023) found variations in AI adoption, with higher readiness among the age group of 31–50 compared to those aged 20–30. This suggests that academics aged 31–50 are more likely to embrace AI in their teaching, possibly due to their maturity and openness to new ideas. However, academic rank did not significantly affect AI adoption among faculty members (Alnasib, 2023).

## Barriers to AI Adoption

The adoption of AI in higher education is not without its challenges. Faculty members (who play a central role in the implementation of AI technologies) often encounter barriers that hinder their adoption of these tools. These barriers encompass various challenges, including a lack of training, insufficient vision from universities regarding AI applications, shortages of AI experts within academic institutions (AlAhmari, 2022), and limited recognition of the importance of AI applications among faculty. Alnasib (2023) confirmed the need for hands-on training in implementation of AI modalities and enabling infrastructures such as materials and facilities.

Al-Subhi (2020) provided detailed insights into these challenges, reporting issues such as

the perception that adopting AI requires more effort than traditional teaching methods; a lack of awareness about AI's role in education; inadequate incentivisation of AI adoption among faculty; insufficient training programs for faculty in AI applications; and inadequate time allotted for training in AI adoption strategies and applications. Gupta and Bhaskar (2020) also emphasised institutional and administrative barriers to AI adoption, including deficiencies in resources and time. Additionally, a lack of equipment and infrastructure were identified by Salem and Mohammadzadeh (2018) and Teeroovengadum et al. (2017). Research emerging from Egypt by Sharawy (2023) concluded that while there was evidence of faculty intention and willingness to incorporate AI, there was also a lack of funding and supporting policy for the incorporation or adoption of AI; thus underscoring the point that successful AI adoption by faculty was predicated on the creation of facilitating conditions inclusive of training, resources, infrastructure, and policy guides (Sharawy, 2023). It can be argued, therefore, that universities and institutions of higher learning must fulfill the demands of millennials who function in a technological milieu, implying that there is still much more that needs to be done in terms of facilitation (Bucea-Manea-Toniş et al., 2020).

## Conceptual Framework

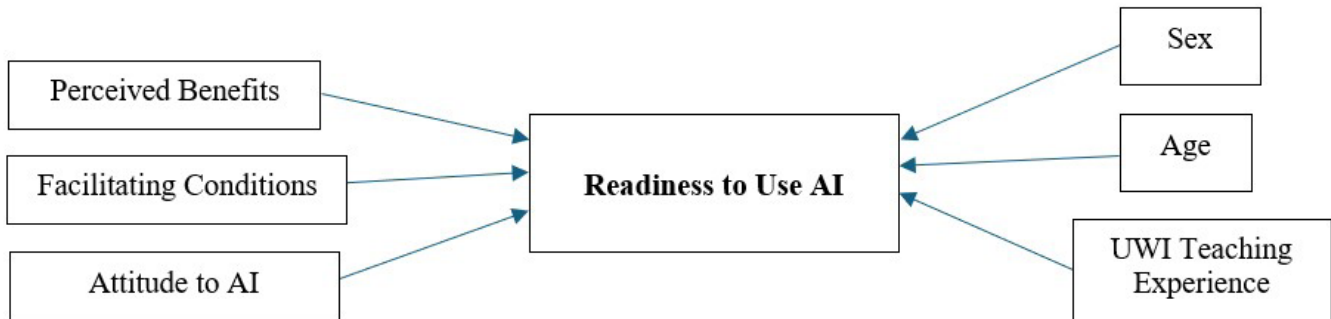
The conceptual framework for this study focuses on readiness to adopt AI in higher education, rather than the actual adoption of AI technologies. Readiness to adopt AI refers to faculty members' preparedness and willingness to integrate AI tools into their teaching practices. This construct is distinct from adoption, which pertains to the actual implementation and ongoing use of AI tools. Readiness, therefore, serves as a precursor to adoption; it represents the factors that must be in place for faculty members to be willing to engage with AI technologies in their classrooms. The framework suggests that faculty members' readiness to adopt AI is influenced

by several key factors: perceived benefits of AI, attitude towards AI, and facilitating conditions (Venkatesh et al., 2003).

This research study adopts the Unified Theory of Acceptance and Use of Technology (UTAUT) as its primary theoretical framework, with modifications to align with the study's objectives and context, to better understand predictors associated with faculty members' readiness to adopt AI. The model focuses on three constructs: *Perceived Benefits of AI in Teaching*, *Facilitating Conditions*, and *Attitude Towards AI* — which are hypothesised to positively predict readiness to use new technologies such as AI (Van Schaik, 2009; Venkatesh et al., 2003). In the context of this study, the constructs are defined as follows:

- *Perceived benefits of AI in teaching* incorporates the concept of performance expectancy and signifies the extent to which faculty members believe that using AI would enable them to significantly enhance their job performance in teaching (Sugandini et al., 2018; Venkatesh et al., 2003).
- *Facilitating conditions* encompass the availability and readiness of the organisational and technical infrastructure, such as the necessary resources, technical support, and training opportunities to support AI use (Venkatesh et al., 2003).
- *Attitude towards AI* refers to the degree to which faculty members view a specific behaviour favourably or unfavourably (Ayanwale et al., 2022).
- *Faculty readiness* refers to the degree to which a faculty member exhibits confidence in their capacity to proficiently incorporate AI into their teaching practices.

In addition, the variables sex, age, and years of UWI teaching experience were included as covariates so that the relationship between the main constructs of interest could be more accurately estimated. The conceptual model used is presented in Figure 1.

**Figure 1***The Conceptual Framework*

The study was guided by the following research questions:

1. What is faculty members' experience with integrating AI into their teaching practices?
2. Is there a correlation between faculty members' readiness to integrate AI into teaching and their perceived benefits of AI in higher education and teaching, the facilitating conditions regarding AI use, and their attitude towards AI?
3. Do perceived benefits of AI, facilitating conditions regarding AI use, and attitude towards AI predict readiness to integrate AI into their teaching practices, after controlling for gender, age, and teaching experience?
4. What are the primary barriers that significantly impact faculty members readiness to adopt AI?

## Methodology

### Research Design

A non-experimental quantitative methodology was adopted to investigate the factors influencing faculty adoption of AI in higher education. The research design employed an online survey using SurveyMonkey, a web-based plat-

form. The online survey method was chosen for its efficiency, cost-effectiveness, and ability to reach a large and geographically dispersed sample. Additionally, an online survey allows for anonymity, which may encourage participants to provide candid responses about their attitudes and perceptions regarding their readiness for AI adoption.

Faculty members were contacted using their university email addresses to ensure direct communication with the target population. An initial email was sent to faculty members through official university channels, containing a link to the online survey. This email emphasised the voluntary nature of participation and assured respondents of the confidentiality of their responses. To encourage participation and maximise the response rate, reminders were sent at regular two-week intervals. Prior to the conduct of the survey, Institutional Review Board (IRB) approval was obtained to ensure compliance with ethical guidelines for research; including informed consent, confidentiality, and voluntary participation.

### Sample Size and Response Rate

The entire population of 196 full-time faculty members at the Cave Hill Campus was invited to participate in the study. However, as two of the researchers involved in the study are also full-time faculty members, they were excluded from completing the survey. Therefore, the possible

population size for the study was adjusted to 194 eligible participants. Based on a confidence level of 95% and a margin of error of 5%, the minimum required sample size was calculated to be approximately 130 respondents. However, the actual response to the survey yielded 78 faculty members, resulting in a response rate of approximately 61%. This response rate exceeds the average online survey response rate of 44.1% reported by Wu et al. (2022) in their meta-analysis of 1,071 online survey response rates in education-related research.

### Instrumentation

The survey instrument was developed in alignment with the Unified Theory of Acceptance and Use of Technology [UTAUT] model (Venkatesh et al., 2003), incorporating key constructs and variables identified in the study objectives. Survey items were adapted from validated scales used in prior research on technology adoption (Alnasib, 2023; Al-Qeisi, 2009; Chatterjee & Bhattacharjee, 2020; Zhang et al., 2023) specifically from Alnasib's (2023) study on faculty readiness for AI integration in higher education, and were tailored to reflect the specific context of AI integration in the Caribbean higher education setting.

Adaptations were made to ensure relevance and applicability, including:

Terminology adjustments to align with regional practices and policies.

- Addition of context-specific examples of AI use in teaching and learning in the Caribbean.
- Simplification and clarification of items to ensure comprehensibility for faculty from diverse disciplines and levels of AI familiarity.

Any revisions made were also subjected to a content validity review by three experts in faculty development and educational technology experts in educational technology and higher education, to ensure that the items accurately captured the intended constructs and aligned with the study's objectives. The final survey comprised 37 items categorised into five key sections:

1. **Demographic information (6 close-ended items).** Participants provided information on sex, age, faculty, academic position, and years of teaching experience at the University of the West Indies (The UWI).
2. **Technological background (4 close-ended items).** This section assessed faculty members' prior exposure to AI tools and their self-perceived level of AI expertise.
  - **AI expertise level.** Participants self-reported their level of expertise with AI tools on a 5-point scale, ranging from beginner (limited or no experience) to expert (extensive knowledge and experience in AI).
  - Experience with AI in instructional practices: Participants indicated whether they had significant experience, limited experience, no experience, or had attended AI-related workshops without direct implementation.
  - **Familiarity and usage of AI tools.** Faculty members identified specific AI tools designed for educational purposes with which they were familiar and/or had used, including chatbots (e.g., ChatGPT), adaptive learning platforms, automated grading systems, and intelligent tutoring systems.
  - **Perception of AI in instructional practices.** Participants selected whether they perceived AI as an opportunity, a threat, both, or were neutral/unsure about its impact on teaching.
3. **UTAUT Constructs (25 close-ended Likert-scale items,** ranging from 1 (Strongly Disagree) to 5 (Strongly Agree), to quantify faculty perceptions).
  - **Perceived Benefits of AI in Teaching (9 items).** Focused on faculty perceptions of AI's impact on

teaching effectiveness (e.g., “I can use AI technology to improve my teaching effectiveness”).

- **Facilitating Conditions (7 items).** Examined institutional support for AI integration (e.g., “Cave Hill has the resources required to develop AI-based smart content”).
- **Attitude Towards AI (4 items).** Assessed faculty attitudes toward AI adoption (e.g., “I enjoy using AI technology”).
- **Faculty Readiness (5 items).** Measured faculty members’ confidence in incorporating AI into their instructional practices (e.g., “I am willing to use AI technology in my teaching”).

- 4. Perceived Barriers to AI Adoption (1 close-ended item).** Faculty identified barriers to AI adoption, including lack of institutional support, ethical concerns, and perceived complexity.

- **Additional comments (1 open-ended question).** Allowed participants to provide additional comments on or concerns about their readiness to adopt AI in higher education.

### Reliability and Validity

To ensure content validity, the survey instrument was adapted from established scales and reviewed by three experts in faculty development and educational technology to confirm its alignment with the selected constructs. Additionally, a pilot test was conducted with five faculty members to assess clarity, wording, and completion time. Feedback was used to refine the survey instrument before full deployment. For internal consistency reliability, Cronbach’s alpha coefficients were calculated for each construct. When the reliabilities of the four scales were examined, all exceeded the threshold Cronbach’s alpha value of 0.70 (Hair et al., 1998; Nunnally, 1978), indicating adequate internal consistency (See Table 1).

**Table 1**

*Reliability Coefficients and Construct Means*

Constructs	No. of Items	Reliability	Mean (/5.00)
Perceived benefits of AI in teaching	9	0.90	3.50
Facilitating Conditions	7	0.88	2.61
Attitude towards AI	4	0.76	3.43
Faculty Readiness	5	0.71	2.85

## Findings

### Data Analysis

The collected survey data were analysed using SPSS Version 27. Descriptive statistics, including means, standard deviations, and frequency distributions, were used to summarise the demographic characteristics of participants, faculty experience with AI, and their perceptions of their readiness for AI adoption.

To address the research questions:

1. Independent t-tests and ANOVA were conducted to examine differences in AI readiness and perceptions across demographic groups (e.g., age, gender, and teaching experience).
2. Pearson correlation analysis was used to assess the relationships among perceived benefits of AI, facilitating conditions, attitude towards AI, and faculty readiness to integrate AI into teaching.

3. Multiple regression analysis was performed to determine the predictive power of perceived benefits, facilitating conditions, and attitude towards AI on faculty readiness; while controlling for age, gender, and years of teaching experience.
4. Frequency analysis was used to identify the most commonly perceived barriers.
5. Internal consistency reliability was assessed using Cronbach's alpha coefficients.

## Results

### Sample Demographics

The sample comprised 77 participating faculty members, after excluding one incomplete response, the majority of which were female, constituting 66.7% ( $n = 52$ ); while males accounted for 33.3% ( $n = 26$ ) of the sample. Regarding age distribution, the largest proportion of faculty fell within the age brackets of 50–59 years (42.9%,  $n = 33$ ) and 40–49 years (35.1%,  $n = 27$ ).

Regarding faculty representation across different academic disciplines, the faculties of Humanities & Education, Social Sciences, and Medical Sciences each contributed 24.4% of the sample, while Science and Technology accounted for 16.7% ( $n = 13$ ). Smaller numbers of faculty members were affiliated with the Faculties of Law (6.4%,  $n = 5$ ), Sport (2.6%,  $n = 2$ ), and Culture, Creative and Performing Arts (1.3%,  $n = 1$ ). Additionally, the distribution of academic ranks revealed that 3.9% ( $n = 3$ ) were professors, 24.7% ( $n = 19$ ) were senior lecturers, 68.8% ( $n = 53$ ) held the position of lecturer, and 2.6% ( $n = 2$ ) were assistant lecturers. Furthermore, the experience levels of faculty members as lecturers at the University of the West Indies varied, with 14.1% ( $n = 11$ ) having 1–5 years of experience, 26.9% ( $n = 21$ ) having 6–10 years, 20.5% ( $n = 16$ ) having 11–15 years, and 38.5% ( $n = 30$ ) having more than 15 years of experience. A detailed overview of the demographic profile of the sample is presented in Table 2.

**Table 2**

*Demographic Profile of the Participants*

	Frequency ( <i>n</i> )	Percentages (%)
<b>Sex</b>		
Female	52	66.7
Male	26	33.3
<b>Age</b>		
30 – 39 years	10	12.8
40 – 49 years	27	34.6
50 – 59 years	33	42.3
60 years and over	7	9.0
No response	1	1.3
<b>Faculty</b>		
Culture, Creative and Performing Arts	1	1.3
Humanities and Education	19	24.4
Law	5	6.4
Medical Sciences	19	24.4
Science and Technology	13	16.7
Social Sciences	19	24.4
Sport	2	2.6
<b>Position</b>		
Professor	3	3.8
Senior Lecturer	19	24.4
Lecturer	53	67.9
Assistant Lecturer	2	2.6
No Response	1	1.3
<b>UWI Teaching Experience</b>		
1–5 years	11	14.1
6–10 years	21	26.9
11–15 years	16	20.5
More than 15 years	30	38.5

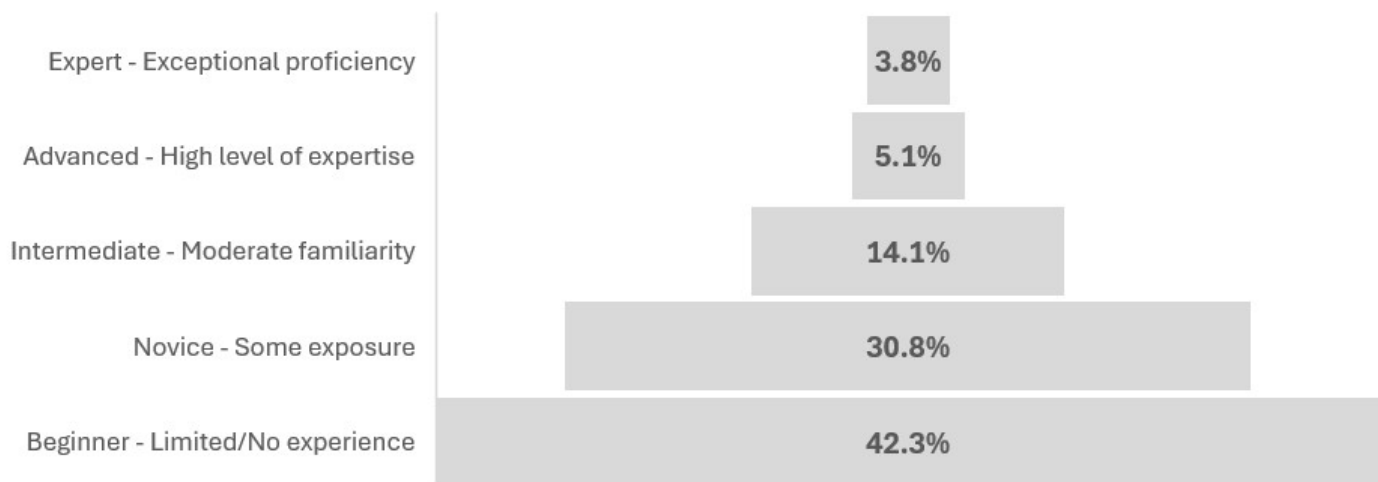
## Research Question 1: What is the extent of faculty members' experience with integrating AI into their teaching practices?

### AI Competence and Experience

Faculty members' expertise with AI tools was generally low. When asked to rate their level of AI expertise, most identified as novices or beginners (73.1%,  $n = 57$ ), while only 8.9% ( $n = 7$ ) reported advanced or expert levels (see Figure 2).

### Figure 2

Chart Showing Faculty Members' AI Experience



Similarly, faculty members' experience with AI tools in instructional practices was limited, with 48.1% ( $n = 37$ ) indicating having some limited experience with AI tools, while 45.5% ( $n = 35$ ) reported having no previous experience with AI tools. Only 6.5% ( $n = 5$ ) acknowledged having significant experience with AI tools. It should be noted that there was no significant difference in any of the demographic variables such as the sex or age of participants.

Given the limited experience levels, it was not surprising that awareness and usage of AI applications were notably low among the

participants. AI academic writing tools had the highest level of familiarity, with 64.1% of participants reporting awareness, yet only a quarter of the participants (25.6%) reported actual usage. Small proportions of participants indicated familiarity with or usage of exam proctoring tools and image generation tools. However, the majority of participants reported unfamiliarity with other AI tools mentioned, including adaptive learning platforms, virtual teaching assistants, and intelligent tutoring systems (see Table 3).

**Table 3**

*Familiarity with and Use of AI Applications*

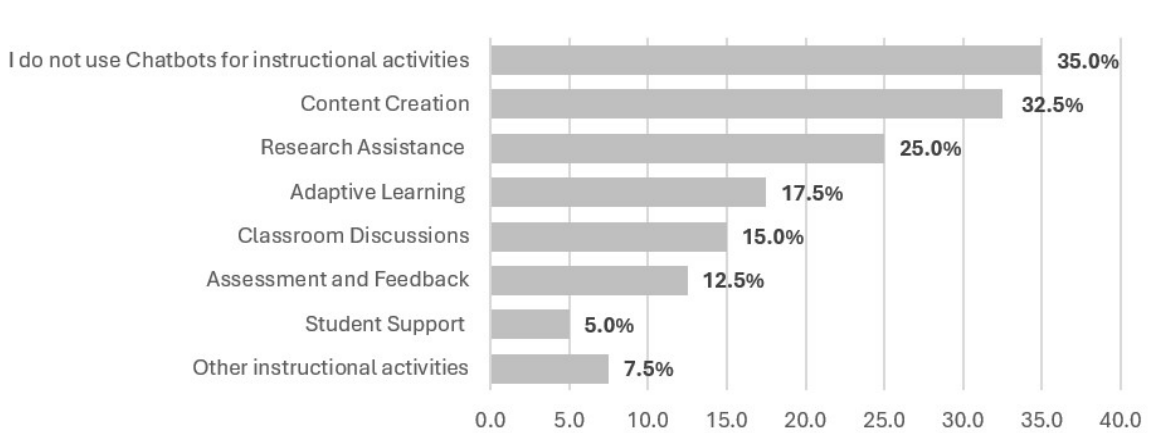
	Familiar With %	Have Used %	Neither %
Academic Writing	64.1	25.6	32.1
Exam Proctoring	28.2	16.7	62.8
Image Generation	21.8	11.5	71.8
Question Creation	12.8	6.4	76.9
Automated Grading Systems	10.2	3.8	78.2
Content Curation	10.2	5.1	78.2
Intelligent Tutoring Systems	8.9	5.1	79.5
Virtual Teaching Assistants	6.4	3.8	82.1
Adaptive Learning Platforms	2.6	1.3	82.1

Faculty members were then asked specifically about their use of specific GenAI chatbots such as ChatGPT, Google BARD/Gemini, and Microsoft Cortana; with usage being relatively high, as just over half of the faculty members (51.3%, n = 40) reported using chatbots. Interestingly, of those using chatbots, 42.5% (n = 17) did not use them for instructional activities. However, for

those incorporating chatbots into instructional activities, the primary uses were content creation (32.5%, n = 13) and research assistance (25.0%, n = 10). Smaller groups reported using chatbots for adaptive learning activities (17.5%, n = 7); classroom discussions (15.0%, n = 6); assessment and feedback (12.5%, n = 5); and student support (5.0%, n = 2) (see Figure 3).

**Figure 3**

*Bar Chart Showing How Faculty Use Gen AI for Instructional Activities*

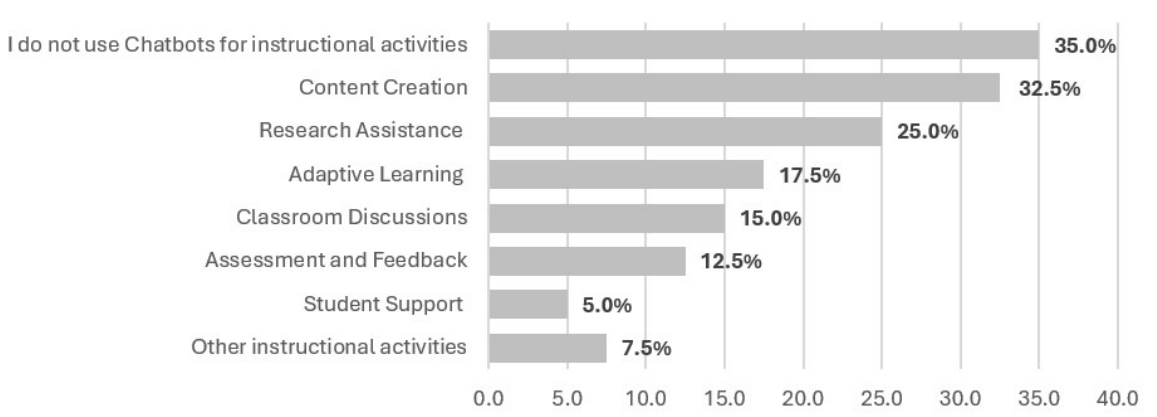


Overall, when asked whether they viewed AI as an opportunity or threat, the majority of faculty members perceived it as both an opportunity and a threat (62.8%, n = 49), with just under

one quarter (23.1%, n = 18) perceiving it as an opportunity, and only a small percentage (2.6%, n = 2) considering it a threat (see Figure 4).

**Figure 4**

*Faculty Members' Perceptions of AI as an Opportunity and a Threat*



**Research Question 2:** Is there a correlation between faculty readiness and perceived benefits, facilitating conditions, and attitude towards AI?

Pearson product moment correlation analysis found the following:

- Facilitating conditions had the strongest correlation with readiness to use AI in teaching ( $r = 0.345$ ,  $p < 0.01$ ), indicating that supportive campus conditions play a crucial role in educators' readiness to adopt AI in teaching, even more so than their perceptions of its benefits or attitudes towards it.
- Perceived benefits of AI in teaching showed a weaker but still significant positive correlation with readiness to use AI in teaching ( $r = 0.250$ ,  $p < 0.05$ ), indicating that educators who perceived greater benefits from AI are more inclined to integrate it into their teaching practices.
- Attitude towards AI was not significantly correlated with readiness to use AI in teaching ( $r = 0.130$ ,  $p > 0.05$ ).

Table 4 presents the correlation results.

**Table 4**

*Correlations between the Four UTAUT constructs*

	PB	FC	RU	ATT
PB	1	.125	.250*	.327**
FC		1	.345**	-.092
RU			1	.130
ATT				1

\* Correlation is significant at the 0.05 level (2-tailed).

\*\* Correlation is significant at the 0.01 level (2-tailed).

**Research Question 3:** Do perceived benefits, facilitating conditions, and attitude towards AI predict readiness to integrate AI, after controlling for gender, age, and teaching experience?

### Multiple Regression

A hierarchical linear multiple regression analysis was conducted to understand the factors influencing educators' readiness to integrate AI in teaching practices (RU). The independent variables included the three constructs: Perceived Benefits of AI in Teaching (PB), Facilitating Conditions (FC), and Attitude to AI (ATT), and the demographic variables of age, gender, and

UWI teaching experience were dummy coded and added as covariates. The analysis showed the following:

- The model explained 33.9% of the variance in faculty readiness ( $R^2 = 0.339$ ,  $F(6, 61) = 5.21$ ,  $p < 0.001$ ).
- Perceived Benefits of AI indicated a significant moderate positive effect ( $\beta = 0.319$ ,  $p < 0.05$ ).
- Facilitating Conditions also had a moderate positive effect ( $\beta = 0.233$ ,  $p < 0.05$ ).
- Attitude towards AI was not a significant predictor ( $\beta = 0.054$ ,  $p = 0.641$ ).

In addition, age and gender were significant predictors:

- Females exhibited lower AI readiness than males ( $\beta = -0.321$ ,  $p < 0.05$ ).
- Faculty aged 50+ had significantly lower AI readiness than those aged 30–39 ( $\beta = -0.397$ ,  $p < 0.05$ ), suggesting that faculty members in the 30–39 age group are relatively more ready to use AI in teaching, particularly when compared to those aged 50 and over, who exhibited the lowest readiness to use AI.

Table 5 presents the regression results.

**Table 5**

*Regression Analysis of Factors Influencing Faculty Members’ Readiness to Use AI in Teaching*

Model	Unstandardised Coefficients		Standardised Coefficients		Sig.
	B	Std. Error	Beta	t	
1 (Constant)	3.692	.262		14.114	.000
Sex=Female	-.506	.170	-.342	-2.971	.004
Age1=40 – 49 years	-.405	.265	-.280	-1.528	.131
Age1=50 years and over	-.508	.252	-.370	-2.013	.048
2 (Constant)	1.908	.556		3.433	.001
Sex=Female	-.475	.157	-.321	-3.020	.004
Age1=40 – 49 years	-.333	.243	-.230	-1.369	.176
Age1=50 years and over	-.545	.231	-.397	-2.354	.022
PB	.282	.102	.319	2.773	.007
FC	.232	.106	.233	2.192	.032
ATT1	.050	.107	.054	.469	.641

**Research Question 4:** What are the primary barriers that significantly impact faculty members readiness to adopt AI?

Among the barriers reported by faculty hindering their use of AI applications and tools in instructional activities, lack of familiarity ranked highest, with 64.1% ( $n = 50$ ) of participants echoing previous findings of limited AI awareness. Faculty members also cited a lack of necessary resources (52.6%,  $n = 41$ ); ethical concerns (48.7%,  $n = 38$ ); and time constraints to learning about and integrating AI (43.6%,  $n = 34$ ) as significant hindrances. Additional reported barriers are detailed in Figure 5, indicating a multifaceted challenge in AI adoption within instructional contexts.

## Additional Comments

The following section discusses the themes that emerged when faculty members were asked to provide additional comments, highlighting both the opportunities and challenges associated with the adoption of AI in their instructional practices.

### Opportunities

Some faculty members acknowledged the inevitability of AI's presence in education and emphasised the importance of learning best practices for its use. For instance, one participant suggested that students should submit their AI-generated scripts alongside assignments to enable accurate assessment of their individual contributions. Additionally, faculty members expressed their eagerness to implement AI solutions and noted the time-saving benefits of AI in teaching preparation.

We cannot avoid AI, but as instructors, we must learn the best practice approaches to the use of AI. For example, students should submit their ChatGPT script for all assignments where they use this tool. (Female, 30–39)

I am ready to fully incorporate AI in my teaching and learning. It has been saving me time on prepping content and presentations and coming up with engaging activities, etc. However, I need to learn about the other capabilities of AI such as grading, individualised assistance for students, teaching assistance, etc. (Female, 40–49)

## Ethical Concerns

Concerns regarding students' possible unethical use of AI and its potential impact on critical thinking skills were raised. Some faculty members expressed concerns about the ethical implications of AI use in student work and advocated for comprehensive frameworks and penalties for breaches. Others raised concerns about profit-driven motives and the lack of understanding of AI's true potential and risks, particularly in small island states.

Worried about the ethical implications of AI, in terms of student work. Cave Hill needs a comprehensive framework for the use of AI in student submissions, including the penalties for doing so if breached. (Female, 30–39)

The wholesale adoption of AI is driven largely by profit and the belief that we will be left behind. AI has become the newest buzzword and there appears to be a shift in technological direction in the Caribbean, without any understanding of where the current state of AI truly is. (Male, 50–59)

## Students' Overdependence on AI

As a related concern, other faculty members expressed the possibility of students' overdependence on AI, prompting calls for ethical considerations and training. Some cautioned against over-reliance on AI and stressed its role as a support tool rather than as a replacement for human learning. Concerns about generative AI programs and their potential negative impact on assessment and plagiarism were also voiced. One faculty member likened AI to a tool (such as a Dremel), capable of great benefit when used correctly but potentially harmful when misused.

I am concerned about the potential to dampen students' critical thinking and comprehension skills, especially for complex concepts. I am concerned that AI can be used as a crutch that stops students from learning to think quickly because instead, they can use AI tools quickly. (Female, 40–49)

I see many uses for AI, but I have many ethical concerns about usage and students' overdependency on it, and therefore instructors' inability to increase their analytical ability, skills, and output!!! (Female, over 60)

## Need for Training

Finally, faculty members called for more training opportunities and highlighted the need for training to fully utilise AI's capabilities, such as grading and providing individualised assistance to students.

I need to learn about the other capabilities of AI such as grading, individualised assistance for students, teaching assistance, etc. It would be nice if The UWI offered training and sensitisation in this area for the upcoming academic year. My only concern is students' unethical use of AI, so sensitisation in ethical use would be good for students. (Female, 40–49)

There are so many tools out there, a curated webinar would be ideal. (Female, 40–49)

Teaching staff need to be allocated time to learn about AI use in teaching. There was a very helpful one-day seminar last summer that taught us how to use ChatGPT — more of this would be helpful. (Female, 30–39)

## Discussion

### Key Findings and Implications

This study provides insights into faculty readiness to adopt AI in higher education. The findings indicate that while faculty members recognise AI's potential benefits for enhancing teaching effectiveness and student engagement, concerns about ethical implications, academic integrity, and diminished human interaction remain prevalent (Uygun, 2024). Faculty perceptions of AI align with Wiggins (2023), who describes AI as both an opportunity and a challenge in educational settings.

Additionally, the study revealed limited AI expertise among faculty members, with most identifying as novices or beginners, and very few considering themselves intermediate or advanced users. A significant proportion of faculty had little to no prior experience with AI tools, and their awareness of specific AI-driven applications for teaching was relatively low (Kitcharoen et al., 2024). This aligns with findings from other technology adoption studies that

emphasise training gaps and limited AI exposure as major barriers to faculty engagement (Moura & Carvalho, 2023).

Among the key determinants of AI readiness, perceived benefits and facilitating conditions emerged as significant predictors, reinforcing previous studies (Ayanwale et al., 2022; Chatterjee & Bhattacharjee, 2020; Salem & Mohammadzadeh, 2018). Faculty who perceived AI as beneficial for teaching and learning and who reported institutional support for AI integration demonstrated greater readiness to adopt AI tools. This underscores the need for structured AI training programs, improved institutional infrastructure, and ongoing technical support to facilitate AI adoption (Sharawy, 2023).

Notably, attitude towards AI was not a significant predictor of AI readiness, contrary to previous research that found positive attitudes to be strong indicators of technology adoption (Becker et al., 2017; Edwards et al., 2018; Sánchez-Prieto et al., 2019). This suggests that while faculty may express openness to AI, other factors, such as access to resources, perceived ease of use, and institutional encouragement, are more influential in determining actual adoption behaviours.

Demographic analysis revealed that older faculty members and female faculty exhibited lower AI readiness, highlighting the need for targeted interventions to support these groups. This finding suggests that universities should prioritise inclusivity in AI adoption efforts, offering tailored training and mentorship programs to bridge the digital divide among faculty (Fahmiyah et al., 2023; Shaouf & Altaqqi, 2018).

Despite the recognized potential of AI in higher education, several barriers to adoption persist. The primary challenges include lack of technical expertise, insufficient training opportunities, limited institutional support, and concerns regarding AI's role in academic assessment. These findings emphasise the importance of clear AI policies, faculty development initiatives, and strategic investments in AI-supportive infrastructure to promote widespread adoption.

Despite the recognised potential of AI to revolutionise teaching and learning, several

obstacles hinder its widespread adoption among faculty. One of the primary challenges reported by faculty members is the lack of technical expertise and training in AI tools and applications. Many faculty members perceived themselves as novices or beginners in terms of AI expertise, with limited experience in using AI tools in instructional settings (Moura & Carvalho, 2023). This lack of proficiency could not only undermine their confidence in utilising AI but also impede their ability to effectively incorporate AI-driven technologies into their teaching practices.

## Limitations and Future Research

While this study provides valuable insights into faculty AI adoption, several limitations and areas for future research are outlined below.

1. This study applied the UTAUT model to examine faculty adoption of AI. However, other stakeholders, such as university administrators, IT personnel, and students, play a crucial role in AI adoption. Future research should adopt a multi-stakeholder approach, integrating Hwang et al.'s (2020) AI Role Framework to explore AI's function as a learning partner, tutor, or tool in higher education.
2. The target population was full-time faculty; however, Cave Hill campus employs more adjunct faculty than full-time faculty. Adjunct faculty may experience different challenges, such as limited access to institutional resources, professional development restrictions, and job security concerns, which could affect their readiness to adopt AI. Therefore, future research should include both full-time and adjunct faculty to provide a comprehensive understanding of AI adoption across different faculty categories.
3. This study used a cross-sectional research design, capturing faculty perceptions at a single point in time. Given the rapid evolution of AI technologies, faculty attitudes and adoption behaviours may

shift significantly over time. A longitudinal study tracking AI adoption trends, changes in faculty readiness, and evolving institutional policies would provide a more dynamic perspective on AI integration in higher education.

4. The UTAUT model was originally designed for general technology adoption and may not fully capture Gen AI-specific adoption factors, such as trust in AI-generated content, ethical concerns, and AI transparency. Future research should expand the UTAUT model to incorporate Gen AI-specific constructs, ensuring a more nuanced understanding of AI adoption.
5. The study was conducted before an official institutional AI policy was implemented. As a result, faculty responses reflect individual perceptions rather than adherence to institutional guidelines. A follow-up study after the AI policy's implementation could provide insights into how formalised policies impact faculty adoption and whether institutional AI support structures have improved.

## Recommendations

While this study focused on the Cave Hill campus, its findings hold broader implications for higher education institutions worldwide, particularly in developing regions where technological advancements are often hindered by policy limitations, infrastructural challenges, and faculty resistance. As AI continues to evolve, it is essential for universities to take a structured approach to fostering faculty adoption and integration of AI technologies. To achieve this, several key recommendations emerge from the study.

1. HEIs should develop structured AI training programmes that cater to faculty members at different levels of expertise. Many faculty members have limited AI knowledge, which may contribute to resistance or reluctance to engage with

- AI-driven tools. Institutions should offer tiered training programmes, beginning with AI literacy modules that introduce faculty to basic AI concepts, before advancing to hands-on workshops and AI integration strategies. These training programmes should also include pedagogical applications of AI, demonstrating how AI-driven technologies can enhance student engagement, automate administrative tasks, and personalise learning experiences. Furthermore, a strong emphasis on ethical considerations should be embedded in the training to ensure that faculty members are aware of issues such as AI bias, data privacy, and academic integrity concerns.
2. In addition to faculty training, universities must strengthen their institutional AI infrastructure to facilitate seamless AI adoption. A major barrier identified in the study was insufficient institutional support and resources, which prevented faculty from experimenting with AI-driven teaching tools. Institutions should invest in AI-powered learning management systems (LMS), automated assessment tools, and adaptive learning platforms that allow for efficient grading, personalised feedback, and enhanced content delivery. Cloud-based AI resources can further enhance accessibility, allowing faculty to store and analyse student data securely. However, investments in AI infrastructure must be accompanied by a dedicated technical support team that can assist faculty with troubleshooting, best practices, and AI integration strategies to ensure that technology adoption is sustainable and user-friendly.
  3. Beyond infrastructure, universities must establish clear institutional AI policies that provide guidance on both faculty and student AI use. As AI tools become increasingly sophisticated, ethical considerations surrounding AI-generated content, plagiarism, and intellectual property rights will become more critical.
  4. It is also important to address demographic disparities in AI adoption, to ensure that all faculty members, regardless of age or gender, have equal opportunities to engage with AI technologies. This study found that female faculty and older faculty members exhibited lower AI readiness than their male and younger counterparts, which highlights the need for targeted interventions. Universities should offer specialised AI workshops for these demographic groups, ensuring that training materials resonate with their unique concerns and learning preferences. Additionally, institutions can promote AI peer mentorship programs, pairing faculty members who are more confident in AI use with those who are less experienced, creating a supportive learning community. By providing customised AI training resources, universities can bridge the digital divide, ensuring that faculty of all backgrounds are equipped with the necessary skills and confidence to engage with AI.
  5. Finally, universities should promote cross-disciplinary AI research collaborations to encourage faculty members from diverse academic backgrounds to explore AI applications in their respective fields. While STEM disciplines have traditionally led AI-driven innovations, there is growing interest in AI's potential in the arts, humanities, and social sciences.
- Universities should create comprehensive policies that define acceptable AI usage in teaching, assessment, and research while ensuring that students and faculty alike are held accountable for AI-generated outputs. Faculty members should also be actively involved in policy development, to ensure that AI guidelines align with pedagogical objectives and reflect real-world classroom challenges. Institutions should consider forming AI governance committees that oversee policy enforcement, faculty concerns, and AI-related academic misconduct cases.

Encouraging interdisciplinary research on AI applications in language learning, creative industries, and social sciences can foster innovative teaching and research projects. Institutions should establish research grants and funding opportunities to support faculty-led AI initiatives, allowing educators to experiment with AI-driven methodologies while contributing to the body of knowledge on AI integration in higher education.

## Conclusion

This study provides empirical insights into faculty readiness to adopt AI, revealing that perceived benefits and institutional support are key predictors of AI readiness, while attitude toward AI does not have a significant influence. While the study focuses on the Cave Hill campus, its implications extend to HEIs globally, particularly in developing regions facing technological and policy-related challenges. Additionally, faculty perceptions of AI as both an opportunity and a threat play a pivotal role in shaping their readiness to adopt it. This dual perception emphasises the complexity of AI integration, where excitement about its potential benefits must be balanced with concerns about its impact on teaching and ethical implications such as privacy and fairness. Future research should explore longitudinal AI adoption trends, adjunct faculty experiences, and AI-specific adaptations of the UTAUT model. By addressing these gaps, institutions can develop a sustainable and well-supported AI adoption framework, equipping faculty with the knowledge and resources needed to integrate AI into their teaching and research practices in a meaningful and effective way.

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# Exploring Early-Career Academics' Experiences with Mentoring at a Higher Education Institution in Jamaica

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## Abstract

Early-career academic staff have various professional and psychosocial needs as they enter the world of academia. Mentors can provide guidance concerning departmental and university regulations and protocols, career development, balancing the professional and personal spheres of life and more. Yet, many faculties and departments within tertiary institutions do not have active formal mentorship programmes to support early-career academics. This generic qualitative study aimed to explore early-career academics' experiences with and perceptions of mentorship within a faculty at a regional tertiary-level institution. Data for this study were collected through one-to-one semi-structured interviews and thematically analysed. Among the main findings are that early-career academics desire mentorship, which is not readily available within their departments. However, some unstructured forms exist, and they suggest structured systems of mentorship for the institution. Recommendations include having deans and department heads provide training to identify and address the career-specific needs of faculty they supervise.

*Keywords:* early-career, academics, mentorship, higher education, Caribbean

## Introduction

In academia, the term "early-career" is usually defined as research capability in the first five years after PhD completion, with career progression from post-doctoral employment to tenure promotion and after (Bosanquet et al., 2017). Austin (2010) broadens the perspective gained from Bosanquet et al. (2017), claiming that early-career faculty are in the service period between years 1-7 of their faculty employment or those who have not yet gained tenure. They also extend this designation to faculty who have previously worked in other sectors but have transitioned to higher education. Part of the experience of early-career academics is that they face a host of challenges as they negotiate the

very demanding academic landscape. Trower's (2010) assertion that there is a culture of normalising unlimited demands on faculty, thus necessitating avenues for reciprocal support and assistance with time management and energy, among others, rationalizes their status. This normalizing of unlimited demand on faculty that Trower (2010) advances is ironic considering The European Commission's (2011) report that access to resources, supportive interactions, and transparent career prospects are challenging for early-career researchers in academia worldwide. Both sources expose the inequity in work demand on early-career academics and the dearth of available resources with which to respond.

Mentoring seems a plausible remedial tool to address some of the named challenges because of the reasons argued below.

Mentoring is promoted as a crucial mechanism of support, especially for those in academia whose careers are at the earlier stages (Sargent & Rienties, 2022). Zeind et al. (2005) underscore this cruciality by arguing that the contribution that mentorship makes as a support mechanism for developing and retaining faculty is highly reputed. Other scholars also tout this view regarding the potent value of mentorship. For instance, Higher Educational Institutions (HEIs) have used this developmental practice as a means of managing the talents of their inexperienced or freshly appointed faculty, as part of their succession planning apparatus and to facilitate the transference of skills and knowledge needed to effectively function (Roets et al., 2019). Thus, mentorship cements itself as what Zeind et al. (2005) describe as a chief element of academic environments. In light of the stance that faculty generally feel a sense of disconnection and disengagement from their departments (Beech et al., 2013), the availability of this support continues to remain critical for early-career academics.

Nonetheless, there is a challenge. Despite the value of mentorship, the increasingly competitive nature of higher education means that academics' time is often more devoted to their professional demands as opposed to the career development of others through, for instance, mentorship (Roofe & Miller, 2015). Indeed, there are increasing calls for mentorship to be officially recognised, to ensure that advanced career scholars are willing to make themselves available to mentor junior colleagues (Sargent & Rienties, 2022). Roofe and Miller (2015) and Sargent and Rienties (2022) reinforce the currency of the need for scholars to further explore mentorship as a strategy for early-career empowerment by ensuring that the experiences they encounter are developmental and prepare them to thrive. Remmik et al. (2011) contend that experiences during the initial years of academic careers have a great influence on the development of university lecturers' concepts of learning and teaching, their values, and their professional identities as university scholars.

This eradicates any doubt that for universities to thrive, they must have a workforce that can deliver on their objectives for teaching, research, public service, and other priorities.

The foregoing discussion supports Straus et al.'s (2013) view that effective mentorship is imperative for the career success and satisfaction of both mentors and mentees, but myriad challenges prevent faculty members from accessing the effective mentorship they need. The Caribbean landscape, including Jamaica, has not been cauterized from this reality; which leaves much work to be done through contextual exploration of mentorship experiences from varied perspectives. This qualitative research was a response to address this gap. It was aimed at understanding early-career experiences with mentorship at a local university to gain insights into their experiences as they navigated the terrain of mentorship, and their recommendations for improving it.

This study is therefore significant, as it focused on the experiences of early-career academic staff in an underexplored area in the Caribbean. The body of existing work, such as that of Ferguson and Ellis (2022), addressed mentorship of Masters' level students; whilst work such as Roofe and Miller (2015) focused on the mentor-mentee relationship between the two authors. The work of Gill and Gosine-Boodoo (2021) studied librarians, but it used a survey research design. This study contrasts with Gill and Gosine-Boodoo (2021) by employing a qualitative approach to allow for an in-depth exploration of participants' perceptions and experiences. Additionally, it adds to this growing body of work by focusing on early-career academic faculty experiences at a regional Caribbean university. Hence, it offers insights into practical and policy measures that can be incorporated into regional HEIs to support the career trajectory of these individuals and opens other areas for research exploration. Additionally, the study provides a springboard from which further research exploration can be pursued to deepen the dialogue about how to best address early-career faculty in Jamaica and the wider Caribbean. The importance of this dialogue is justifiable in the context of what has already been shared. If early-career faculty members

fail to master their work demands (especially in research, teaching, and collaborative efforts), their career trajectory will be eclipsed by the resultant psychological strain and will retard their growth. This would not auger well, as universities must respond to national developmental needs, and to operate from such a state of deficit would negate this goal. The applicability to Jamaican universities, particularly the one under study, is great, given the institution's need to enhance its global competitiveness through high-quality, relevant research.

This research was guided by two central research questions and their commensurate interview questions to understand early-career faculty experiences and perceptions of mentoring and their recommendations to improve mentorship.

### Central Research Questions:

1. What are early-career academic staff's experiences with and perceptions of mentoring?
2. What recommendations do early-career academic staff have for improving the mentorship process?

In this paper, we therefore began by establishing the overall struggle of early-career academics and the justification of mentorship as an appropriate tool to address some of their challenges. What follows is a brief overview of mentorship, early-career faculty needs and the scholarly discourse on mentorship in Jamaica and the Caribbean. Thereafter, we provide a description of our methodological processes and present the research findings, themed under the main research questions. The article closes by presenting some practical implications for policy, practice, and further research work.

### Conceptual Framework

For this study, we turn to Yob and Crawford's (2012) Mentoring Model, developed from their synthesis of the literature on mentoring students. Whilst their framework was developed with respect to doctoral students, we felt this an appropriate framework, given that the literature

speaks to both sets of elements (academic and psychosocial) in this framework. The academic domain, as outlined by Yob and Crawford, consists of four attributes that mentors should have:

- Competence — which includes individuals' expertise in their field, knowledge of research methods, and familiarity with the norms of their institution;
- Availability — immediacy in professional and social contexts, accessibility, and responsiveness;
- Induction into the academic environment through, for instance, facilitating opportunities for networking, collaborative research and publications; and
- Challenge — to facilitate the mentees' growth through constructive criticism and professional and academic questioning.

In addition to the academic domain, Yob and Crawford also outlined three attributes underlying the psychosocial domain that a mentor should possess:

- personal qualities — such as trust, friendliness, and patience;
- communication skills — such as the ability to engage in active listening and to speak the truth to mentees; and
- emotional support — offering the mentee encouragement and affirmation.

Yob and Crawford's (2012) framework is useful as it speaks to the qualities and needs that underpin a successful mentoring relationship, support the mentees' successful orientation into academia, and promote development as an academic.

### Literature Review

#### The Origins and Role of Mentorship

Mentorship has been a longstanding critical aspect of higher education, given the pivotal role that it plays in the holistic development and growth of tertiary students (Paterson & Hutchinson, 2019), a pool from which HEIs typically recruit

full-time and adjunct faculty members. Newman (2022) adds to this discourse about the role of mentorship by placing emphasis on the value of the mentorship process to the mentee. Similarly, given the importance of research and publications to faculty in HEIs (Gill & Gosine-Boodoo, 2021), mentorship has an essential role to play in how early-career faculty members grow and develop within their positions.

The concept of mentoring originates in Greek mythology with Odysseus, the King of Ithaca, entrusting his colleague Mentor with his son Telemachus for guidance and counselling (Büchner & Hay, 1998; Cohall, 2021). Mentor "plays a protective role in the safe and proper development of the young charge's potential" (Büchner & Hay, 1998, p. 19). Thus lie the origins of mentoring as a process to guide newcomers into their profession (Büchner & Hay, 1998). Mentoring has been defined as a "process in which a person with a rank of seniority, the mentor, guides the development of a junior colleague, the mentee" (Cohall, 2021, p. 66). A similar definition proposes mentoring as "a form of academic socialisation that mediates the professional learning of new faculty, facilitating their entry ... and thus equipping them to adapt effectively both personally and culturally" (Mullen & Forbes, 2000, p. 43). In these and other definitions, it is seen as a process that benefits the mentee primarily. Indeed, as Büchner and Hay (1998) propose, it is most often thought of in this way.

Mentoring has been characterized as formal or informal, with differences in how the relationships are initiated, how long they last, and the ways in which they are governed (Newman, 2022). Numerous definitions of mentorship abound in the literature, with its traditional conceptualisation as one that has been hierarchical and unidirectional (Dickson et al., 2021) in nature, with unequal power relations between the mentor and mentee, primarily benefitting mentees. Despite these merits, Bottoms et al. (2013) critiqued this model as one that could potentially stifle the autonomy of scholarship production, which is central to academic work. However, as the concept has evolved, more contemporary conceptualisations

view mentorship as a process that can also include non-hierarchical structures. For instance, peer mentorship is not focused upon as much in Jamaica and the wider Caribbean in the literature, even though peer mentors report more feelings of "mutual expertise, equality and empathy frequently absent from the aforementioned" traditional mentorship relationships (Büchner & Hay, 1998, p. 22). Indeed, the findings of other researchers also highlight the critical value that peer mentors have for early-career scholars (Mullen & Forbes, 2000). For instance, from their case study of a 6-year mentorship program, Dickson et al. (2021) reported several benefits early-career faculty members derived from their peer-mentorship group. These included targeted professional learning experiences, highlighting each other's work through nominations for rewards and positions of leadership in professional bodies. Nonetheless, this should not undermine the fact that there is also research that speaks to the mutual or reciprocal benefits of mentoring for both mentors and mentees (see Ferguson & Ellis, 2022).

The literature also underscores the various roles that mentors play, including that of teacher, confidante, counsellor, supporter, coach, sponsor, collaborator, and role model (Bäker et al., 2018; Büchner & Hay, 1998). The benefits of mentorship for the mentee include, but are not limited to, the development of a professional academic identity; learning new skills; learning the institutional norms, processes, expectations and responsibilities of the new work environment; increased scholarly productivity; integration into professional networks; sharing of scholarly opportunities; and emotional support (Anekstein, 2021; Bäker et al., 2018; Ferguson & Ellis, 2022; Mazerolle et al., 2018; Smith et al., 2019). Thus, mentorship has both academic and psychosocial functions.

### **Early-Career Faculty Needs**

On the academic faculty journey, one certainty about mentoring relationships captured by Mgaiwa and Kapinga (2021) is that beginning and more experienced academics encounter various impediments. This demands close attention to

the elements that frame successful relationships and those that occasion failure, considering the support that early-career faculty need. Straus et al. (2013) advocate for relationships framed by reciprocal influence, mutuality of respect, transparent expectations, similar values, and personal associations to ensure successful mentoring relationships. In contrast, they claim that where communication is weak, attitude is non-committal, a clash of personalities and interests exists, real or imagined competitiveness is discerned, and the mentor is inexperienced, mentorship will collapse. Therefore, to mitigate failed early-career mentor relationships, what they need to progress in their career must be understood.

Sims' (2002) two general categories of mentoring — career functions and psychological functions — provide the lens under which these challenges may be examined. According to him, career functions aid career growth and expose mentees to situations which make them more visible and provide challenges, exposure, and protection, among other functions. On the other hand, the psychological functions of mentoring help the mentee's sense of personal and professional efficacy, and provide validation and camaraderie. Faith as an engine of agency and resilience; the ability to identify independent interests and focus; and the input of formal and informal mentorship structures were identified as important psychosocial factors of the early-career journey in an African context (Kay & Karmowska, 2024). While advancing that early-career academics found value for their career advancement and workplace safety in their mentorship experiences with senior academics and peers when it was supportive, Gatwiri et al. (2024) also noted that early-career members of staff were often concerned about their experiences with lack of mentoring and betrayal by their peers or senior others. This further highlights the salience of psychological and psychosocial support structures in mentorship relationships.

Though the academic arena has experienced extensive changes over the past few decades for early-career researchers in relation to overall well-being and employment-related matters

(Johnson & Weivoda, 2021), some challenges persist, including in the Caribbean. Related to career functions, some areas in which early-career academics manifest gaps are: inadequacies and uncertainties in undertaking research, securing grants, student advising, and committee service (Popper, 2007, as cited in Houston, 2019). Zimmerman (2021) supports student advising but expands the needs by adding the ability to cope with institutional change and learning to teach in the context of higher education. Additionally, early-career faculty have suffered from burnout (Iris, 2023) and worry about their career progression, given the likely obstacles to becoming tenured (Austin, 2010). They also wrestle with instability in their jobs, insufficient funds for research, and participating in high-quality opportunities for training (Shettima et al., 2024).

Early-career faculty also have needs associated with their psychological functions. The absence of encouragement, lack of mentoring, and insufficient time to engage in other work — apart from teaching (Hemmings et al., 2013) — are among their struggles. Essentially, they need consistent encouragement, mentoring, and more time to be productive. Theirs is also the struggle to unpack what is normative or traditional within their departments, as well as the various cultures that exist (Sargent & Rienties, 2022). Yet, these are not all. Austin (2010), in naming the lack of collegiality and community and the need to achieve the right work-life balance as challenges that early-career faculty face, alerts readers to the need for a more collegial atmosphere and stable work cultures in which they can flourish. Hence, this amplifies the need for effective mentoring and the importance of including their perspectives when analysing their needs and crafting relevant and applicable solutions to address their concerns. Another important consideration is the recognition that mentorship is not an act to be done to early-career scholars, but rather a process in which to involve them. Newman (2022) validates this way of constructing mentorship by highlighting various characteristics that impact the success of mentor-mentee relationships, including personality types, reciprocity, and shared interests.

## **Mentorship in Jamaica and the Caribbean**

In the Caribbean region, Newman (2022) points out that mentorship at the graduate student level is a “hybrid of the U.S. and United Kingdom model”, where “supervisors generally provide guidance in the form of monitoring their students’ academic progress, while providing instruction and encouragement in their research activities; more so than mentoring on personal and career development” (Newman, 2022, p. 199). He does note, though, that this supervisory relationship may evolve into a mentoring relationship.

Within Jamaica and the wider Caribbean, the literature base on mentorship is slowly growing, though it is not as substantive as it could be. Some researchers have been engaging with the notion of mentorship at various levels, including for undergraduates, postgraduates and faculty. Paterson and Hutchinson (2019) used a quantitative research approach to explore mentorship outcomes for Bachelors’ level degree students at a university in the Caribbean. Amongst their findings was that student affairs staff had a significant impact on mentoring outcomes, as opposed to other types of mentors. Ferguson and Ellis (2022) study used a qualitative approach to explore mentors’ and mentees’ experiences with respect to graduate research student development at a university in the Caribbean, with a specific focus on Masters’ level education students. Their study found that mentoring relationships enhanced students’ research capabilities, found students more readily identifying themselves as researchers, and facilitated the translation of graduate students’ research skills into their professional contexts in the education sector. Newman (2022) undertook a qualitative study to explore the mentoring experiences of both mentors and graduate student mentees at a university in the Caribbean, finding that both sets of participants described the relationship as a fulfilling one, despite some of the challenges encountered.

Research on mentorship at the faculty level has also been undertaken. Roofe and Miller’s (2015) qualitative case study of two academics in Jamaica, documented and discussed how

the mentorship relationship facilitated the development of the junior academic through factors such as goal setting, the enhancement of confidence, and the provision of opportunities for career development. Gill and Gosine-Boodoo (2021) used survey research to explore the mentorship experiences of academic librarians at a regional university campus in Trinidad. Amongst the findings were that whilst individuals received support from mentors, they were not confident that the support had any impact.

Although these studies are important and have added to the body of literature, the research literature on mentoring in the Caribbean region needs much more development (Newman, 2022). In particular, Newman (2022) points out that “the exploration of mentoring relationships can provide an understanding of how they can assist faculty, administrators, and students to highlight the nuances of cultural and institutionally specific experiences” (p. 222). Further, given Cohall’s (2021) call for mentorship as a key element of maintaining high quality teaching, training, and research within the regional university – The University of the West Indies – this proposed study becomes significant. Cohall (2021) proposes that “formal mentoring can build resilience of Caribbean academic institutions [in a] challenging environment of higher education [and that] building capacity through mentorship in higher education strengthens the research output and contributes to the development of the region” (p. 67).

The scope of this literature review on early-career mentorship research in higher education acknowledges both traditional (Büchner & Hay, 1998) and contemporary (Dickson et al., 2021; Mullen & Forbes, 2000) mentoring approaches; a variety of early-career needs (Iris, 2023; Zimmerman, 2021) and the means by which they may be addressed (Austin, 2010; Hemmings et al., 2013); as well as the career functions of mentorship (Sims, 2002; Dickson et al., 2021). The mentorship research discussed in this review, specific to the Caribbean, also examined mentorship practices at the undergraduate, graduate, and faculty levels in higher education, with one study remaining ambiguous regarding

its impact on mentees. Consequently, there is a vibrant, growing body of literature concerning mentorship in the Caribbean. However, in light of Newman's (2022) characterisation of Caribbean mentorship practices as a hybrid model, there are gaps in the understanding of mentorship relations. To begin with, focused research on early-career faculty experiences in the Jamaican and wider Caribbean contexts is still limited and there is a lack of sufficient knowledge to develop an indigenous model that reflects Caribbean experiences. Both understandings are vital, as mentorship efforts align with institutional capacity-building, research productivity, and collaborative opportunities at the university level, which could potentially have a broader impact. This suggests that mentorship should be regarded as a sustainable development endeavour, reliant on succession planning to ensure that mentors are adequately prepared (Straus et al., 2013) to impart the skills and knowledge necessary for the academy's survival. This research exploration of early-career faculty experiences can provide valuable insights that contribute to any framework, guiding more intentional discussions about how early-career faculty mentorship needs are addressed.

## Methodology

### Study Design and Participants

The study employed a qualitative research approach in order to allow us to hear directly from the research participants about their unique experiences with, and perceptions of, mentorship and its various facets. Additionally, the use of qualitative research allowed the researchers to access deep descriptions and understandings (Lichtman, 2013) of early-career faculty experiences with mentoring. Merriam (2009) highlights that, "Qualitative researchers are interested in understanding how people interpret their experiences, how they construct their worlds, and what meaning they attribute to their experiences" (p. 5). Specifically, a generic research design was used, as this study "exhibit[s] some or all of the characteristics of

qualitative endeavour" but is not explicitly guided by a particular qualitative research genre (Caelli et al., 2003, p. 2; Kahlke, 2014). Additionally, as Caelli et al. (2003) assert, the generic research design is apt for those whose focus is on understanding an experience or event. In this instance, we were focused on understanding early-career academics' experiences, specific to mentorship. This deep, detailed understanding is critical to ensuring that mechanisms are in place to respond to and support the needs of these early-career academics in ways that serve their interests and, by extension, further universities' agendas in research and publications.

The study focused on six early-career academic staff members within a particular faculty at a regional HEI in Jamaica. This was deemed adequate, given that the nature of qualitative research accommodates small sample sizes (with sometimes as few as one person), allowing for in-depth detailed data to be gathered (Lichtman, 2013) on participants' experiences of mentorship. These were individuals drawn from five of the faculty's departments who had obtained their doctoral degree, as we felt that those with a doctoral degree were on a research track within the university, which includes a focus on research and publications. To ensure inclusion, we advised the Dean of the faculty about the research. The Dean advised that we approach heads of departments to identify possible participants who fit our study criteria; in keeping with Bosanquet et al.'s (2017) thoughts that early-career in academic circles typically spans five years after PhD completion, with a focus on career progression for postdoctoral appointment and beyond. Additionally, purposive sampling was also used to some extent, as the first researcher occupied an administrative role at the time of the study and thus knew a number of early-career staff at its inception. Participants who did not fall into the category of early-career academic faculty members, as well as those without a PhD, were excluded from the study in order to set its parameters (see Table 1). Four faculty members were female and two male. All had obtained their PhD within the last six years at the time of this research.

**Table 1***Research Participants*

<b>Participant</b>	<b>Gender</b>	<b>Year PhD Awarded</b>
Daisy	Female	2020
Basil	Male	2018
Acia	Female	2021
Lily	Female	2021
Olive	Female	2018
Briar	Male	2022

**Data Collection**

Data for the study were collected through the use of interviews, as the technique allows researchers to hear from participants in their own words. Specifically, one-to-one semi-structured interviews were used, as these offer the researcher and the participants flexibility in the research process. As there was a rise in COVID-19 cases in Jamaica at the time of the study, to ensure that neither the participants nor the researchers were put at risk of contracting the COVID-19 virus, interviews were conducted virtually, via Zoom video conferencing. The interview questions focused on how participants defined a mentor/mentoring; their involvement in mentoring since joining the faculty; successes or challenges experienced; strategies used by their mentor(s); how mentorship has shaped them as early-career faculty; and recommendations for improving the mentorship process. Additionally, we sought to gather basic demographic data about the participants. We felt these questions focused on their experiences of mentoring, and recommendations with respect to developing a culture of mentorship within the faculty and the wider university.

**Data Analysis**

To facilitate data analysis, all one-to-one semi-structured interviews were transcribed verbatim. The interview transcripts were read through several times to become familiar with the data and to locate identifying markers for removal in order to safeguard anonymity and confidentiality. Transcripts were coded, with words or phrases that described the meaning of

the segments of text assigned (Creswell, 2012). Open-coding techniques were used for broad meaning-making. Subsequently, similar codes were clustered. This categorization process led to the emergence of common themes through axial coding. In terms of trustworthiness, several measures were taken. The data were first triangulated among three individuals (the two researchers plus a research assistant) who reviewed codes, clusters, and the assertions being proposed to identify similar ideas that emerged, and locate discrepant information and possible omissions. Member checking was then conducted — transcripts and preliminary findings were shared with participants to ensure accurate representations of their data and alignment of the findings with participants' experiences. Finally, findings were shared using rich, thick description, enabling readers to assess their transferability. In keeping with the generic research design, these findings took on a narrative feel in some instances, allowing for the exhibiting of features of other research designs (e.g., narrative) even whilst not claiming to be a particular research design (Caelli et al., 2003).

**Ethical Considerations**

The research proposal was submitted to and approved by the university's institutional review board. Additionally, permission to undertake the research study was sought from the Dean of the Faculty from which the participants were drawn. Participants who fit the inclusion criteria for the study were introduced to the research and invited

to participate. The informed consent forms were shared with the potential participants, outlining further particulars of the research. In addition, each participant was pre-assigned a pseudonym for use during the data collection, data analysis and reporting processes. In reporting the findings, these pseudonyms were used to ensure confidentiality.

## Positionality Statement

Before we go further, we think it would be useful to offer some details about ourselves and what piqued our interest in this study. The first author has offered support to early-career researchers at the doctoral level throughout her career to-date in academia, through (i) the delivery of workshops and courses focused on research, writing, and publication skills, and (ii) the inclusion and mentorship of graduate students in research and publication projects for which she is principal or co-principal investigator. She does this as a way of helping young researchers navigate their entry into academia, particularly as she benefited from three critical mentorship relationships at pivotal junctures when she was an early-career researcher.

The second author led a department at a tertiary institution where oversight of new recruits was part of her portfolio. She displayed commitment to helping them adjust to their roles and functions in ways that would maximise the department's output and experienced how impactful those efforts were on their adjustment. Recently, the roles have reversed. She transitioned to a university, where, despite having nearly 30 years of teaching experience, of which 15 years were spent training teachers, she was faced with navigating an entirely new set of work demands at that level. While her previous work experiences and a few supportive colleagues aided her pathway as an early-career university faculty member, the transition proved challenging due to the general perception that one should inherently know how to navigate the role. This sparked her curiosity to deeply understand two aspects: how other early-career individuals navigated the environment and the

institutional support structures that were in place to facilitate a smoother transition. Understanding these factors can shed light on how to assist her, even while she continues to navigate this landscape. Thus, both researchers' experiences converge at the point of a shared desire to seek further knowledge to enrich our independent relationships with the respective early-career members with whom we continue to interact. In this light, we remained alert throughout the data collection, analysis, and reporting of the need to sublimate any possible bias our closeness to the subject could invoke.

## Findings

In this section, we now turn to present the findings of our research. The main research questions form the broad headings or thematic focuses, and the assertions derived from each are the subthemes.

### **Research Question 1: What are early-career academic staff's experiences with mentoring?**

#### **Assertion 1: Early career academic staff describe varied experiences with mentorship since joining the faculty.**

In general, participants shared positive experiences since joining the faculty. They expressed finding mutuality amongst colleagues, rich and meaningful interactions with students, and opportunities to develop professionally. Basil shared: "I can say, one, that I have found the teaching very fulfilling ... and then to have colleagues as well who are much more specifically interested in some of the work that I do as well". Lily indicated:

So I guess in a nutshell, I would say very good ... I like the opportunities for growth and I like the interaction with my students. That's the best part of the job. The interaction with students is rich. I feel like they learn from me and I learn from them ... so I like that. But in addition, you know, the university allows opportunities to grow.

Thus, though Basil and Lily outlined the positive aspects of their roles, Basil's was anchored in his interactions with students and colleagues'

interest in his work while Lily presented a contrast, highlighting more satisfaction from the reciprocal learning interactions with students.

In terms of mentorship, these experiences were more mixed in nature. Participants cited some elements of support, for instance, with respect to research and publications. However, they found some aspects of the onboarding process to be minimal in nature. With respect to her Department, Daisy shared,

Previously, I don't think that structure and support existed. So, um, I think there has been a deliberate move to create an environment where academics ... in terms of research output, which is priority ... there is a mechanism in place that is trying to get us to complete more research.

Briar concurred with Daisy's reported initial lack of onboarding and the frustration it occasioned when he outlined:

Well, in my mind, I've gotten aspects of the support I need ... initially when I joined ... I got frustrated and it was more on the administrative side ... and I don't think that the onboarding process was one that accommodated somebody who is new to the process.

Thus, participants highlighted fulfilling experiences with respect to their new work in general but more varied experiences in terms of the support received, noting that at the start of their journeys, where support was non-existent or minimal, it improved as they moved on.

**Assertion 2: Participants have had to seek mentorship from plural means to address either human or material needs in seeking to advance their careers.**

In instances where there was a lack of formal and/or informal mentorship structures or where participants felt more support was needed, participants drew on various means of support. This included accessing expertise from persons within and external to their departments. Olive, for instance, described how she drew on a few key persons for mentoring support, including some from outside of her own department.

But for my career, I have more than one mentor. I have more than one. Um, but I have a main one ... the thing is, you

have to look where you want to go in your career. The person who is the main one may lack certain, um, dimensions ... So, therefore, I have to also have another person who can help me in the area of projects and publications because the main person is not really ... whereas the person is an academic, they're not really entrenched in that culture of um, research and projects and doing extracurricular stuff. I do have like probably about two or three more persons who I'm constantly in touch with them on a regular basis getting that kind of support that I need ... one is connected [to the faculty]. One is retired. She's directly in my specialization ... um, from our faculty. And the other one, she is in another department that is connected to my field.

This was similar to what Daisy expressed as she highlighted the need to draw on diverse expertise given the newness to the field and the lack of explicit guidance in some instances:

So I would say at the moment I have two mentors: one in the department and someone who is external ... there are so many areas as a new academic, someone who is new to the field, that you were never exposed to or taught or wasn't explained to you explicitly ... this is how we operate, this is what is expected and so on ... Yeah, the local [mentor] ... So personality-wise, okay, I'd say that we're opposite...worked in academia for over 20 years.... We study adjacent issues. So they understand all the theories and questions I'm asking.

Briar also shared a similar perspective to that of Daisy and expounded: "in fact I consulted and got guidance from outside because I was asking inside and I never got any help." Thus, these individuals were drawing on various persons with the relevant expertise to offer them guidance, even when those persons could not be found within their departments. They found this integral to ensure that they could understand and meet the demands and expectations of them in their new environments.

**Assertion 3: The majority of participants believe mentors have shaped their career paths and it is vital that mentors are interested in their growth and professional advancement.**

The participants in this research were of the belief that those acting as their mentors

had shaped their academic career paths. Acia outlined how mentorship helped her and also helped graduate students and other early-career faculty:

There were groups of graduate students and, you know, early career professionals and we would discuss the ways to publish our articles and how to craft manuscripts and to create, you know, other connections with other professionals in different universities. So that was one experience.

Thus, this helped to contribute to her research publication work as well as broaden her professional network, particularly in terms of those working at other institutions. With respect to the mentor who offered her opportunities in teaching, Lily emphatically stated "They have contributed tremendously to that. So I feel confident when I stand in front of my class". Lily could therefore more confidently deliver her material and interact with her students. Additionally, Basil said,

I mean ... having to plan ahead for my career and where do I want to be in the future ... I think mentorship has definitely shaped that ... what I need to prioritize is learning the ins and outs of the evaluation and promotion process here ... I think mentorship has really helped me.

Thus, for these early-career academic staff, mentors helped in several of their academic responsibilities, including teaching and orientation to departmental and university norms and expectations.

**Assertion 4: Participants experience mentorship as a reciprocal act between mentor and mentee, and one that fosters continuity.**

Similar to the literature, these participants saw themselves gaining from their mentor whilst also giving to their mentor. Basil shared that "there's more opportunity to influence the mentor, I suppose, and mentor them. I'm not saying that from pride ... or, you know, cocky ... you know, as I said, there's room for the relationship to flow in different directions." Briar, in speaking of his relationship with his mentor and their collaborative activities, indicated that "we've collaborated in that way. So what it says

is that I'm sharing aspects of my experience with her and she's also sharing aspects of her experience with me ... So the technical term is a reverse mentoring approach". Thus, Briar felt that he was able to offer to the mentoring relationship even as he was benefitting from it.

Additionally, they felt that this process of contributing to someone's growth should be a continual one, where those who have benefited from mentorship give back. They therefore felt that it was incumbent upon them to "pay it forward" with students and/or peers. Acia described it thus:

You know, you have received that help and that guidance and that kind of positive reinforcement and it's good that you can pass that on, which I typically do, you know, whenever I'm in a session with my students ... and you know I would provide them with that necessary information and that support. So having that foundation first makes it easier for me to pass that tradition on as well.

**Research Question 2: What recommendations do early-career academic staff have for improving the mentorship process?**

**Assertion 1: Participants see merit in having both informal and formal mentorship structures but seem to think a somewhat more formal structure should be in place to cater to the needs of new faculty.**

As the mentorship within his department was more informal in nature, Basil shared the following thoughts:

There is something about a more formal process ... the ideal for me would be to go when I want ... when I think I need it ... so even if someone offers advice, again it's not something that I feel a particular weight, um, that I must do this thing. The more formal part is having someone who is more consciously keeping track, checking in, asking questions, but not with the sort of heavy weight. So to me that would be kind of ideal, rather than being slotted into some sort of formal structure and system that I might not always find very helpful. Or that might be a little bit intimidating.

Thus, he felt something formal was needed but not necessarily conceptualised as a formal system with rules and regulations. Indeed,

he felt that a formal system might actually be more intimidating, thus perhaps undermining the intended benefits of the mentorship process. Briar thought that both structures could be in place, with the formal aspect providing a pool of mentors who were available and willing to offer their expertise to those needing support. The informal aspect could emerge naturally and organically. He stated:

So it could be both. A formal programme shows the initiative ... shows something different about the (department) in terms of that direct interest or effort to ensure that there is mentorship. But an informal process also works. The only thing I'd say is from a formal or informal perspective, having the pool of people because usually a mentee goes searching for the mentor ... and not the mentor go searching for the mentee. Because there could be somebody who is interested in mentoring me but I have no such interest in that person. So from the perspective of formality, it could mean that there is a formal slate of persons who are put up to see if persons need mentors, here are the persons.

**Assertion 2: Mentees must recognise that even whilst having a mentor, they can still exercise autonomy.**

Participants were vocal in advising mentees to maintain their own sense of autonomy even whilst drawing on the expertise of their mentors. They highlighted in particular the need to exercise their own judgement in situations as this would build their confidence and self-efficacy in various aspects of academia. Olive and Daisy highlighted this succinctly. Olive said, "She gives good advice. She's an advisor. At the end of the day, you know the final decision rests with the mentee. Nobody can tell you what to do". Daisy voiced, "You can't spoonfeed the mentee. That's important. So you can't give them everything." Lily, with slightly more detail, shared:

And one of the things she did was give me maybe the first semester she gave me one lecture to plan and deliver. And she supervised it ... but that was one of the earliest forms of mentoring I got. And she would talk me through ... One of the things she would invite me to assist with developing materials ... when she had to do a case study, cause we develop the case study test from scratch, and she asked

me to do the questions. And so I got some autonomy as well. And all of that helps, you know, with the confidence-building.

Thus, Lily highlighted one of the benefits of this autonomy as the enhancement of confidence within the new academic staff member.

Associated with the idea of autonomy, the research participants spoke to the notion of boundary-setting within the mentor-mentee relationship. This was seen as important, given that the relationship is one existing within a professional context. Daisy believed that, as with any professional relationship, these parameters should be clear:

You have to set some boundaries in terms of expectations ... even if it's informal ... your mentor may not be your friend ... setting expectations from the outset and perhaps the relationship between mentor and mentee may change over time. But understanding from the offset how you're going to relate with each other is important. Because it's a professional relationship.

Olive raised a similar viewpoint articulating that "And you the mentee, you cannot be looking for a mother or father or a bunununu<sup>1</sup> friend. A mentor is not really your bunununu friend. Yes, you're going to laugh and talk. But you have to be willing to listen". Olive therefore underscored that, at its core, the relationship was a professional one, even whilst there might be moments of light-heartedness within the interactions.

## Discussion

The early-career academics who participated in our research provided deep insights with respect to their experiences of mentoring, much of which aligned with the existing literature. These individuals indicated positive experiences since joining the faculty, finding fulfilment in their teaching and in sharing their work with colleagues who had similar interests and/or who had an interest in their research undertakings. They also appreciated that the university offered various opportunities for professional growth. Despite this, similar

<sup>1</sup> In Jamaican patois, a "bunununu friend" means someone close to you.

to what is documented in the literature, these individuals desired support in areas such as research and publications and orientation to the norms of their departments (see Sargent & Rienties, 2022; Zimmerman, 2021). Thus, these individuals welcomed the mentors who offered them support and guidance as they desired socialization into the academic norms of their departments and the wider university (Mullen & Forbes, 2000). Of interest, whilst the need for mentors who possessed attributes in both the academic and psychosocial domains — as outlined in Yob and Crawford's (2012) Mentoring Model — was voiced, the desire for mentors who had competence, could offer induction experiences, and were available (academic attributes) were the attributes foregrounded by participants.

Participants described receiving mentorship through both informal and formal structures (Newman, 2022) and indicated receiving support from more than one mentor in some instances. Additionally, where neither formal nor informal structures existed in their departments, they sought mentorship in some cases from those external to the faculty, including from other universities. Notwithstanding this, they felt that the mentors offered critical support for the beginning stages in their careers as academics and their progression in areas such as teaching, research, and publications. The participants did not simply view mentorship as a purely hierarchical relationship. Rather, they saw mentorship as something mutual or reciprocal in nature, from which both mentor and mentee benefitted (Ferguson & Ellis, 2022; Straus et al., 2013). Further, they outlined a clear need for those benefitting from the mentorship process to help others as they progressed to students at both the undergraduate and graduate levels, and other early-career scholars.

Based on their experiences, participants shared several important recommendations for developing a culture of mentorship within the faculty. They supported the idea of a formal mentoring structure (however that might be conceptualised), so that scholars are not neglected or overlooked at the onset of their careers. Indeed, this formal mentoring can ensure capacity-building and output in the

realm of higher education (Cohall, 2021). This may necessitate that mentoring be officially recognised in promotion and tenure processes (Sargent & Rienties, 2022), particularly given the ever-increasing work demands of academics. This is an important consideration since the areas of research, teaching, and other academic work featured strongest in the participants' experiences in terms of what they desired from mentors and what they received from them. Though the findings of the research suggest that they recognised that the psychological functions of mentoring were important, their manifest understanding of how mentorship works was driven by career progression.

They also suggested the need for clear expectations (Straus et al., 2013) to be outlined at the onset of the relationship so that boundaries are not transgressed. Although they were gaining from the mentorship relationship in various ways, the participants indicated that this did not negate the need for themselves and other mentees to exercise their own autonomy and decision-making as it pertains to their duties and career progression.

Therefore, in terms of empirical achievements, the study demonstrated that a segment of the Caribbean's early-career faculty mentoring experiences resonates with the global understanding that there is a need for structures of mentorship which are sensitive to promoting autonomous scholars. Another noteworthy point is that the participants in this study seemed very proactive in externally seeking the material and personal resources they lacked within the institution. The findings of the study presented a dominant hierarchical mentorship model in practice, which is a slight departure from Bottoms et al.'s (2013) critique that this model could stifle agency.

## Recommendations

In this section, we consider some of the practical implications for implementation and research and policy directions to be pursued, inspired from the findings and discussion. These are our recommendations to accompany those voiced by our research participants.

## Training and Support

Leadership has to be strategically centred in any attempt at moving the mentorship agenda. In this light, deans and department heads should have access to structured, context-specific training to enable them to provide career guidance for the faculty members they supervise who are at various career stages. This training would help them understand the unique needs of each career stage and empower them with strategies for practical ways to facilitate and nurture career growth. Some of these strategies could include, for example, providing targeted feedback, goal setting, creating a context for co-producing research, teaching resources or other professional learning activities, where desirable attitudes and skills can be modelled for early-career faculty members. Though the university has an orientation, departmental onboarding is also necessary to acclimatize new members to the department's culture.

## Research

As leaders in HEIs contemplate the strategic role their institutions will continue to play in national development, it would be important to widen the scope of the current discourse about early-career academics' experiences with mentorship through gleaning insights among a wider cross-section of Jamaican universities. This research would ascertain, among other things, national mentorship needs, structures in place, and levels of success achieved by them. To balance the perspectives, it would also be important to understand from Jamaican university top leaders the role they believe mentorship plays in educational organizational development and the career trajectory of early-career academics, how they have been supporting the effort, and the goals they intend to achieve with their pursuits.

## Policy

In addition to the research and practice implications, policy considerations are also possible. Based on the participants' descriptions of their experiences with mentoring, it is recommended that the university consider a broad-based and structured framework of

mentorship. Such a framework should be accompanied by a policy development and implementation process guided by succession planning principles, which display sensitivity to talent development, career planning and management, and advanced replacement strategies.

## Conclusion

There are some limitations to the study. As a qualitative study, the findings of the research are not generalizable to other early-career academic staff members. Additionally, given that the study focused on participants from one faculty, the voices of those from other disciplines are absent. Finally, given the gender make-up of the staff within the faculty, there are more female than male participants.

Despite these limitations, what this research has demonstrated is that the primacy of mentorship for early-career academics should not be understated as it continues to emerge as an area of consistent need in HEIs. Though early-career academics should continue seeking ways they can become more agentic in the exercise of autonomy over how their career progresses and the support systems that they can activate, they will achieve better success if done within an institutional frame. For this, they need support. Within this context, for those institutions striving for continuous growth, the legitimacy and importance of a well-equipped academic core is critical, and the transformative power of mentorship should be harnessed to accommodate the upward trajectory they desire. Mentorship should be prioritized within HEIs because of its potential role in enhancing the academic and professional development of early-career academics to improve their pedagogical competence, content knowledge, and leadership skills. Therefore, HEI leaders, as the custodians of our educational institutions, are tasked with maximizing the potential of this invaluable resource through their transformational leadership capabilities and situating mentorship more centrally in their organizational leadership and management practices.

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# Using Social Media to Enhance Project-Based Learning in Caribbean Higher Education: A Case Study

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## Abstract

Social media's transformative potential offers Caribbean educators innovative approaches to project-based learning (PBL) in higher education. This exploratory case study investigates the integration of digital platforms in a health communication class within a Caribbean academic context, examining how social media can enhance student engagement and learning outcomes. Students developed theory-driven digital health messages and executed mini-campaigns across social media platforms. Utilizing qualitative methodologies, including student reflections and instructor observations, the research analysed pedagogical dynamics. Key findings reveal that strategically structured social media-based PBL enables students to cultivate real-world communication skills while practically applying theoretical frameworks. The study demonstrates social media's capacity to create motivational, contextually relevant learning environments that support hands-on creative experiences. While highlighting the potential of digital pedagogies, the research also underscores the importance of implementing social media interventions with institutional sensitivity and robust ethical considerations.

*Keywords:* project-based learning, social media, campaign strategies, higher education, pedagogy

## Introduction

The proliferation of social media has equipped educators with innovative strategies for teaching and assessment. Researchers have extensively documented the advantages of digital platforms, highlighting their potential to enhance student engagement, collaboration, and learning outcomes (Han & Shujun Han, 2022; Safapour et al., 2019; Barclay et al., 2018; Greaves, 2024; Rafiq et al., 2024). These benefits are particularly pronounced in communication classrooms, where social media can serve as powerful tools for facilitating classroom interactions and developing critical

thinking skills. Given social media's fundamental objective of communication, integrating these platforms into a communication classroom offers a synergistic opportunity to explore non-traditional curriculum implementation such as project-based learning (PBL).

These platforms were originally designed to facilitate communication between individuals and groups (Carr & Hayes, 2015; Dhanwal, 2023), making them a natural fit for communication-focused educational environments. Students can collaborate on projects using platforms they already understand and engage with daily, making the learning experience more relevant

and accessible (Adekantari et al., 2020; Guillén-Gámez et al.; 2024; Jewpanich & Piriyasurawong, 2015; Mendez & Lopez, 2021). This integration also allows students to develop digital literacy and professional communication skills that are increasingly essential in today's workplace, while simultaneously mastering traditional communication concepts through practical application rather than theoretical study alone (Liu et al., 2022; Wang et al., 2025).

The learning process inherently demands collaboration, shared resources, and multifaceted feedback from peers, audiences, and instructors. By integrating social media into PBL, educators can cultivate a synergistic learning environment that facilitates innovative educational experiences. Students can leverage these platforms to share resources, exchange constructive feedback, and engage in meaningful dialogues about their projects. Such a collaborative approach not only elevates the quality of final projects but also fosters the development of critical interpersonal and communication skills essential for success in health communication and professional settings (Almulla, 2020).

This study aims to explore the integration of social media and PBL in Caribbean higher education contexts, examining the potential for digital pedagogies to enhance student engagement and learning outcomes. By investigating students' and educators' experiences with social media-supported PBL, the research seeks to develop contextually relevant strategies for technological integration that respect the region's unique cultural and educational landscape. The objectives include analysing the alignment between social media platforms and PBL principles, documenting the challenges and opportunities of digital learning approaches, and generating insights that can inform institutional pedagogical innovations. Ultimately, the study aspires to contribute to the decolonization of educational technologies by centering Caribbean perspectives and experiences in understanding digital learning transformation. The significance of investigating social media integration with PBL in Caribbean educational contexts extends beyond methodological innovation to address critical regional educational

challenges (Montoya et al., 2023). Such research can potentially transform pedagogical practices in small island developing states, where technological infrastructure and educational resources are often constrained, by providing nuanced insights into contextualized digital learning strategies (Wilkinson, 2024).

The study addresses a critical gap in understanding how Caribbean students negotiate digital learning environments, offering valuable perspectives on creating culturally responsive pedagogical approaches (Wilkinson et al., 2024). By examining the intersection of social media and PBL, this research can inform institutional strategies for enhancing student engagement, developing critical digital literacies, and preparing Caribbean learners for increasingly globalized professional landscapes (Montoya et al., 2023). Moreover, the study contributes to broader conversations about technological adaptation in postcolonial educational settings, potentially providing a model for other Global South contexts navigating digital pedagogical transformations (Wilkinson et al., 2024). The findings reveal that both the class facilitator and the students derived significant benefits from this approach, demonstrating social media's potential as a contextual digital pedagogy within the Caribbean.

## Literature Review

### Project-based Learning

Project-based learning (PBL) is an educational approach fundamentally rooted in constructivist principles. At its core, PBL is guided by three pivotal principles: "learning is context-specific, learners are involved actively in the learning process, and they achieve their goals through social interactions" (Kokotsaki et al., 2016). This student-centered methodology has gained significant traction, particularly in higher education settings. Empirical research has consistently highlighted PBL's multifaceted benefits. Studies demonstrate its effectiveness in enabling students to solve and evaluate problems, design innovative solutions to real-life

challenges (Almulla, 2020) and cultivate higher-order thinking skills (Han & Shujun Han, 2022). Perhaps most notably, PBL's remarkable capacity for fostering collaboration between students and educators stands out as a defining characteristic (Almulla, 2020; Lasauskiene & Rauduvaite, 2015). As Kokotsaki et al. (2016) emphasize, this collaborative focus is fundamental to PBL, serving as the mechanism through which shared goals are realized; culminating in comprehensive end-products. Beyond problem-solving and collaboration, PBL has proven instrumental in meeting broader educational objectives. Researchers have documented its potential to help college students develop empathy (Almulla, 2020), acquire essential life skills (Wurdinger & Qureshi, 2015), and facilitate interdisciplinary integration (Rice & Shannon, 2016).

In the Caribbean context, effective Project-Based Learning (PBL) implementation demands rigorous, culturally responsive, and evidence-based standards. Larmer (2015) and Larmer et al. (2015) propose a gold standard framework for PBL, which encompasses several critical elements: presenting a challenging problem or question; sustaining inquiry, ensuring authenticity; empowering student voice and choice; providing opportunities for reflection, critique, and revision; and producing a public-facing product. These standards are particularly relevant for Caribbean educational environments as help to address regional problems and allow for the emergence of authentic problemsolving techniques which maintain local realities and resonate community needs (Samuel, 2024).

Complementing this framework, Kokotsaki et al. (2016) outline additional guiding principles crucial for successful PBL implementation which can be particularly transformative in Caribbean educational contexts. These include strategic time management; comprehensive student orientation; cultivating a culture of self-management; effective group dynamics; engaging external stakeholders from local communities; leveraging technological resources appropriate to regional infrastructure; and implementing robust assessment and evaluation

mechanisms that recognize diverse learning expressions. Historical and contemporary research converges on several key insights salient to Caribbean educational contexts. The most effective projects are characterized by novelty, authenticity, intellectual challenge, and collaborative potential, with a strong emphasis on student autonomy (Kokotsaki et al., 2016). Recent scholarship further refines these principles, advocating for comprehensive support structures for students and educators, balanced instructional approaches, assessment methodologies that prioritize reflection and peer evaluation, and meaningful opportunities for student choice and independence (Gutiérrez-Ujaque, 2024; Maringe, 2017; Samuel, 2024). These principles serve as a comprehensive guide for implementing PBL in Caribbean collegiate environments, and providing a robust framework for educational innovation, student engagement, and a pedagogy that reflects Caribbean communal values and the unique challenges faced by Caribbean students and educators.

## **Social Media in the College Classroom**

Social media platforms have revolutionized student engagement in higher education, offering innovative outlets for global interaction and collaborative learning. Social networking sites enable users to express beliefs and interact across geographical boundaries (Han & Shujun Han, 2022). In the Caribbean educational landscape, the inherent collaborative nature of these platforms offers transformative potential for pedagogical innovation. These platforms facilitate diverse educational activities, including group projects, discussions, resource sharing, real-time engagement, and participatory learning (Suebsom, 2020; Tung et al., 2024; Watson, 2020). By enabling collaborative interactions that respect Caribbean students' cultural backgrounds, social media platforms can serve as critical tools for democratizing educational access and knowledge production (Maringe, 2017). Such platforms become especially significant in small island contexts, where technological infrastructure and educational resources are

often constrained, providing opportunities for innovative learning experiences that center student agency and cultural relevance (Samuel, 2024).

Researchers have extensively documented the multifaceted educational potential of social media. Elnaz Safapour et al. (2019) highlight its capabilities for sharing information, enhancing learner engagement, facilitating peer-to-peer learning; and promoting critical thinking, self-directedness, and self-monitoring. Social networking sites have proven particularly effective in flipped classroom models, enabling students to fully immerse themselves in learning experiences (Veldhuis et al., 2020). Additionally, Nuraini et al. (2020) emphasize how social media diversifies learning environments, empowering students with greater control over their educational processes and activities, including intrinsic motivation for task completion. Empirical studies further suggest that social media can significantly improve students' motivation and language proficiency (Asrifan & Dewi, 2023).

The transformative potential of social media extends beyond traditional classroom constraints. These platforms enable student autonomy by creating communication spaces that transcend physical and virtual classroom limitations (Oh et al., 2020). By eliminating time, access, and distance barriers, students can learn flexibly, accessing resources and global information at will. These characteristics make social media particularly promising for PBL as they can address five of the six principles for successful PBL implementation (Kokotsaki et al., 2016). Social media facilitates authentic work creation, student voice and choice, reflection opportunities, and serves as a platform for launching public products, especially in contexts such as health communication.

The COVID-19 pandemic accelerated social media's educational integration. Institutions rapidly adopted web-based platforms to maintain educational continuity. Khan (2021) documented successful implementations in Pakistan, where Facebook Live and Google Meet proved crucial for student engagement. While some studies indicated varying effectiveness across different educational

domains (with theoretical classes benefitting more than practical ones), the pandemic underscored social media's potential to bridge institutional-student gaps (Nadeak, 2020).

However, the literature also acknowledges significant challenges. Nuraini et al., (2020) warn about potential risks including online harassment, bullying, and platform addiction. Data security concerns are substantial, with Tung et al. (2024) highlighting the risks of unauthorized information access and inadequate platform security. Taylor et al. (2023) further caution about privacy vulnerabilities, noting that online identifiers can be inadvertently shared. Critical considerations extend to access equity and facilitator preparedness. The digital divide can exacerbate existing student disparities, potentially causing frustration and learning outcome delays (Hrastinski, 2019). Motivational research reveals mixed findings, with some platforms enhancing student engagement while others create potential distractions (Van den Beemt, 2020; Han & Shujun Han, 2022; Wen & Piao, 2020). Additionally, not all educators possess the necessary skills to effectively leverage these technological tools (Van den Beemt et al., 2020).

Research exploring social media's integration with PBL reveals nuanced insights. Oh et al., (2020) found students to be initially hesitant about educational social media use, primarily due to privacy concerns. This concern is salient to Caribbean contexts where there is limited and underdeveloped technological infrastructure (Montoya et al., 2023; Wilkinson et al., 2024). Nevertheless, benefits emerged, including student accomplishment, learning flexibility, enhanced communication, and reduced spatial-temporal constraints. Multiple studies consistently demonstrated improvements in problem-solving, critical thinking, and overall learning outcomes when integrating social media with PBL (Adekantari et al., 2020; Palsodkar et al., 2023; Jewpanich & Piriya-surawong, 2015; Rosiyanah et al., 2019). Noteworthy exemplars include a Facebook study highlighting learning flexibility (Sato et al., 2013) and a Thai research project using Telegram to improve EFL students' communication skills, where online project

discussions dramatically enhanced student interactions (Lubis et al., 2020).

Research has demonstrated that social media can facilitate innovative pedagogical approaches, particularly in project-based learning, by providing platforms for authentic work, reflection, and global communication. However, successful implementation requires careful consideration of contextual, technological, pedagogical, and ethical dimensions, recognizing both the powerful learning potential and the inherent limitations of these digital platforms. Additionally, there is a paucity of research about social media integration in the Caribbean classroom. Against this backdrop of technological innovation and educational complexity, this study seeks to explore the intersection of social media and project-based learning through the following research questions:

1. To what extent does social media use in Caribbean higher education align with and support the core principles of project-based learning?
2. What insights emerge from integrating project-based learning with social media in Caribbean higher education?
3. How do students perceive and experience the incorporation of social media in their learning environment?

## Methodology

This study employs an exploratory case study design. This design is used to answer how and what questions and have tested qualitative underpinnings (Bhatta, 2018; Yin, 2014). Case studies represent a qualitative research approach that enables researchers to conduct comprehensive, multi-dimensional analyses of complex phenomena. Additionally, they make room to explore complex social phenomena within their natural settings (Creswell & Poth, 2018). The case study approach has been widely used across various educational contexts, demonstrating its versatility and depth of insight. Recent research has leveraged this methodology to investigate critical areas in education, including

project-based learning with gamification strategies (Zhang & Watson, 2025); technology integration in college classrooms (Chasokela et al., 2025); digital transformation in universities (Xiao, 2023); sustainable development in higher education institutions (Wright et al., 2022); and special education interventions (Kratochwill et al., 2012). The study was approved by the ethics committee of the university.

Exploratory case studies allow researchers to investigate contemporary phenomena within their real-world context, especially valuable in Caribbean settings where limited prior research exists on how PBL can be merged with social media in the classroom. This methodological approach enabled an in-depth examination of contextual conditions, facilitating the generation of contextually-grounded theory that can highlight the Caribbean. Moreover, the flexibility of the exploratory case study design supports the capture of multiple sources of evidence, which is crucial in capturing the intricate social dynamics characteristic of Caribbean research environments (Yin, 2014).

A single case was chosen for this study for several reasons. The exploratory nature of the study demanded an in-depth, contextually-rich investigation that a single case could provide, allowing researchers to thoroughly examine the complex interplay between social media and project-based learning (Yin, 2018). As Stake (2005) argues, single case studies are particularly valuable when investigating "bounded systems" with unique characteristics, which align with the distinctive educational context of Caribbean higher education institutions. The complex cultural and technological dynamics at play require what Flyvbjerg (2006) describes as "context-dependent knowledge," which is best captured through intensive study of a representative case. Furthermore, as Baxter & Jack (2008) note, case studies are ideal when the boundaries between the phenomenon (social media use in education) and context (Caribbean higher education) are not clearly evident. The representative case also fits into the focus on student perceptions and experiences in this study, allowing for in-depth and rich assessment (Merriam & Tisdell, 2016).

This further enabled deep engagement with student voices. Finally, this approach aligns with Creswell and Poth's (2018) assertion that single case designs are appropriate when examining innovative practices in specific educational contexts, potentially establishing what Patton (2015) refers to as "information-rich cases" that can inform future educational practice in the region.

## Site and Participants

The study was conducted at a university in Jamaica, in an upper-level health communication course. This module is offered at the university as an elective where any student, regardless of their major program, can sit the course which introduces students to the theories and basic design principles of health communication. The specific aims included helping students to: understand the contexts and role of communication in promoting and maintaining health and wellness; understand the correlation between theory and practice in health communication settings and interventions; choose relevant and appropriate theories/strategies for message creation; understand the role of audience analysis in the creation of targeted messages; create simple health communication messages; know how to formulate a mini-health communication intervention; and, appreciate the importance of monitoring and evaluation in health communication interventions.

The course was offered remotely through the university's learning management platform – Moodle. Moodle is a Learning Management System (LMS) that allows educational institutions to set up online courses using a multiplicity of features, including hosting course materials, synchronous and asynchronous presentations, assessments, and other educational features (Moodle, 2022). The course was offered using a combination of both synchronous and asynchronous presentations. The class met twice weekly for a 1-hour lecture and a 2-hour tutorial. The tutorial sessions also doubled as workshop spaces for students to be guided through completing their assignments and to present their work for feedback. The course's assessment

structure incorporated social media as a central component, requiring collaborative work among students. Based on enrollment numbers, the class was organized into two distinct groups. For their communication campaign, each group undertook the task of identifying a health issue with specific Caribbean relevance. Following this selection, groups conducted audience analysis to determine the most appropriate demographic target for their health messages.

There were 12 students who signed up for this class. However, after the first 2 weeks, there was an attrition of 4 students, so 8 students completed the course at this offering. This number included 6 women and 2 men. None of the students were communication students. Their majors ranged from engineering to business and hospitality. They initially developed individual messages, applying theoretical frameworks and strategic approaches covered in the course curriculum. These preliminary message drafts underwent a structured workshop process, where students received comprehensive feedback from peers and from the course facilitator. Following this formative assessment phase, students refined their messages based on the collective input received. The culminating phase involved collaborative integration of individual contributions, with group members combining their revised visual elements to create cohesive campaigns. These finalized campaigns were then launched on social media platforms, allowing students to experience authentic health communication implementation in digital environments.

The message design assignment required students to create their messages for a social media channel of their choice. They were graded for using message design strategies and elements; use of theory; appropriateness for the target audience; and oral explanation of design choices.

**Group 1.** This group focused on HIV/AIDS prevention and targeted their messages to young adults, 19–24 years old. They strategically incorporated credible role models to enhance message persuasiveness, securing the participation of the reigning Ms Jamaica Universe as a central figure in both their video production

and poster design. This approach leveraged social cognitive theory's concepts of observational learning and identification with aspirational figures. The group augmented their persuasive appeal through carefully selected popular music that served as an auditory backdrop in their video, while simultaneously incorporating testimonial evidence on their static poster display — a dual-channel approach to message reinforcement. Since they were required to use the McGuire's Hierarchy of Effects framework, this was evident in cross-platform message consistency and unified branding elements, particularly evident in deliberate colour scheme coordination and music selection continuity, which facilitated improved message recognition and recall.

**Group 2.** The second group addressed hypertension prevention, targeting persons expertise-based persuasion strategy was employed, prominently featuring statistical evidence from the World Health Organization on poster materials — a technique that enhanced message credibility through association with authoritative institutional sources. Additionally, the visual communication strategy demonstrated demographic targeting through imagery that clearly identified and represented their intended audience age group. The inclusion of relatable role models who demographically matched

the target audience further strengthened identification potential and message relevance. The campaign also exhibited cross-platform message consistency, with uniform persuasive elements maintained across all channels. The selection of poster-based dissemination represented an appropriately aligned medium for their demographic target.

The teams engaged in a comprehensive collaborative planning campaign process. They established the campaign's primary objectives and developed a structured work plan to achieve these goals. Planning included strategic decisions about appropriate social media platforms for content distribution and carefully considered posting frequency to optimize engagement. The teams were required to implement clear divisions of labour, with specific responsibilities assigned to each member based on individual strengths and expertise. They created and submitted a detailed timeline to ensure timely execution of all campaign elements. Additionally, they conducted thorough budgetary planning to allocate resources effectively across all campaign components. This systematic approach gave students the required real-world project experience. Table 1 summarizes the choices that each group made regarding their health focus, target audience, medium, and social media platforms.

**Table 1**

*Table Highlighting Students' Message Design Choices*

	<b>Group 1</b>	<b>Group 2</b>
Health focus	HIV/AIDS	Heart Disease
Audience	19–24 years old	Over 50 years
Theory	Social Cognitive Theory	Health Belief/Social Cognitive Theory
Media	Posters, Video	Posters
Social media platform	TikTok, Instagram	TikTok, Instagram

The design of this assignment included requiring teams to develop a monitoring and engagement plan as the culminating component, though implementation of these plans was intentionally excluded from the assessment requirements. This pedagogical decision was informed by the elective nature of the course and the multi-disciplinary backgrounds of the enrolled students, who were not communication majors. The instructional approach prioritized conceptual exposure to monitoring and evaluation principles while acknowledging the students' academic workload constraints across their primary fields of study.

This balanced approach allowed students to gain valuable theoretical understanding of campaign assessment methodologies without imposing the additional time and resource demands that full implementation would entail, thus maintaining appropriate academic expectations for non-specialist students engaging with communication practices. The assignment guidelines specified a 1-week campaign duration. The monitoring and engagement plan directed students to critically analyze several key dimensions:

1. Goal achievement assessment, reflecting on measuring possible outcomes against predetermined campaign objectives.
2. Identification and reflection on possible multidimensional campaign consequences, including positive, negative, and neutral impacts.
3. Engagement analysis, with specific attention to what could be high-performing content and the qualitative nature of audience interactions.
4. Strategic recommendations for campaign optimization in a hypothetical extended implementation scenario.
5. Reflective analysis of key insights gained regarding health communication planning and execution processes.

### **Addressing Ethical Challenges**

The use of social media in the project-based learning environment presented several ethical challenges that required careful consideration and management. Primary among these concerns was the potential for online harassment and the associated mental health risks for student participants. To mitigate these risks, the researchers' approach incorporated multiple protective layers and monitoring strategies. Students were exposed to training on digital citizenship and online safety prior to campaign launch as a part of the curriculum. This training included specific guidance on recognizing, documenting, and reporting problematic interactions without engaging with hostile actors. The training also exposed students to

practices such as scheduled breaks from online engagement and guidance on mindful social media use. Additionally, students were encouraged to create campaign-specific professional accounts separate from their personal profiles, establishing a boundary between their academic and personal digital presence. Furthermore, a debriefing session was held after the campaigns closed, which facilitated discussions and opportunities for students to process challenging interactions and share coping strategies. Fortunately, students did not report any problematic interactions.

The literature (see Hrastinski, 2019) indicated ethical considerations concerning the digital divide. For our study, 100% of students reported that they had 24-hour access to a personal electronic device (a smartphone or a laptop). Additionally, students indicated considerable knowledge about the different social media platforms. This eliminated concerns about the digital divide for this class.

### **Data Collection Strategy**

Consistent with established case study methodologies, this research used multiple data collection points to ensure a comprehensive and nuanced understanding of the investigated phenomenon; calling for triangulation of data sources, in-depth exploration of contextual factors, and robust analytical insights to capture the multifaceted nature of the research subject. The study employed a comprehensive multi-method approach to data collection, using three primary qualitative research techniques. To address the first research question (To what extent does social media use in Caribbean higher education align with and support the core principles of PBL?), and the second research question (What insights emerge from integrating PBL with social media in Caribbean higher education?), facilitator observations were systematically documented periodically through detailed field notes and a reflective research journal, capturing real-time interactions and contextual insights throughout the campaign. Notes were also recorded after sessions where students were engaged in message creation, content creation, and social media use and

discussion. Additionally, to respond to the third research question (How do students perceive and experience the incorporation of social media in their learning environment?), a semi-structured focus group interview was conducted to explore students' experiences with social media campaign strategies, allowing for in-depth group discussions and exploration of collective perspectives. The focus group interview was done via the Zoom platform, recorded, and later transcribed. Of the 8 students in the course, 6 were present and participated. They were encouraged to speak freely to give their honest reflections.

### **Focus Group Protocol Development**

The development of the semi-structured focus group interview protocol followed a systematic process to ensure alignment with the research questions while allowing for emergent themes related to social media use in project-based learning (PBL) within Caribbean higher education contexts. Following the recommendations of Krueger & Casey (2015), the protocol was designed to foster an open and dynamic discussion environment while maintaining focus on the research objectives. First, a comprehensive review of relevant literature on social media in education, project-based learning, integrating social media into PBL contexts and Caribbean higher education contexts was conducted. This review identified key constructs and potential discussion themes relevant to the intersection of social media and project-based learning.

To establish trustworthiness at this stage of the project, the researcher aimed to have the protocol reviewed by an expert panel following Morgan's (2019) recommendations. However, after initial contact, only one other expert was available to review the protocol along with the researcher. The researcher was a communication specialist, and the other researcher was a seasoned project-based learning specialist. Their feedback was incorporated to enhance cultural relevance, question clarity, and construct validity. As suggested by Barbour (2018), the protocol was pilot-tested with a small group ( $n=3$ ) of students from a higher education institution not

participating in the main study. The pilot revealed the need for additional probing questions regarding platform-specific experiences and modifications to terminology that better reflected local context and vernacular. See Appendix 1 for a copy of the protocol.

By integrating these multiple data collection methods, the research design aimed to enhance data credibility, provide a comprehensive understanding of the research phenomenon, mitigate potential methodological biases, and capture both individual and collective insights into social media campaign strategies (Creswell & Poth, 2018).

### **Trustworthiness**

The study implemented comprehensive verification strategies to enhance research trustworthiness and credibility. As the primary instructor for the health communication course under investigation, I acknowledge my dual role as both educator and researcher. This positioning provided valuable insider knowledge of curriculum design and pedagogical intent, but simultaneously created potential biases in data collection and interpretation. The dual lecturer-researcher role potentially affected several dimensions of research integrity, such as power differentials that may influence student responses. As Dwyer & Buckle (2009) note, participants may provide responses they believe the researcher/instructor wants to hear, rather than their authentic experiences. To mitigate potential response bias stemming from my instructor status, I employed several strategies including explicitly assuring students that their participation or non-participation would not affect their course grades; and that the focus group primarily occurred after course grades were submitted (Cook-Sather, 2006). It would have been ideal for the focus group to be facilitated by a disinterested researcher, but this was not realized due to time and resource constraints. I also recognize the potential bias toward confirming the effectiveness of the pedagogical approach. To counterbalance this tendency, rigorous reflexivity practices were implemented, including maintaining detailed reflexive journals

documenting author assumptions; engaging an external qualitative methodologist to review the coding framework; and deliberately searching for disconfirming evidence within the data” (Attia & Edge, 2017).

Additionally, an experienced qualitative researcher conducted an independent review of the focus group audio recordings and transcripts, providing critical peer-debriefing to validate the research interpretations. Methodological triangulation was achieved through multiple data sources, including detailed field notes, facilitator observations, journal data, and the focus group transcript, which allowed for cross-validation and reduction of potential single-method biases. To ensure dependability, rigorous documentation of the entire research process was maintained, including transparent coding frameworks and systematic tracking of analytical decisions. The study employed a structured coding process with explicit documentation, encompassing initial open coding, focused selective coding, and theoretical coding frameworks. By integrating these verification strategies, the researcher aimed to enhance the credibility, reliability, and trustworthiness of the findings.

### **Data Analysis**

This study employed thematic analysis, a qualitative research method that allows for systematic identification, analysis, and reporting of patterns (themes) within the collected data (Braun & Clarke, 2006). The analysis process involved a rigorous, iterative method of coding and theme development, focusing on interpreting participants’ experiences and perspectives through their narratives and contextual interactions. The focus group recording was transcribed, anonymized, and prepared for analysis. Coding was done manually by the author and verified by an experienced researcher. The verification process checked and confirmed the accuracy, credibility, and trustworthiness of qualitative research findings (Braun & Clarke, 2024).

The research followed a 6-phase approach to thematic analysis:

1. Familiarization with the data through repeated reading and initial note-taking;
2. generating initial codes by systematically identifying meaningful units of text;
3. searching for potential themes by collating coded data into coherent clusters;
4. reviewing and refining themes to ensure they accurately represented the dataset;
5. defining and naming themes to capture their essential characteristics; and
6. producing the report by selecting extract examples, relating the analysis to the research questions, and producing a narrative that describes the data (Braun & Clarke, 2024).

Ethical considerations were maintained throughout the process by ensuring participant confidentiality, obtaining informed consent, and maintaining a reflexive approach to data interpretation, acknowledging the researchers’ potential biases and subjective interpretations.

### **Ethical Considerations**

The study adhered to rigorous ethical protocols, beginning with obtaining formal ethical clearance from the university’s research ethics committee. At the semester’s onset, participants were comprehensively informed about the research study, with all students required to sign an informed consent form which outlined the nature of the research, the data collection strategies, guarantees of confidentiality, privacy, their right to withdraw, and data management strategies. Additionally, a detailed briefing was conducted to clearly explain participants’ rights, research procedures, and the full scope of the study. Furthermore, since the focus group was scheduled after the course delivery, students were asked to sign an additional consent form at this stage which outlined their voluntary participation.

Notwithstanding the above, the inherent ethical considerations when conducting research embedded within a university course are acknowledged. These include (but are not limited

to) student–instructor power imbalances, where students may feel obligated to participate in the research out of concern about how refusal might affect their grades or standing in the course. Even with assurances to the contrary, the inherent power differential creates implicit pressure to participate (Saxena et al., 2015). Also, in focus groups specifically, some students may feel pressured to conform to dominant opinions, especially when discussing their experiences with required course activities. As the course progressed and research data continued to be collected, students may have forgotten that they were also research participants or may have wanted to withdraw specific interactions from the research corpus (Saxena et al., 2015). Although these issues did not arise in this study, the possibility is acknowledged. The issue of true voluntary participation can also present in studies of this nature, where data collection was ongoing during routine course delivery. Ensuring that participation is genuinely voluntary when the research is embedded in required coursework activities also presents significant challenges that require careful considerations.

Ways to mitigate some of the above challenges were incorporated in the design including clear, non–penalizing ways for students to opt out of research participation while still fully participating in the course. To minimize the impact on assessment, the data analysis for this project was done after the submission of course grades.

## Findings and Discussion

The study’s findings reveal promising insights into the integration of social media within PBL environments. The analysis of data was structured to provide a comprehensive understanding of the research phenomenon, presenting perspectives from the primary sources (the facilitator observations and student experiences). The emerging themes examine the findings through the lens of facilitator observations, capturing the qualitative insights and contextual dynamics observed during the project implementation; and through student perspectives, presenting their lived experiences, perceptions, and reflections on using social media within the PBL framework.

## Theme 1: Immersive and Dynamic Pedagogy

The first research question inquired into the potential of integrating PBL with social media, seeking to understand the pedagogical dynamics. Through facilitator observations, the study revealed that this approach reshapes both the educational delivery method and the learning environment. The interconnection between technological integration and pedagogical practice allowed usually considered informal communication channels to be reimaged and repurposed to more dynamic, strategic platforms for academic and professional learning. As Larmer (2015) highlighted, project–based learning aims to “offer students the opportunity to design and create solutions to real–life problems”, a principle directly embodied in this course’s methodology and observed through the project. One journal entry noted:

**Reflection on RQ1:** I’m observing that social media most strongly aligns with the PBL principles of public product creation and authentic audience engagement. The platforms naturally facilitate sharing work beyond classroom walls — students are receiving comments from community members, creating a real sense of purpose. I’m seeing alignment with the principle of student voice and choice. But I do wonder about the platform algorithms and features and wonder if they drive some content decisions rather than student learning goals.

Unlike traditional classroom applications that limit social media to blogging or passive engagement, this course positioned social media as a primary mechanism for assignment completion and strategic communication skill development. Additionally, there was a comprehensive reimaging of learning interactions with more fluid boundaries between stringent classroom constraints, leading to more interactive, collaborative and digitally–mediated educational experiences. The fusion of PBL and social media created a learning ecosystem that was responsive, adaptive, and deeply reflective of contemporary Caribbean communication landscapes.

The selection of social media as a primary learning tool was particularly strategic within the health communication context. Huo et al. (2019) noted the “changing landscape of the diversity of sources that individuals depend on for health information and news”, underscoring the critical importance of digital communication platforms. As they observed, the easy diffusion of messages through social media has fundamentally transformed information dissemination. By integrating social media as a core assignment methodology, the course bridged academic learning with professional practice, preparing students for the complex communication environments they will encounter in their future careers.

The pedagogical approach offered significant advantages beyond traditional learning modalities. The relatively inexpensive nature and ubiquitousness of social media made it an adaptable platform that could be accessed by students from varied backgrounds who might have found more traditional communication channels challenging. The platforms’ inherent collaborative features enabled students to simulate real-world organizational communication dynamics, providing an immersive learning experience. It was observed that “students enjoyed collaborating on the assignments”, highlighting the engagement and enthusiasm generated by this innovative approach. Additionally, a community approach to addressing health concerns emerged as family members and friends commented on the students’ work.

**Field notes.** An emerging insight is the way social media is revealing regional health communication needs. Students are receiving comments about health concerns specific to Caribbean communities that aren’t well-represented in the textbook literature. This is creating a form of community-driven curriculum that extends beyond my original learning objectives — a powerful example of authentic learning.

By reimagining social media as an educational tool rather than as only a communication platform, the course challenged conventional academic boundaries. Students were not just consumers of information but active creators and strategists, designing communication campaigns, observing audience engagement, and developing sophisticated digital communication skills. This approach underscored the necessary involvement of social media as an important aspect of modern strategic communication, transforming digital platforms from recreational tools to real-world professional learning environments.

## **Theme 2: Successful Project-Based Learning Implementation**

This study aimed to understand the integration of social media and project-based learning. Drawing from Larmer’s (2015) comprehensive framework for successful project-based PBL, this course demonstrated a rigorous approach to meeting established pedagogical standards. Larmer (2015) identified 6 critical components essential for effective PBL implementation. These are outlined below, along with how the course met these standards:

- 1. Challenging Problem or Question.** The course design centered on a complex, real-world health communication challenge that required students to engage deeply with authentic professional scenarios.
- 2. Sustained Inquiry.** Students were encouraged to pursue in-depth investigation, moving beyond surface-level exploration to develop comprehensive understanding and sophisticated communication strategies.
- 3. Authenticity.** By using social media as a primary communication platform, the course created a direct link between academic learning and professional practice, ensuring real-world relevance.

- 4. Student Voice and Choice.** The project methodology empowered students to make critical decisions about their communication approaches, content creation, and strategic messaging.
- 5. Reflection, Critique, and Revision.** The course integrated multiple opportunities for students to critically evaluate their work, receive feedback, and iteratively improve their communication strategies.
- 6. Public Product.** Social media platforms enabled students to create and share their final projects, transforming academic assignments into publicly accessible communication artifacts.

**Field notes.** Incorporating social media in the class in this way aligns well with PBL. In the design stage of the course, PBL standards were mapped to ensure we had all the aspects detailed in the literature.

Table 2 provides a detailed mapping of how these PBL standards were operationalized throughout the course, demonstrating a comprehensive and thoughtful approach to project-based learning implementation.

**Table 2**

*Alignment of PBL Standards and the Current Course*

<b>PBL Standard</b>	<b>Course Content</b>
Challenging problem	Target a population to address a health issue and create communication messages that address this issue.
Sustained inquiry	Opportunity to work on the product progressively throughout the semester — incorporating research, communication strategies, and other relevant elements.
Authenticity	Real message design assignment addressing a real issue.
Student voice and choice	Students had a choice with their topic, medium, target population, social media platform.
Opportunity for reflection	Oral presentations and collaborative engagement for assignments.
Critique and revision	Peer and facilitator reviews incorporated.
Public product	The message was designed and posted publicly to students' chosen social media platforms.

### **Reflection on RQ1**

After reviewing the complete project cycle, I can more confidently assess how social media aligns with PBL principles in this context.

The strongest alignment appears in:

- Creating public products (social media naturally facilitates sharing)

- Authentic audience engagement (particularly when leveraging existing community networks)
- Reflection (the immediate feedback loop prompts ongoing assessment)

The weakest alignment appears in:

- Student voice and choice (platform constraints can limit expression)
- Sustained inquiry (platform algorithms reward quick content rather than depth)

The sections of weakest alignment provide grounds for future studies to explore how these limitations can be addressed.

The course encountered several nuanced challenges during its implementation. Students articulated mixed feelings about the social media-based assignments, with particular complexity surrounding message development strategies. The class size led to small group configuration (consisting of three students per group) and this prompted reflective discussions about the potential advantages of more expansive collaborative models. Students felt that larger groups may have a role to play by potentially contributing more needed skills to complete the projects.

The facilitator observed that while students grappled with the novel instructional approach, they simultaneously demonstrated remarkable adaptability. Notably, despite these initial reservations and navigational challenges, students ultimately expressed overwhelmingly positive assessments of the learning experience. Statements from the focus group indicated this as outlined below.

**S1.** I liked using social media in this way because I didn't really think that we could use social media for schoolwork. I have used social media to chat with lecturers and friends about schoolwork but it is the first time that I am using it to actually do an assignment. Love it and I hope I get to do more courses where I can use it.

**S2.** I enjoyed it because I was able to post about something that really matters to a lot of people. I liked seeing people like our posts and know that the information could help somebody.

The innovative social media integration emerged as a significant catalyst for increased student motivation, suggesting that technological pedagogical approaches that are culturally-specific can effectively transform potential barriers into meaningful learning opportunities.

### Theme 3: The Ethics of Social Media Enhanced Education

The integration of social media into academic projects presents complex challenges regarding students' digital identities and online presence. While university students are presumed to have the autonomy to make informed choices about their digital engagement, the study revealed nuanced and potentially problematic intersections between academic and personal digital spaces. Oh et al. (2020) critically highlight the paramount concerns surrounding students' online identities and the potential long-term implications of digital engagement, a perspective vividly illustrated through the study's observations.

During the research period, students created dedicated social media pages for their academic assignments, yet the boundaries between academic and personal digital identities remained remarkably permeable. A particularly revealing instance involved a student who initiated a "TikTok Live" session from her assignment page, simultaneously bridging her academic project and personal digital presence. A social media "live" refers to a livestreaming event where interaction with an audience in real-time occurs (Gilbert, 2019). Livestreaming is one strategic way to drive engagement on social media. Influencers use livestreams to attract new audiences and to maintain their current audiences (Giertz et al., 2021). By revealing her true identity during this synchronous discussion with followers, the student inadvertently collapsed the carefully constructed boundaries between her academic and personal online personas.

This blending of digital identities underscores the subtle yet significant risks associated with social media integration in educational contexts. The seemingly innocuous act of hosting a live discussion represents a broader challenge of maintaining professional boundaries in an increasingly interconnected digital landscape. Students, even when equipped with digital literacy, may not fully comprehend the long-term implications of such seemingly spontaneous digital interactions, potentially exposing themselves to unforeseen personal and professional consequences. The course design

carefully navigated institutional and regulatory frameworks by ensuring adherence to relevant policies and procedures. Considerations such as institutional permissions, and other guidelines on digital engagement such as privacy protections, and ethical sharing of information were meticulously addressed. The approach limited social media's impact on overall grade calculation, maintaining a balanced approach to digital assessment that protected students' academic and personal interests. This is especially critical as research indicates that Caribbean populations are particularly susceptible to digital discrimination, cyber harassment, and data privacy breaches, with limited institutional protections against online violence and identity exploitation (Barrett & Williams-Shakespeare, 2024; Boisselle, 2014; Wilkinson et al., 2024).

The research acknowledges potential risks associated with social media integration, drawing from critical studies on digital communication and student well-being which highlight that potential for students to experience online harassment and bullying (Abaido, 2020; Nuraini et al., 2020). This research indicates the potential for exposing students to these risks such as unwanted attention or presumptive personal connections. Students did not report any harassment or bullying in this study, but were ambivalent on the potential for boundaries to be crossed. For example, one student expressed that:

I was happy that I did not have to post from my page because in posting about HIV/AIDS, I can just imagine that someone would probably think that I have AIDS and begin to spread it. I do not really care but not posting from my page was good.

Another student expressed the opposite however, proclaiming that:

I would not have minded posting from my personal page because I know so many people with high blood pressure that I would like them to see my group's message so they will learn. As a matter of fact, I sent some of my messages to my page outside of class so that they could see it. And I got good response from some people.

Even though these responses highlight ambivalence in how students navigate these boundaries, this interaction highlights the sensitive nature of online engagement and emphasizes that these require careful management and support. In a Caribbean context, this is critical due to the region's complex historical experiences of surveillance, marginalization, and digital vulnerability (Montoya et al., 2023; Wilkinson et al., 2024).

Mental health considerations in the literature were a critical area of concern, supported by extensive research from Cunningham et al. (2021) and Ivie et al. (2020) — demonstrating the potential psychological challenges associated with social media use. Additionally, Oh et al. (2020) revealed that despite being digital natives, students often lack familiarity with educational social media use. This finding prompted the course designer to create a robust support system. Extensive out-of-class support, multiple consultation opportunities, a scaffolded learning environment, and flexible communication channels were established to support students' digital learning journey. Understanding these nuanced digital risks is crucial for developing critical digital literacy skills that will empower Caribbean nationals to protect their cultural integrity, personal safety, and technological agency in increasingly interconnected digital environments (Giroux, 2016). This was a main area of concern that prompted the researcher to implement comprehensive supportive strategies and thankfully, no concerns were noted: field notes data showed that the facilitator often engaged students in discussions about mental health. Frequent check-ins with students, open communication channels, provision of counselling service information, and opportunities to express hesitation or seek clarity were integrated into the course design and implementation to ensure student safety.

The course demonstrated that with appropriate support, ethical considerations, and robust institutional frameworks, social media can be a powerful educational tool. While challenges

existed, the overall experience was deemed highly beneficial, with significant potential to enhance student engagement and provide practical learning experiences. The approach balanced technological innovation with student protection, creating a nuanced and supportive learning environment that prioritized student well-being and academic growth.

#### Theme 4: Student Engagement

The findings reveal an overwhelmingly positive student response to the course, particularly highlighting the transformative potential of interdisciplinary learning. Students expressed profound appreciation for the opportunity to explore creativity beyond their traditional academic boundaries. The elective nature of the course provided a unique space for intellectual exploration, allowing students to engage with new fields of study that extended beyond their primary areas of expertise. One student's reflection powerfully captured the broader implications of this learning experience:

It was interesting learning something new. It makes me think that when I go out into the job market, I could possibly apply for a job in [a field] that I never thought about. I feel like I have more experience now.

This quotation illustrates the heightened levels of student engagement and the potential for expanded career perspectives that emerged from the course design.

The use of social media as a primary assignment platform emerged as a particularly compelling aspect of the course. Students enthusiastically embraced the departure from traditional project formats, finding the digital approach both liberating and creative. The platform allowed students to tap into their creativity not only in design aspects but also in content creation across social media channels. This approach provided an enjoyable outlet for sharing their work, with students appreciating the opportunity to showcase their projects to family and friends during the campaign period. A notable example emerged from a student who conducted an impromptu TikTok live session, extending far beyond the original course

requirements. The 4-hour session demonstrated students' genuine enthusiasm for their chosen topics, with the student proudly presenting engagement statistics to the class. Her interest in the HIV/AIDS topic illustrated the potential for social media to create meaningful, extended learning experiences.

**Reflection on RQ3.** Class today was very interesting. Students were divided into their groups and worked together on their messages. Students seemed animated as they discussed various aspects of their projects.

Social media has been recognized as a powerful tool for boosting classroom engagement, with research highlighting how Gen Z students perceive the integration into educational settings as an enjoyable and creative approach (Mendez & Lopez, 2021). During the study, the facilitator observed that students demonstrated a remarkable willingness to submit multiple drafts of their work, seeking extensive feedback before publicly sharing their assignments. When participants were further questioned about this practice during the focus group, they revealed that their awareness of the public audience motivated them to seek more comprehensive feedback than traditionally expected. This is understandable, since research underscores that feedback is a critical mechanism for improving student achievement (Williams, 2024). One student's awareness of the "public eye" was captured in a journal entry:

**Reflection on RQ3.** I'm also noting how the public nature of these projects is affecting student motivation differently than I expected. While some students are energized by public engagement, others are expressing anxiety about publicly representing health information, mostly expressing the need to have work as "perfect" as possible before it goes out into the "real world".

The students' proactive approach to refining their work suggests a significant level of academic ownership. This engagement has profound implications for learning, potentially fostering deeper understanding, more sophisticated critical thinking skills, and improved content retention. Moreover, their willingness to iterate on their

work not only corroborates existing literature on increased course content engagement but also illuminates promising avenues for enhancing learning outcomes (Alenezi, 2023; Liu et al., 2022; Schnackenberg et al., 2014; Han & Shujun Han, 2022).

Students articulated mixed feelings about their social media-based assignments, with particular complexity surrounding message development strategies. The class size led to small group configuration (consisting of three students per group) and this prompted reflective discussions about the potential advantages of more expansive collaborative models. Students felt that larger groups may have a role to play by potentially contributing more diverse skills and perspectives needed to complete complex projects successfully. However, they also identified that larger groups create significant disadvantages, including higher potential for social loafing behaviors and the stifling of some students' voices during collaborative discussions. Research confirms that smaller groups often lead to greater accountability and less social loafing, as there are fewer people in the group to rely on for work completion, and smaller groups allow more opportunities for group members to contribute to group dialogue ((Vogel & Wood, 2023). Studies demonstrate that while large or medium groups can produce more diverse perspectives, they are particularly susceptible to social loafing, whereas small groups tend to promote individual contributions but can be heavily influenced by group dynamics (Li et al., 2023; Luo et al., 2023; Saqr et al., 2019). Current research reveals that students' competencies, emotional relationships, and collective identities are key determinants of social loafing behavior, with shared responsibility and group conflict being significant factors students identify as contributing to reduced individual effort in larger collaborative settings (Luo et al., 2021; Rajaguru et al., 2020; Liu et al., 2022).

## Limitations

Despite the successful integration of project-based learning (PBL) in the course, several significant limitations emerged that warrant critical reflection. The introductory nature of the course created inherent challenges in students' ability to comprehensively evaluate the effectiveness of their health communication interventions. Without extensive prior experience, students struggled to definitively assess the impact of their communication strategies on the target audience.

A critical constraint was the course's pedagogical focus, which prioritized message creation over the technical aspects of multimedia communication design. This approach placed considerable reliance on students' existing skillsets and their capacity to seek external support for design-related challenges. The limited instructional time devoted to multi-media communication design meant that students were essentially required to leverage their prior knowledge or independent learning capabilities to address complex design requirements.

The primary emphasis on message creation, while valuable, inadvertently created a knowledge gap in the comprehensive communication design process. Students were challenged to translate their strategic communication insights into visually compelling and technically proficient multimedia content without direct instructional support for design principles and technical execution. These limitations suggest the need for a more holistic approach to PBL implementation, one that provides more structured support for technical skill development and offers more robust mechanisms for evaluating communication intervention effectiveness. Finally, the research design acknowledged the inherent limitations of qualitative research, including potential researcher bias and the context-specific nature of the findings. While recognizing that the results offer rich, nuanced insights into the studied phenomenon, it is acknowledged that the results cannot be generalized, but instead can provide deep, contextual understanding of the specific research context.

## Conclusion

In this class, the use of social media in PBL exemplified how the college classroom can be digitized and provide engagement for students. Social media is growing in use and reach, and bringing some of its more professional features into the classroom allows students to get the real-world experience that PBL demands. Although the course under consideration was a communication course, which may have allowed for more relevant use of social media due to the obvious discipline overlap; college facilitators can explore how these tools can be incorporated into other varied disciplines. Using social media as an outlet for their creativity, students get a chance to merge their interests and worlds, while learning in an engaging and modern way. However, ethical uses should be considered, and more research done to ensure that students are safe as they continue their educational journey.

The findings illuminate the transformative potential of social media as a pedagogical tool that transcends traditional Caribbean educational boundaries. By centering student creativity and authentic communication, this approach embodies the region's rich tradition of adaptive and contextually responsive learning. Caribbean education has long celebrated innovative knowledge transmission, from oral storytelling traditions to community-based learning models, and digital platforms represent a contemporary extension of this pedagogical heritage. Future investigations should explore the integration of social media and project-based learning (PBL) across the diverse disciplinary contexts within the Caribbean, extending beyond the current study's scope. Researchers might profitably examine the differential efficacy of various social media platforms in supporting PBL objectives, identifying which digital environments most effectively facilitate collaborative learning and project development. This involves exploring how digital platforms can be culturally calibrated to reflect the region's diverse linguistic landscapes, interdisciplinary knowledge systems, and collaborative community learning practices. Scholars are encouraged to investigate platform efficacies that align with Caribbean students'

distinctive learning experiences, emphasizing digital literacy that empowers (rather than merely replicates) metropolitan educational models. A particularly promising avenue for scholarly inquiry is the nuanced exploration of audience engagement mechanisms within social media-enhanced PBL practices — a dimension left unexamined in the present research.

By systematically investigating these intersections, scholars can develop more comprehensive understandings of how digital platforms can be strategically leveraged to amplify local voices, facilitate cross-island dialogues, and create meaningful learning ecosystems that reflect the region's dynamic intellectual traditions.

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## Appendix 1

### ***Using Social Media to Enhance Project-based Learning in Caribbean Higher Education: A Case Study***

#### **Research Questions:**

1. To what extent does social media use in Caribbean higher education align with and support the core principles of project-based learning?
2. What insights emerge from integrating project-based learning with social media in Caribbean higher education?
3. How do students perceive and experience the incorporation of social media in their learning environment?

#### **Introduction and Ground Rules (5–10 minutes)**

##### **Facilitator Script:**

Good day everyone and thank you for agreeing to participate in this focus group discussion. As you were informed, you do not have to participate in this study even though you were in my class. This aspect is totally voluntary and even now, if you want to leave, you are free to do so without any consequence to you. So, is everyone consenting to being here? (Give time to answer). Thank you for submitting the consent form earlier. I appreciate that. I will be guiding our conversation today and the purpose of this discussion is to explore your experiences using social media as part of your campaign activities in our class.

Before we begin, I'd like to review a few ground rules:

- There are no right or wrong answers; we're interested in your honest opinions and experiences.
- Everyone's perspective is valuable. Please feel free to share your views even if they differ from what others have said.
- We ask that only one person speaks at a time.
- Everything shared here remains confidential. While I will be recording this session for research purposes, your identities will be kept confidential in any reports or publications.
- Please silence your mobile phones, though you may keep them with you.
- This session will last approximately 45 minutes.

Does anyone have any questions before we begin?

**[Address any questions]**

I'll now start the recording and we can begin our discussion.

## Questions

1. Let's start by going around the room. Could you please briefly describe your typical use of social media platforms in your daily life?
  - a. How has your use of social media changed since entering this class?
2. Which specific features or capabilities of social media platforms have been most useful for your health communication project work?
  - a. *Probe:* How did these features support research, collaboration, content creation, or information sharing?
3. You were asked to create social media handles specifically for the campaigns, could you describe how you feel about this.
  - a. *Probe:* Do you think your experience would be different if you had posted from your own hands/page?
  - b. *Probe:* What would be your recommendation for going forward? Should students post from a group page or their own pages?
4. How has the integration of social media in your projects influenced your approach to:
  - a. *Probe:* Researching health information?
  - b. *Probe:* Creating health communication materials?
  - c. *Probe:* Considering audience needs and perspectives?
  - d. *Probe:* Understanding cultural contexts in health communication?
5. Did you experience any negative type of interaction online during the campaigns?
  - a. *Probe:* If yes, please explain.
6. Explain your thoughts on whether social media should continue to be used in higher education/ university settings.
  - a. *Probe:* Are there any cultural factors that you think we should consider when asking students to share their work online?
7. How does social media help us in general to address health communication issues relevant to Caribbean populations?
  - a. *Probe:* Can you provide examples?
8. How has using social media in your health communication projects affected your:
  - a. *Probe:* Motivation and engagement with the course material?
  - b. *Probe:* Development of professional skills?
9. What challenges have you experienced when using social media for your health communication projects?
  - a. *Probe:* How have you addressed these challenges?
  - b. *Probe:* What support would have been helpful?

10. How has the integration of social media in your health communication projects influenced your view of:
  - a. *Probe:* The role of social media in health communication practice?
  - b. *Probe:* Health information dissemination in the Caribbean?
11. Based on your experience, what recommendations would you give to instructors about integrating social media into projects in the future?
12. Closing Question: Is there anything else about your experience with social media in your health communication projects that you would like to share that we haven't covered?

### **Facilitator Closing Script:**

Thank you all for your participation and valuable insights today. Your experiences and perspectives will help us better understand how social media can be effectively integrated into project-based learning in health communication education in the Caribbean context. As a reminder, your contributions will remain confidential. If you have any questions or additional thoughts after today, please feel free to contact me via the information provided in your consent form. Thank you again for your time.

### **Post-Focus Group Procedures:**

1. Review key points and initial impressions
2. Document any methodological observations or contextual factors
3. Secure recordings and notes according to data protection protocols
4. Schedule transcription and initial coding
5. Send thank-you messages to participants

### **Materials Needed:**

- Note-taking materials
  - Facilitator guide (this document)
-

# Exploring the Interconnectedness of High School and Community: A Naturalistic Inquiry

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## Abstract

This qualitative case study examines the reciprocal relationship between Ocean Academy, a secondary school established in 2008, and the community of Caye Caulker, Belize, through the lens of Vygotsky's 1978 Sociocultural Theory. Using naturalistic inquiry and employing semi-structured interviews, observations, and document analysis, this study explores how the school and community mutually influence each other's development. The research reveals four primary themes: cultural vibrancy and engagement, academic style and flexibility, infrastructural and environmental challenges, and community collaboration and support. Findings indicate that while the school faces significant infrastructural and socioeconomic challenges, strong community partnerships and innovative educational approaches have created a resilient educational ecosystem. The school's integration of place-based education and experiential learning has fostered strong connections between academic achievement and local cultural preservation. However, persistent challenges related to infrastructure, resource allocation, and external pressures from tourism highlight the need for systematic support and policy intervention. This study contributes to understanding rural education in developing contexts and demonstrates how schools can serve as catalysts for sustainable development in their immediate community while preserving cultural identity.

*Keywords:* community collaboration, place-based education, cultural preservation, sociocultural theory, K-12 education

## Introduction

Education in geographically isolated or rural communities presents a distinctive set of challenges, often rooted in limited access to resources and economic constraints. These challenges are not new; scholars have long recognized that rural education requires an approach that responds to the community's social, economic, and environmental realities (Sher, 1977). Research has shown that rural schools face significant hurdles, such as difficulties recruiting and retaining teachers,

limited technological access, and pervasive economic disparities (Barley & Beesley, 2007; Durán-Narucki, 2008; McDowell, 2001). However, despite these challenges, rural and isolated schools often possess unique strengths, including strong community ties, opportunities for place-based education, and a deep sense of local identity (Howley, 1997). As a result, many of these rural schools serve as learning centers and vital social hubs deeply embedded in the fabric of daily life. Many of them embrace place-based education, as Smith (2002) described, which integrates the local culture, history, and

environment into the curriculum, fostering a meaningful connection between students and their surroundings.

Furthermore, the geographic isolation of rural communities often necessitates innovative educational solutions. For instance, Mulford (2003) emphasized that rural schools must adopt flexible models of leadership and teaching that can adapt to fluctuating resources and changing community needs. This adaptability is evident in how schools tailor their educational programs to address local challenges, such as limited economic opportunities, and broader educational goals such as preparing students for life beyond their immediate environment. A growing body of literature has focused on the intersection of rural education and sustainability, particularly in coastal or island communities where environmental stewardship is critical (Gruenewald & Smith, 2008). Schools in these areas increasingly integrate environmental education into their curricula, teaching students about sustainable practices and protecting local ecosystems. This is relevant to the student's immediate context and aligns with global movements toward educational sustainability (United Nations Educational, Scientific and Cultural Organization [UNESCO], 2017). By adopting this approach to incorporating sustainability education into their curriculum, schools in coastal or island communities prepare students for future challenges and instill a sense of responsibility towards the environment (Down & Ferguson, 2022).

### **Community as a Central Hub for Educational Success**

Community engagement plays a vital role in fostering student success, particularly in rural settings where schools often serve as central hubs for social and educational development. Epstein's (2001) theory of overlapping spheres of influence highlights the importance of strong connections between families, communities, and schools in promoting student achievement. In this model, schools are not isolated entities but integral components of a broader social

network, including families, local businesses, and community organizations. In rural settings, these relationships are often even more pronounced, with schools becoming as a focal point for community activities and local development (Green, 2013). The literature on community engagement in education emphasizes the role of schools in fostering a sense of belonging and social cohesion (Curry et al., 2023; Egure et al., 2023; Ishimaru, 2014, 2017). Bryk and Schneider (2002) argue that trust is the foundation of solid school-community relationships, and trust is built through ongoing, reciprocal interactions between school staff, students, and community members. In isolated communities, where social networks are often tightly woven, the school's role in building and maintaining these relationships becomes even more critical (Bauch, 2001; Coleman, 1988).

### **Leadership**

Educational leadership in these rural and isolated communities requires unique skills and strategies that prioritize community engagement, adaptability, and ethical decision-making. School leaders in these contexts must navigate the complexities of limited resources, geographic isolation, and the need to integrate local culture and values into the school's operations and curriculum (Mulford, 2003). Research by Starr and White (2008) highlights the importance of distributed leadership in rural schools, where community involvement and shared decision-making are critical to the school's success. In community-oriented schools, leaders must adopt a holistic approach that sees the school as part of a larger ecosystem. This involves fostering strong relationships with community stakeholders, engaging families in the educational process, and ensuring that the school's goals align with the community's needs and aspirations (Harmon & Schafft, 2009). Leaders in these schools often take on roles beyond traditional administrative duties, serving as advocates for the community and facilitators of local development (Sher, 1977).

## Research Context

Belize is a culturally diverse nation with a population of approximately 400,000, spread across 7 districts, encompassing a broad spectrum of economic and social conditions. Some regions of the country still lack basic infrastructure such as indoor plumbing and electricity. In contrast, others boast modern amenities such as high-speed internet, creating a significant disparity in access to resources and opportunities (Medina, 2008). The population is an ethnic mosaic, influenced by the diverse cultures of the Kriol, Maya, East Indian, Garinagu, Mestizo, and Mennonite communities. English, as the national language of Belize, serves as a unifying factor amid this rich cultural diversity. However, many Belizeans are multilingual and speak Kriol, Spanish, or indigenous languages daily.

Caye Caulker, a small limestone island located off the coast of mainland Belize, provides a microcosm of the nation's cultural and economic dynamics. With a population of approximately 2,000, the island's history reflects its shift from a primarily fishing-based economy to one centered on tourism, which became the dominant industry in the 1960s. This transformation profoundly affected the island's social and economic structure. Before 2008, educational opportunities for Caye Caulker residents were severely limited, with only a primary school available for students up to age 12. As a result, many island natives lacked the secondary education necessary to pursue higher-paying jobs in the expanding tourism sector. Consequently, expatriates or newcomers often took the more lucrative, influential positions within the island's economy, while native islanders remained in lower-paying service roles.

### Ocean Academy

In 2008, the educational landscape of Caye Caulker was transformed with the establishment of Ocean Academy (OA), a secondary school developed by two women, an American and a Canadian, who were driven by the need to provide local students with access to secondary education. Ocean Academy was created to offer

a world-class education to students in Forms 1–4 (grades 8–12), empowering them with the skills needed for employment or to pursue higher education. The school promotes the idea that “you don’t have to leave the island to get a world-class education,” underscoring its commitment to making high-quality education accessible to the local population (Ocean Academy, 2023, p. 1). Ocean Academy’s model of education is distinctive in its integration of global perspectives with local needs. The school leverages the vital tourism industry of Caye Caulker, attracting visitors from around the world to contribute to its educational environment. These visitors, often professionals from diverse fields, are invited to teach classes or lead workshops, exposing students to a wide range of expertise and real-world knowledge. This unique approach aims to enrich student learning through real-world experiences while providing students with valuable networking opportunities, enabling them to “be self-aware, well-rounded, and immersed in the real world” while also equipping them with practical skills relevant to both the island’s economy and the wider world (Ocean Academy, 2023, p. 3). Ocean Academy’s approach reflects a blend of local community engagement with global educational standards, allowing students to remain grounded in their cultural identity while gaining skills and perspectives that extend far beyond the island’s borders. However, the full extent of the interrelatedness of the school and the community, and how this relationship shapes student learning, remains largely unexplored. Understanding these dynamics is crucial, as it could provide valuable insights into how Ocean Academy and the broader community can mutually support one another, to foster educational success and sustainable local development as graduates reintegrate into the island’s economy and society. To examine these interconnections more deeply, this study draws on Sociocultural Theory (Vygotsky, 1978) and aims to explore how social interaction and cultural context influence learning within this unique school-community ecosystem. In particular, the research is guided by the following questions:

## Research Questions

How have Ocean Academy and the Caye Caulker community mutually influenced each other?

1. What are stakeholders' (family, community, staff/teacher, and student) perceptions of OA?
2. How do individuals from the school and community interact, and what influence do these interactions have?
3. How have interactions between the school and the community influenced social norms and culture on the island?
4. What challenges and opportunities exist in the school and on the island?

## Theoretical Framework

Vygotsky's Sociocultural Theory of Cognitive Development provides a foundational lens for this study, helping to frame the dynamic interplay between Ocean Academy and the Caye Caulker community. Vygotsky's theory emphasizes that cognitive development is not an isolated, individual process but is profoundly shaped by social interactions and the cultural context in which an individual is embedded (Vygotsky, 1978). According to Vygotsky, human cognition develops through engagement with the cultural tools (such as language, symbols, and artifacts) present within a particular society. These tools serve as mediators of thought and shape how individuals perceive and understand the world around them. Thus, cognitive development is profoundly social, evolving first at the interpersonal level through dialogue with others and later at the intrapersonal level as these social interactions are internalized through processes such as inner speech (García-Carrión et al., 2020).

Language plays a critical role in this developmental process. It is not only a tool for communication but also a medium for thinking and learning. Through language, individuals self-regulate, organize their thoughts, and navigate various cognitive tasks such as problem-

solving, memory, and learning. Vygotsky (1978) argued that cognitive development is a process of internalizing culturally mediated social experiences, where learners gradually move from dependence on external support to greater autonomy in their thinking. A key concept in Vygotsky's theory is the Zone of Proximal Development (ZPD), which describes the range of tasks a learner can perform with the help of a more knowledgeable other but cannot complete independently. This guidance, or scaffolding, is crucial for cognitive development as it allows learners to achieve tasks beyond their current capabilities, gradually becoming more proficient and self-sufficient.

The application of Vygotsky's theory to the context of the island of Caye Caulker and Ocean Academy highlights education's role as a mediator of individual development and broader cultural transformations. As a unique educational institution on the island, Ocean Academy serves as a conduit through which students interact with diverse social and cultural experiences, many extending beyond the local community. The exposure to these diverse perspectives — whether through engagement with visiting educators, global visitors, or innovative teaching methods — mirrors the concept of scaffolding in Vygotsky's theory, as students are supported in expanding their cognitive and social capacities. The school's commitment to bringing external knowledge into the local context aligns with the idea that cognitive development is deeply tied to the cultural tools and social interactions that individuals encounter.

Furthermore, the reciprocal nature of this relationship is crucial for understanding how Ocean Academy and the Caye Caulker community influence each other. While the island's unique socio-cultural environment shapes the school, it also significantly reshapes social norms and cultural values within the community. Introducing new ideas and pedagogical practices at Ocean Academy may challenge traditional thinking and foster new social and cultural dynamics on the island. As students internalize these diverse experiences, they may contribute to shifts in the

island's collective identity and social structures, demonstrating the bidirectional influence that Vygotsky described in his theory of cognitive development. Vygotsky's sociocultural theory thus provides a robust framework for analyzing how Ocean Academy functions as both a product and a shaper of the cultural environment on Caye Caulker. By examining the interactions between students, educators, and the community through this lens, we can better understand how cognitive and social development at the individual level interacts with broader societal changes. The school's role in mediating cultural knowledge and fostering cognitive growth positions it as a key agent in the ongoing transformation of the island's social and cultural landscape.

## Methodology

This qualitative research employs a naturalistic inquiry framework embedded within a case study design to explore the social dynamics of a rural high school in a community. Naturalistic inquiry emphasizes investigating phenomena in authentic, real-world contexts (Bhandari, 2023; Erlandson et al., 1995). It is particularly well-suited for examining the multifaceted interactions among parents, community stakeholders, and school personnel. Through this approach, this study elucidates the complex web of social interactions, cultural practices, and community participation that underlie the school's operational dynamics. The design facilitates an in-depth, contextually rich examination of how these relational networks generate opportunities and challenges, particularly in fostering student engagement and academic success within the school setting.

## Data Collection

Given that naturalistic inquiry emphasizes capturing reality as it unfolds in its natural environment (Bhandari, 2023; Erlandson et al., 1995), the 7-person research team spent 6 consecutive days immersed in the school and the broader community of Caye Caulker,

and the extended observation period included both structured and unstructured observations in diverse settings. In the school context, researchers observed classrooms, school activities, and informal student interactions (e.g., break periods). Observations extended to events such as a prom and a cancer fundraising initiative, which were pivotal in understanding the school's integration into the community. In the broader community, observations focused on local businesses, family gatherings, recreational events, and religious services, all of which provided insights into the patterns of social behavior and the community's cultural fabric.

In addition to observations, semi-structured interviews were conducted with individuals who could provide key insights into the school-community relationship. These included 5 educators from OA and 6 community members, including 2 local business owners, a parent, a hotel staff member, a local musician, and a community leader. The interviews followed a semi-structured interview format to allow participants to express their perceptions and experiences freely, consistent with the open-ended nature of naturalistic inquiry (see Table A1, Appendix A).

The interviews aimed to uncover the influence of the Caye Caulker community on Ocean Academy and the influence of the school on the Caye Caulker community. The interview participants were selected based on convenience sampling, as interviews were conducted with individuals accessible to the researchers during the 6-day data collection period. In addition to the interviews and observations, documents such as the Ocean Academy student handbook, school photographs, lesson notes, and students' written work were collected and analyzed. These documents served as secondary data sources, enriching the researchers' understanding of the school's curriculum, ethos, and day-to-day functioning. Informal conversations with staff, community members, and students further supplemented the formal data collection efforts.

## Data Analysis

The data analysis for this study was conducted using a blend of Humble and Radina's (2018) coding style and Merriam's (2015) constant comparative method. The analysis unfolded as a deeply collaborative process, with 5 of the researchers meeting twice in person and twice via Zoom to discuss findings, refine codes, and identify emerging themes. A shared Google Doc facilitated real-time collaboration, allowing for continuous tracking of the evolving analysis. Given the naturalistic inquiry approach, data collection and analysis occurred simultaneously. This aligned with Merriam's (2015) guidance on the constant comparative method, which encourages researchers to engage with data iteratively, allowing them to continually refine their focus and adjust their inquiry as new themes emerge.

The analysis process began with open coding of field notes and interview transcripts (see Table A2, Appendix A). Interviews, averaging 45 minutes each, were transcribed in full and analyzed alongside observational data. The researchers individually reviewed and tagged their data sets during this initial coding phase, using open coding to identify recurring concepts and patterns (Humble & Radina, 2018). Codes ranged from descriptive tags such as "perceived vast opportunity for students" and "environmental consciousness and awareness", to participant-specific phrases like "students create goods to sell" and "the pandemic affected us." This open coding approach facilitated the discovery of emerging patterns by focusing on participants' direct language and behaviors observed in the field. In addition to open coding, axial coding (Humble & Radina, 2018) was employed to link the initial codes into more cohesive categories. This allowed the team to explore relationships between the codes and better understand the underlying dynamics shaping Ocean Academy and its interactions with the Caye Caulker community. Some of the resulting categories

included: "Challenges and Needs," "Skill Development," "Infrastructural Challenges," "Cultural Preservation and Community Values," and "Classroom Challenges and Conditions." These categories were derived from the constant comparison of interview and observational data, ensuring that each data set was cross-referenced and systematically integrated into the analysis.

During team meetings, 5 researchers condensed the codes into these broader categories, using the shared Google Doc as a platform for refinement. As Merriam (2015) suggests, categories were "sorted" and evaluated based on the richness and relevance of the data to the research questions. Researchers compared interview data with observational notes to triangulate findings, cross-checking insights from different data sources to enhance trustworthiness (Lincoln & Guba, 1985). For example, while some interviews revealed insights about "teacher mentorship" and "flexibility in the school resulting in creativity in teachers," these codes were further corroborated by direct observations of classroom dynamics and informal conversations with teachers and community members. One unique aspect of the data collection process was its flexibility. As researchers continued to gather data in the field, they adapted their collection methods based on emerging insights. For example, one researcher deepened her understanding of the island's economic culture by participating in local activities like hair braiding. This added another layer of context to the community's informal economy and social interactions. This approach aligns with Merriam's (2015) constant comparative method, as researchers continuously compared data sources and refined their inquiry based on real-time findings. Ultimately, the categories were synthesized into key themes, which included cultural vibrancy and engagement, academic style and flexibility, infrastructure and environmental challenges, and community collaboration and support. Each theme was developed through a rigorous, iterative process, ensuring that the final

analysis captured the complexities and richness of life on Caye Caulker and the role of Ocean Academy within it.

In line with best practices in qualitative research, the team employed triangulation by incorporating multiple data sources, including interviews, observational notes, and school documents (e.g., student handbooks), to validate the themes and ensure a comprehensive understanding of the phenomenon under study (Lincoln & Guba, 1985). The shared Google Doc served as a critical tool for this collaborative synthesis, allowing for the continual refinement of ideas and contributing to the robustness of the final analysis. Through this iterative process, the research team successfully developed a nuanced and in-depth understanding of the interconnected dynamics between Ocean Academy and the Caye Caulker community, grounded in both sociocultural and naturalistic perspectives.

## Findings

The analysis revealed four key themes that captured the complex dynamics between Ocean Academy and the Caye Caulker community. These themes (cultural vibrancy and engagement, academic style and flexibility, infrastructural and environmental challenges, and community collaboration and support) highlighted the unique interplay of educational practices, community values, and environmental factors. Each theme is explored in-depth below.

### Cultural Vibrancy and Engagement

Caye Caulker thrives on a deep-rooted commitment to preserving its culture and nurturing a spirit of community support, with Ocean Academy at the heart of this effort. Through our observations, we noted the limited presence of fast-food chain stores on the island. While the reasoning behind this absence is not explicitly clear, it suggests a potential effort to protect local businesses and preserve the island's cultural identity and economic resilience.

The scarcity of fast-food chain stores indicates a community emphasis on maintaining its unique character, whether by conscious design or evolving tradition. By keeping out fast food chain stores, these islanders ensure that money stays within their community, creating jobs for their young people, including Ocean Academy graduates. This shared dedication goes beyond economics. It is about creating a space where traditions are valued, and every gesture supports the island's identity.

Inspired by the island's traditions and customs, local artists create and market handcrafted jewelry, woven baskets, wood-carved objects, and more. These goods, promoted to visitors, highlight the island's creative past and considerably boost the local economy by generating employment and encouraging cross-cultural contact. Music and dancing are an equally significant part of the culture. Traditional Garifuna music, particularly Punta, and other Caribbean influences such as reggae are frequently performed at community events and celebrations. Apart from entertainment value, these musical traditions are also crucial for maintaining the people's cultural narratives and histories handed down through the years. One other rich cultural activity is the Lobster Fest, a respondent said. This activity draws residents and guests to honor the local shellfish.

Equally powerful is the island's sense of compassion, which runs through everyday life like a thread holding the community together. A resident's words speak volumes: "We know the elders on the island, and if there's food insecurity in a home, everyone steps in to help." This natural inclination to care for one another is mirrored in Ocean Academy's approach, where students in need receive education and tangible support such as uniforms and supplies. In this way, the school and the community move as one, embracing a shared mission to uplift each other and create a future that honors their cultural roots and collective well-being.

## Academic Style and Flexibility

Our data revealed that Ocean Academy students immersed themselves in the island's culture and economy, creating a seamless blend of education and real-life application. For example, students engage in tourism by leading bicycle and kayak tours, gaining first-hand experience as guides that showcase their island to visitors. By giving tours to tourists, students learn how to monetize their talents and pay for their education. Students also learn financial literacy and are encouraged to make products to sell and take part in internships. A teacher said, "Once a week, students choose workshops," learning skills for working in hospitality and kayaking. With the guidance of local and guest experts in fields like baking, diving, and other trades tied to the island's economy, students acquire vocational skills essential to the local industries. Whether interning at the local bakery or engaging in water-based activities related to the reef system, these experiences prepare them for future employment and instill a deeper connection to their community's way of life. In addition to these skills, students are taught to advertise and create webpages for selling artisan goods, applying their digital knowledge to support local businesses. This exposure became particularly significant during the pandemic, as students leveraged their computer skills to transition smoothly from traditional schooling to online learning environments, illustrating the adaptability and relevance of their training.

The school's emphasis on hands-on learning extends beyond cultural crafts to a broader entrepreneurial focus, where students develop business plans and see them through to execution with the support of the school. Teachers' creativity stood out in most of the observed lessons; as one parent said, "Teachers in the school find unique ways to make class interesting to our kids." Teachers, many former students, and lifelong residents of Caye Caulker enrich this experience by embedding local heritage into the curriculum. One teacher shared, "Learning about

Caye Caulker's heritage in school, like Garifuna music or the Maya language, makes us proud of where we come from and helps students connect with their roots." Integrating cultural elements into entrepreneurial activities enables students to transform their appreciation of local traditions into sustainable business ventures that benefit the economy and their community. Another teacher emphasized this experiential approach: "Instead of teaching them to ride a bike, we show them how to do it." This philosophy reflects a shift from traditional instruction to guiding students through practical, competency-based learning, where they demonstrate skills like using QuickBooks in real-time rather than relying solely on theoretical knowledge. Through these immersive experiences, Ocean Academy fosters a sense of identity, pride, and responsibility in its students, ensuring that their education is not just about academic achievement but also about sustaining the cultural and economic vitality of Caye Caulker.

## Infrastructural and Environmental Challenges

This study highlights profound challenges stemming from the physical and socioeconomic conditions at Ocean Academy, significantly hindering the learning environment and student well-being. During the 5-day observation, researchers noted that the school's proximity to residential homes results in constant noise disruptions, impairing classroom focus and teachers' ability to engage students. One teacher remarked, "It can be quite challenging to keep the students' attention with all the external noise and the less-than-ideal classroom conditions." The lack of modern infrastructure, air conditioning, proper windows, and soundproofing, further compounded these distractions, with poor ventilation and ineffective noise control contributing to a physically uncomfortable learning space. These conditions, coupled with frequent water, electricity, and sewer outages, created an environment where basic needs

are unmet, affecting students' concentration, health, and overall engagement in education. Compounding these infrastructural deficiencies, the school and community are burdened by socioeconomic challenges. Observational data revealed that many families face financial hardships, with some unable to provide food and shelter for their children consistently. One respondent noted, "Not all students have enough food; some don't even have a proper place to stay," reflecting the pervasive economic strain that limits students' access to necessities. The school's condition is aggravated by frequent flooding and constant repairs. The combination of unreliable infrastructure and socioeconomic instability disrupted daily school operations, undermining students' ability to succeed academically.

Beyond these physical and economic barriers, Ocean Academy may also be grappling with significant student behavioral problems, many of which are linked to the area's status as a tourist destination. The community's economic vulnerability has left some students susceptible to exploitation by tourists, who lure them into exploitative sexual relationships in exchange for money or goods. "Tourists sometimes take advantage of the kids because they know they are struggling," one respondent observed. These predatory behaviors, alongside growing issues like drug use and inappropriate language, further destabilize the school environment. With limited staffing and inadequate mental health resources, the school is ill-equipped to manage these complex social risks. As one respondent emphasized, "Bad behavior and language spread like cancer here," underscoring the urgency of addressing these challenges. The persistent lack of infrastructure and deep-seated behavioral and socioeconomic issues necessitate immediate intervention. "The government must help with roads, water, and basic things. Without that, we're stuck," one participant noted, calling for systemic change to support the school and its vulnerable student population.

## Community Collaboration and Support

The theme of "community collaboration and support" emerged as a foundational element of Ocean Academy, significantly shaping the school's educational environment and the broader social cohesion of the community. Data from interviews and direct observations revealed a profound sense of collective care, where community members actively contributed to one another's well-being. This spirit of compassion was particularly evident in how the community looks after its children, ensuring that they receive support at home and at school. Researchers observed that students often travelled to school in small clusters or peer groups, especially during hazardous weather conditions, providing a sense of safety and solidarity as they navigate flood-prone streets together. Teachers, too, demonstrated a deep concern for their students' welfare beyond academic responsibilities. In one notable example, a teacher was observed providing meals to students in her class, knowing that several students might otherwise go without food. These acts of care are not isolated gestures but rather reflect a deeply embedded communal ethic that prioritizes the nurturing and well-being of the next generation.

This community-driven support is not just limited to immediate acts of care; it is also embedded in the longstanding cultural practices of the area. Generational traditions of helping others have fostered a deeply ingrained ethos of collaboration, ensuring that the needs of individuals are met through collective action. "We help each other," as one respondent put it, encapsulates this shared responsibility, which also extends to educational initiatives. Before the establishment of Ocean Academy, parents faced significant financial and logistical burdens in securing their children's education. With no local high school, families were forced to spend considerable sums on daily boat transportation to the city, which was financially draining and

perilous due to rough weather conditions and unsafe vessels. The community's determination to collaborate and provide educational opportunities for its youth was a driving force behind the creation of Ocean Academy, illustrating the intense awareness of education as a vehicle for upward mobility and communal enrichment. This proactive effort to establish a local school shows the community's recognition that investing in education promotes individual success and preserves the vitality and prospects of the entire community.

In addition to creating the high school, the community's collaboration with the school is evident in its sustained commitment to educational advancement. Parents and local leaders regularly engage in school activities and decision-making processes, reinforcing their belief in the transformative power of education. This sense of ownership is deepened by the fact that all the full-time teachers at Ocean Academy are local community members, with some having graduated from the very school where they now teach. This continuity fosters a strong connection between educators and students, as teachers not only understand the unique challenges faced by the community but are also personally invested in its success. Furthermore, students actively seek internship opportunities within the school, demonstrating their desire to give back and strengthen the institution that has supported their academic journey. During school events and community meetings, parents also express their support and actively participate in fundraising initiatives to improve the school's infrastructure. Such involvement demonstrates a collective understanding that education is a cornerstone for future opportunities and community development. One respondent highlighted the community's investment in education: "We are not just sending our children to school — we are building a future for the whole community." This shared vision of education as a pathway to both individual and communal success underscores the depth of commitment that characterizes the relationships within Ocean Academy, making it a central space where the values of collaboration, mutual care, and social responsibility converge.

## Discussion

Family, school, and community engagement are central to students' educational success, particularly in rural settings like Caye Caulker. Research by Epstein (2001) and Sheldon (2003) highlights how schools in such contexts often serve as educational institutions and community hubs, with parental and community involvement as crucial drivers of student success. At Ocean Academy, this dynamic is visible in the collaborative relationships between parents, local businesses, and community members, all contributing to the school's functioning and student development. While shaped by socioeconomic realities, these interactions are fundamentally anchored in a shared commitment to education and the betterment of the island community. For instance, community-wide celebrations, such as the prom event, provide a vivid example of how the island rallies around its students, showcasing a deep collective investment in student achievements. Unlike in more individualistic Western settings, where such events may be limited to student participation, the involvement of parents and community members in these milestones illustrates the community's vital role in shaping the students' educational experiences and personal growth. Beyond celebrations, the active participation of local and international figures (such as retired educators who contribute both in and out of the classroom) reflects how community involvement enhances the school's resources and capacity. One notable example is a retired U.S. teacher who became deeply embedded in Ocean Academy's structure, supporting the school through teaching and joining the Board of Governors (Board of Education) for Ocean Academy and spearheading key initiatives like curriculum development and fundraising. Such contributions align with findings on the importance of community engagement in fostering supportive educational environments (Curry et al., 2023; Egure et al., 2023; Ishimaru, 2014). In Ocean Academy's case, these interactions ensure that students receive academic instruction and broader social and professional experiences critical to their

development. This reciprocal relationship between the school and the community reinforces the evidence that family and community engagement is more than peripheral — it is a cornerstone of student success, enhancing the island's learning environment and social fabric.

Studies have consistently shown that rural schools are more likely to experience resource shortages, affecting their ability to provide quality education (McDowell, 2001). At Ocean Academy, the absence of basic infrastructure like water, electricity, and sanitation systems hampers the daily functioning of the school. However, community cultural practices and values around education counterbalance these deficiencies. The strong community spirit and shared sense of responsibility observed among teachers and students helps to mitigate the impact of material shortages. This aligns with the work of Coleman (1988), who argued that social capital, in the form of strong interpersonal relationships and a shared commitment to educational success, can compensate for the lack of financial or physical capital in under-resourced schools. However, this social capital has limits. As noted in this study, the high poverty levels and limited access to governmental support for infrastructure strain the community's ability to provide consistent aid. The cultural practice of collective support cannot address the systemic issues of limited resource allocation and infrastructural decay. Furthermore, external factors, such as tourist arrivals, introduce cultural tensions that complicate these community efforts. While most tourists contribute positively to the local economy, others exploit the community's poverty, engaging in harmful behaviors that undermine the school's educational mission.

The findings on Ocean Academy's infrastructural challenges are consistent with existing research on rural schools, which identifies physical infrastructure as a critical determinant of educational outcomes (Durán-Narucki, 2008). Persistent flooding, poor road access, and unreliable utilities significantly disrupt the school's functioning. Inadequate

sewer systems and unsafe walking conditions create an environment that is not conducive to learning and places students at risk. In response to these challenges, stakeholders and community members have attempted to adapt by making do with the limited resources available. Teachers must often balance their instructional duties with addressing the immediate physical needs of students, such as providing access to food and drinking water or navigating unsafe roads. This reactive approach to infrastructural problems reflects the broader trend in rural schools, where staff and community members are forced to prioritize short-term survival strategies over long-term infrastructural development (Thapa, 2013). However, these efforts are insufficient in the face of persistent structural problems, as highlighted by multiple respondents who emphasized the need for government intervention to address the most pressing infrastructural needs. The theoretical framework of critical pedagogy (Freire, 1970) suggests that educational spaces should empower students and challenge societal inequities. However, the environmental and infrastructural challenges at Ocean Academy place significant limits on this potential. Without systemic changes that address both the physical conditions of the school and the broader socioeconomic context, the ability of Ocean Academy to function as an empowering space for students remains severely constrained.

Ocean Academy exemplifies the principles of place-based education, an approach that emphasizes integrating students' learning experiences with their local community's cultural, historical, and environmental context. Place-based education proves especially relevant in rural or geographically isolated areas, where local resources shape the community's identity and its students' lived experiences. According to Sobel (2004), students become more deeply engaged when their learning is directly tied to their surroundings, as this connection enhances academic success and fosters a heightened sense of responsibility toward their community and environment. At Ocean Academy, this

philosophy is embedded in the curriculum through partnerships with local eco-tourism businesses and marine conservation initiatives. These real-world learning opportunities enable students to connect their academic knowledge to the island's ecological and economic systems, allowing them to see firsthand how their education helps address local environmental and economic challenges.

This type of experiential learning has been shown to impact student engagement and educational outcomes profoundly. Gruenewald and Smith (2003) argue that place-based education boosts academic performance and nurtures students' sense of civic responsibility and stewardship for their community and environment. Schools like Ocean Academy create more meaningful learning experiences beyond abstract academic concepts by embedding education within the local context. For instance, students at Ocean Academy participate in marine conservation projects, where they can observe the direct impact of their work on both the ecosystem and the economy. These practical experiences help students understand how theoretical knowledge can be applied to solve real-world issues, reinforcing the relevance of their education.

Additionally, experiential learning that involves collaboration with local industries and environmental organizations is crucial for preparing students to face future challenges. Dewey (1938) emphasized that the most impactful learning occurs when students actively engage in their education, rather than passively receiving information. Moreover, Smith (2002) suggests that place-based education can strengthen local economies by equipping students with the knowledge and skills to contribute directly to the community's primary industries. At Ocean Academy, this approach is particularly evident in integrating learning with the island's key economic sectors, such as marine conservation and tourism. Extending these ideas, Down (2010) argues that education for sustainable development (ESD) must go beyond linking curriculum to community. It must reposition the

community at the very center of teaching and learning. Drawing from Caribbean ESD initiatives, Down (2010) emphasizes that meaningful education should be rooted in real community needs and co-created with community members, blending academic and local knowledge through active, service-based engagement. In this view, Ocean Academy's model aligns not only with experiential and place-based learning theories but also reflects the emerging paradigm of ESD, where education actively builds sustainable societies. By embedding community-driven goals into the heart of education, as Down (2010) advocates, Ocean Academy's practices represent a broader shift toward education that prepares students for sustainable futures academically, socially, environmentally, and economically.

## **Reflexivity and Ethical Considerations**

Throughout the research, we remained mindful of our positionality as outsiders to the Caye Caulker community. Reflexivity — an essential aspect of naturalistic inquiry — required us to continually reflect on how our presence and interactions might influence the data we collected. We approached our research with humility and respect, recognizing that the community members were the true experts in their lives and experiences. All participants were fully informed about the purpose of our research and their consent was obtained before any data collection. We also took care to protect the confidentiality of participants, particularly given the small, close-knit nature of the island community.

## **Conclusion**

This study illuminates the complex dynamics between Ocean Academy and the Caye Caulker community, and highlights several significant implications for rural education policy and practice, and education for sustainable development. The success of Ocean Academy's

place-based education model suggests that integrating local cultural knowledge and practical skills into the curriculum enhanced both student engagement and community development. This study also underscores the critical role of community collaboration. However, the findings also reveal that community support alone did not compensate for systematic infrastructural deficiencies and socioeconomic challenges. The persistent issues of inadequate infrastructure, limited resources, and external pressures from tourism indicate a pressing need for policy intervention and systematic support from the government. These challenges threaten not only the school's educational mission, but also the student population's broader well-being. Future research should explore how rural schools like Ocean Academy can better leverage governmental and international resources, while maintaining cultural integrity and a community-centered approach.

This case study contributes to the broader literature on rural education and sustainability education by demonstrating how schools in this isolated community have successfully balanced global educational standards with local cultural preservation. The findings suggest that the future success of this institution depends on strengthening the synergy between community engagement, educational innovation, and systematic support structures. As rural communities worldwide face similar challenges of preserving cultural identity while preparing students for a global future, Ocean Academy's experiences offer valuable insights for educational leaders, policymakers, and researchers in rural education in similar contexts.

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## Appendix A

**Table A1**

*Sample of Interview Guided Questions*

Category	Question
Opening Questions	1. Can you please tell me more about yourself; how long have you lived on Caye Caulker, and what is your history on the island?
Exploratory Questions	2. Can you please tell me more about Ocean Academy and your relationship to the school, what opportunities the school provides, and what challenges are involved with having a high school on the island?
Behavior and Experience	3. How, specifically, have you been involved with the school?
Opinion and Values	4. How, if at all, has life on the island changed since this school was created? 5. How do you think the community perceives Ocean Academy?
Community Involvement	6. How is the community involved in Ocean Academy?
Needs Assessment	7. What are the greatest needs on this island? 8. How, if at all, has the school addressed those needs? 9. How do members of the community and families address those needs?
Closing Questions	10. What suggestions would you have to promote well-being on this island, and is there anything else you would like to share?

**Table A2***First-round Roding of a Researcher*

Category	Interview 1	Interview 2	Interview 3	Observation 1	Observation 2
Duration	2 Hours	1 Hour	1 Hour	1 Hour	3 Hours
Role	Island Native Business Owner-Fisherman leader	Parent of a student attending HS	Teacher at Ocean Academy	Teacher at Ocean Academy	Walk about the island
Background	Born on the island	Parent born on the island's perspective	Entire life has been on the island	Entire life has been on the island	Focus on structure over beauty
Opportunities	First business on the island	Students work to pay for tuition	Attended school on the island	17 students active engaged learners	Islanders selling their products
Community Value	Traditions of helping others	Happy to have a child in school on the island	The community support the school has grown in size	Safe, welcoming classroom culture extends community	Islanders selling goods, no signs of homeless people
Challenges	Hardship to send students to Belize City expensive	Past, no place to go to school except Belize City	Barrier: road conditions, No clean water	School floods when it rains, students walk to school year-round	No clean drinking water, No public sewer system
School Relationship	Established relationships	No challenge with school	A good relationship with the school	Teacher is active in classroom and community	Very laidback lifestyle, School involvement
Student Engagement	Students create goods to sell promoting tourism	Student internships future island leaders	Competency-based learning Students explore interest	Majority of students engaged in working on tourism interests	Students showing rather than telling. Student giving tours
Behavioral Insights	Behavior of youth is most important	Behavior tied to student success	Behavior tied to academic success	Needed intervention for behavior	Community wants good behavior
Parental Involvement	Parents involved in school and island events	Thankful for a high school on the island	Parents engaged and involved in providing food	Government needs to help with infrastructure	Parents want students to stay on the island

Table A2 continued

Category	Interview 1	Interview 2	Interview 3	Observation 1	Observation 2
Environmental Observations	Island is changing No clean water No sewer system	Rain makes big holes, hardship for students walking	Loud noises from the construction	Chickens clucking, roosters crowing	No fast foods Old power grid No cars/trucks
Cultural Insights	Generational traditions of helping others	Students stay on the island future businessmen	Don't appreciate corporations coming in	Islanders help the elders with food, clothing, and shelter	We need visitors to promote tourism for financial stability

# Creating a Course Syllabus and Lesson Plan Using ChatGPT: Some Considerations

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## Abstract

ChatGPT remains controversial in education since its public release in November 2022. Despite its impressive résumé, which includes producing human-like responses, it is liable to hallucinate; and the opportunities for plagiarism are well documented in the literature. Could ChatGPT be an asset to teaching and learning? ChatGPT and other Large Language Models (LLMs) continue to improve at astonishing rates, and students are already using the services. This qualitative study assesses the accuracy and usefulness of ChatGPT as a tool to create a course syllabus and lesson plan for a Western classical music history course, and by extension its usefulness as a teaching tool in the classical music history classroom. The findings suggest that while the LLM cannot be a substitute for the expertise of the educator, it is a useful tool. If used in conjunction with established practices and tools in humanities studies, the very limitations of ChatGPT could not only create powerful learning opportunities for developing AI literacy among students outside of STEM, but could support the development of higher-order cognitive skills in the music history classroom.

*Keywords:* ChatGPT, course syllabus, lesson plans, music history

## Introduction

When OpenAI announced the arrival of ChatGPT, a form of generative artificial intelligence (AI) to the world in November 2022, it was hailed as the “largest language model in the world” (Floridi & Chiriatti, 2020, as cited in Lund et al., 2023, ChatGPT section, para. 3), and one that would “revolutionize the world” (Jürgen et al., 2023, p. 2). Soon after it was unveiled, ChatGPT became the “fastest-growing user application in history” (Lo, 2023, p. 1). ChatGPT’s impressive résumé included answering questions and writing essays, stories, poems, and code within minutes

of receiving a prompt. ChatGPT and similar Large Language Models (LLMs) can generate human-like text on a range of topics (Barrett & Pack, 2023) and provide personalized tutoring to students (Mutanga et al., 2024). ChatGPT’s upgrade to GPT-4, released in 2023, was projected to have “100-trillion parameters, about 500 times more than GTP-3 ... thus approaching the number of neural connectors in the human brain” (Jürgen et al., 2023, p. 3).

ChatGPT’s remarkable power and capabilities have led several scholars to suggest, albeit

cautiously, that ChatGPT could be used to personalize lessons for students, simplify complex concepts, and provide personalized learning (Adiguzel et al., 2023). As a provider of personalized learning, ChatGPT functions as a chatbot, or “bot” for short, where the user converses with the bot using their natural language in similar ways that the user would converse with another human (Chintala et al., 2024). Halaweh (2023) advocated using ChatGPT in the classroom to increase student engagement while teaching 21<sup>st</sup>-century skills such as collaboration, problem-solving, critical thinking, and digital literacy. It was also suggested that ChatGPT could serve as a teaching assistant to teachers by creating lesson plans and in-class activities (Halaweh, 2023).

The benefits of ChatGPT to STEM education and the learning of human languages is well documented (Humble & Mozelius, 2022). Rajala et al.’s (2023) study concluded that despite ChatGPT’s tendency to hallucinate, a term that describes inaccurate output from the bot, students enrolled in a web development course felt that ChatGPT was useful in helping them complete course projects. Their mixed methods study took place in a computer science class for first-year and second-year students at Tampere University, Finland. The pre-test and post-test surveys were completed by 109 students who were divided into two groups. The experimental group had access to ChatGPT to help them with group projects on web design and coding. Each group had between 5-7 students. The control group did the same exercises but did not have access to ChatGPT.

David Malan, Professor of Computer Science at Harvard University, agreed with Rajala et al. (2023) in an interview with Coffey (2023). Malan reported that Harvard had integrated ChatGPT into their introductory computer science courses. The goal, according to Malan, was to allow teaching assistants to devote more time to providing personalized assistance to students. The chatbot would support increased in-person interactions between students and teachers (Coffey, 2023).

## The Problem

Since its inception in the 1940s, generative AI (GenAI) continues to evolve at an alarming rate. Several industries have now integrated it into their workflows, and require their employees to use it. In the finance industry, for instance, AI provides customer service, detects fraud, and supports risk management. In manufacturing, AI provides quality control by detecting defective merchandise (Mossavar-Rahmani & Zohuri, 2024). Despite its accessibility and widespread use, AI is not without its problems. Text created by AI is difficult to detect, making plagiarism easier than before ChatGPT was released. ChatGPT has a penchant for hallucination, or of making up facts. Banning it, or otherwise restricting its use in the classroom out of fear, will severely curtail the effectiveness of a future workforce to thrive in an AI-driven economy. Artificial intelligence is here to stay. It is therefore necessary that educators learn how to integrate AI into their own work processes to familiarize themselves with its potential in their domains.

The problem is that no empirical research has been done to determine whether ChatGPT could be useful for creating a course syllabus and lesson plan for an undergraduate-level class in Western classical music history, or whether Gen AI is useful as a teaching tool in the Western classical music classroom. Research has shown that ChatGPT is useful for teaching STEM subjects, including computer coding. It can pass exams in law and business (Adiguzel et al., 2023). Several studies focus on using ChatGPT in the music education classroom, or as a tool for composing the text for songwriters (e.g., Holster, 2024; Sun, 2024). Few studies examine its use in humanities courses, however (see Ali et al., 2024).

## The Purpose

The purpose of this study is to assess ChatGPT’s usefulness in creating a course syllabus and lesson plan for an undergraduate-level music history course on 20th century classical music at a small teacher’s college in Jamaica. Using ChatGPT to create course syllabi and lesson plans provides a foundational instrument that

educators could modify to suit their contexts. Creating these documents allows instructors to evaluate ChatGPT's suitability as a teaching tool for undergraduate music history majors. It takes AI literacy and prompt engineering out of the exclusive domain of STEM courses and into other subject areas. Because ChatGPT interacts with users in ways that mimic human conversations, users in the humanities, for instance in music, can solicit the chatbot's help to generate text (Holster, 2024), without skills in computer coding (Chintala et al., 2024; Guo, 2024).

## Research Questions

The study answers the following questions:

**RQ1:** What are some of the issues that surface when using ChatGPT-3 to create a lesson plan for an undergraduate music history class on the music of the 20th century at a small teacher's college in Jamaica?

**RQ2:** Could ChatGPT be useful to the Western classical music domain, and by extension, is it worth integrating into the music history classroom?

## Research Participants and Setting

The population most impacted by the results of this study are instructors of Western classical music history and undergraduate music majors who are required to take survey courses in music history. As this 20th century course had not been offered at the college in several years, its content needed to be upgraded. It was time to create a new syllabus. The course was taken by students on the performance track in their fourth and final year of university study, and the class size ranged from 1-6 students.

## Literature Review

Gladstone (2023) states categorically that teachers should use ChatGPT and that it "has no limits" (p. 19) in the ways it can be used. Despite these absolute statements, Gladstone admits that ChatGPT can neither reason nor empathize. This observation is in line with Lund et al., (2023). The bot is unable to determine whether its output could potentially be harmful

to groups of people by perpetuating biases. Each time the user interacts with the bot by inputting prompts, the person is training the AI. This raises issues of privacy, security, and authorship (Gladstone, 2023).

Large Language Models are liable to hallucination and bias. Washburn and McCutchen's (2024) qualitative study found this to be the case in a course on American Indian history. Their sample was drawn from students in their survey and upper-level history courses. The students were given essays generated by ChatGPT that were based on required course readings and instructed to critique the AI's identification of central themes from the texts. The students noted that the AI-generated essays failed to mention a few significant themes from the assigned readings and tended to use the term "Native Americans" as a blanket term without differentiating tribes. The students asked ChatGPT to generate a 10-item bibliography representing the most recent peer-reviewed studies on the topic of Native American history. All 10 items were fictitious. Guo (2024) circumvented the issue of hallucination and was able to generate fairly accurate outputs by engineering their prompts using Python and an iterative process for an art history course. Using the English language, Guo prompted ChatGPT to use Python script to generate a response to his question instead of using the script to write the entire prompt. The researcher analyzed ChatGPT's output, then refined their prompt for a more nuanced response, and repeated the process until the chatbot produced a satisfactory response to the original prompt. This iterative collaboration between user and AI characterizes effective practices in prompt engineering (Guo, 2024). Computer programming, however, is beyond the scope of many humanities instructors and their students. It would not be feasible to teach computer programming in a humanities course.

Cooper (2024) conducted a quantitative study in which 56 participants were asked to distinguish between AI-generated lesson plans and ones created by humans for a music education course. The participants were presented with eight lesson plans: four were created by AI and the other four were created by humans. Fifty-five

percent of the teachers accurately identified the AI generated lesson plans, but most participants admitted to guessing. None of the participants expressed confidence in differentiating between the two. Cooper's study differs from Guo (2024) in that instead of advocating for an iterative interaction with ChatGPT, the user is encouraged to employ "prompt chaining" (p. 11) where the bot is given small bits of instructions to create the lesson plans. Cooper (2024) observed that teachers should become familiar with prompt engineering to create lesson plans to suit their context.

A qualitative research design was chosen for this study because the objective was to evaluate ChatGPT within the context of a music history course for undergraduates. This study differs from the objectives of Cooper (2024). While Cooper's study focuses on lesson plans for a generalized music class for high school students, this study evaluates ChatGPT for its nuanced, insightful, and specific output suitable for a college course intended for music majors. This design seeks to understand the experiences of individuals and groups within a specific time and place (Flick, 2018). In light of the problem and questions that this study addressed, a self-case study provided insight into ChatGPT's strengths and weaknesses from the perspective of the researcher's work process and by extension, the context in which the documents would be used.

The researcher used Kotzeva and Anders's (2023) prompt formula to create a syllabus and lesson plan using ChatGPT for an undergraduate music history course on 20th century music. Kotzeva and Anders's formula was adopted because the study was one of the earliest published on prompt engineering for ChatGPT that was available at the time of conducting this research. Since then, other scholars have published studies on prompt engineering, such as Nazari and Saadi (2024). While Nazari and Saadi (2024) combined a generalized and domain-specific approach to developing their prompt formula, Kotzeva and Anders used an approach taken from rhetoric to develop their formula in which *techne* (skill) connects *praxis* (application) to solve real-world challenges. The authors connected rhetoric and creativity to the world

of AI. ChatGPT lacks contextual and rhetorical awareness, and Kotzeva and Anders's formula provided the context for the bot. By connecting *praxis* to real-world needs, the user can address ethical issues by using ChatGPT as a tool while retaining human autonomy in problem-solving.

## Training Generative AI

Large language models such as ChatGPT, a form of GenAI, can learn vast amounts of data using Natural Language Processing (NLP). The AI is trained through a process called Machine or Deep Learning using a complex system of neural networks, much like the human brain. ChatGPT is trained on approximately 45 terabytes of knowledge gathered from the open web; that is, blogs, Wikis, websites, ebooks, articles, and newspapers (Jürgen et al., 2023, p. 3). Using the ability to predict text, LLMs combine algorithms and deep learning to generate responses to users (Lund et al., 2023). As ChatGPT constantly finds and trains on new data, its responses to the same prompts will improve over time. Each time users interact with the bot, it learns new material and applies it to a later similar prompt. Essentially, it is the user who contributes their expertise to training and improving the AI's output, which then benefits subsequent users. The refining process is akin to helping a student learn through the Socratic process, where the teacher asks questions of the students that are designed to help them think critically to develop their responses (Dalim et al., 2022). The iterative nature of Socratic questioning helps students learn course content (Dös et al., 2016).

This refining process makes it difficult to spot plagiarism. If a student decides to use ChatGPT to complete an assignment, the instructor testing whether the assignment was AI-generated would have a difficult task determining if that was the case, especially if the time-lapse between completing the assignment and the grading process was great enough for the AI to update, upgrade, and improve its responses. Refining, however, can be undertaken by the user instead of going through the AI.

## Method and Findings

In this qualitative study, the free version of ChatGPT released in November 2022 was used to create the course syllabus and lesson plan for an undergraduate course on 20th century music. This is the version that was most accessible to faculty and students in Jamaica at that time. The study was conducted between June and August 2023, when concerns about AI's influence on education and other sectors were heavily reported in the mass media. The AI-generated course syllabus was used to guide the course, and a modified version of the lesson plan for Week 1 was used to teach the course for that week.


The prompt outlined below was developed by Kotzeva and Anders (2023) and is based upon an online workshop conducted by Anders in June 2023. Their 5-part prompt was designed to guide

ChatGPT to produce a response that thoroughly and precisely answered a question. The steps included:

1. **Context.** This is the role or the persona that ChatGPT is to assume as it generates its response.
2. **Task.** This is the job it is to perform.
3. **Instructions.** These are the specific points to be included.
4. **Clarification.** This is the point at which the AI is allowed to ask the user questions.
5. **Refine.** Once ChatGPT has generated its response, this step allows the user to engage in conversation with the AI by asking follow-up questions to clarify aspects of the bot's response, gather additional information, or generate another prompt with different parameters.

### Figure 1

*The Prompt that was Constructed, based on the Formula, to Create the Syllabus*

**D** You are a college professor in a performing arts department. Create a course syllabus for an introductory class on 20th century music for undergraduates. The course is thirteen weeks long. Break down the content into thirteen-week segments. The course must include post-romantic music and artificial intelligence in music 

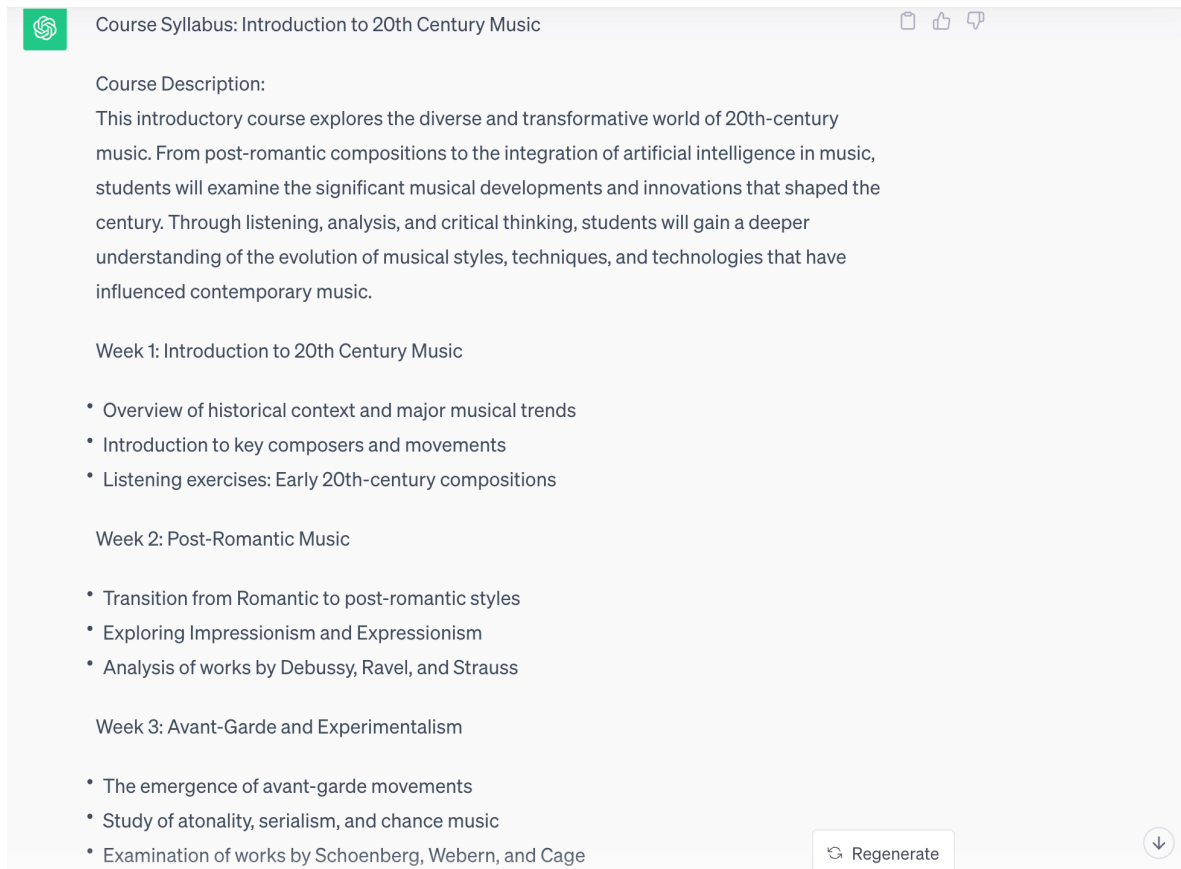
The first sentence provided the context in which ChatGPT would respond: through the context of being a college professor. The second sentence stated the task and reiterated the level: to create a course syllabus for a history course on 20th century music for tertiary-level students. Specifying the context was crucial, as it utilized ChatGPT's ability to create content suitable for the cognitive level of undergraduate

students. Sentences 3–5 specified the length of the semester, 13 weeks. The instructions provided in sentences 4 and 5 requested that the content be presented in 13-week segments and specified 2 topics that were required in this context: Post-Romantic music and AI in Music.

ChatGPT's response is shown in Fig. 2.

## Figure 2

### Course Syllabus Generated by ChatGPT, June 2023



The screenshot shows a chat interface with the following content:

**Course Syllabus: Introduction to 20th Century Music**

**Course Description:**  
This introductory course explores the diverse and transformative world of 20th-century music. From post-romantic compositions to the integration of artificial intelligence in music, students will examine the significant musical developments and innovations that shaped the century. Through listening, analysis, and critical thinking, students will gain a deeper understanding of the evolution of musical styles, techniques, and technologies that have influenced contemporary music.

**Week 1: Introduction to 20th Century Music**

- Overview of historical context and major musical trends
- Introduction to key composers and movements
- Listening exercises: Early 20th-century compositions

**Week 2: Post-Romantic Music**

- Transition from Romantic to post-romantic styles
- Exploring Impressionism and Expressionism
- Analysis of works by Debussy, Ravel, and Strauss

**Week 3: Avant-Garde and Experimentalism**

- The emergence of avant-garde movements
- Study of atonality, serialism, and chance music
- Examination of works by Schoenberg, Webern, and Cage

At the bottom right of the chat area, there is a "Regenerate" button and a downward arrow icon.

The term “20th century music” is a very broad term that encapsulates world, indigenous, folk, fusion, and western classical music. By prompting ChatGPT with the keyword “Post-Romantic Music,” the bot responded with a syllabus that focused on western classical music and included a section on Post-Romantic Music and AI in music. Jazz, however, did play a significant role in the music of Classical genres of the period, and ChatGPT included a section on this cross-fertilization in the syllabus in Week 4 (see Appendix 1 for the entire syllabus). Week 1 offered an overview of the context of 20th century music, and illustrated the diversity of musical styles through the suggested listening exercises.

The ways of presenting course content in a history course on 20th century music are as diverse as the actual content included in such courses. ChatGPT presented the content according to topics rather than chronologically or by contributions of

various countries. The drawback to using ChatGPT to create the syllabus was that the content was not presented in the order in which it occurred in the course textbook. The author chose not to ask the AI to organize the content chronologically because that was the conventional way in which history was presented in texts and taught (Turan, 2020). Using this syllabus required students to jump to pertinent sections of the text for some weeks. Despite ChatGPT’s impressive output, it was necessary to move to step five in Kotzeva and Anders (2023) formula: the refining process.

The refining process was undertaken without the help of GenAI. As this syllabus would be used in an actual classroom, the subheading under Week 2 titled, “Transition from Romantic Music to Post-Romantic Music” was changed to “Post-Romantic to early 20th century,” and Richard Wagner was added before Richard Strauss in Week 2. Impressionism and Expressionism were two separate artistic styles

grounded in differing ideologies. It was for that reason that Expressionism was removed from Week 2 and added to the following week.

These changes were necessary because the students had already taken a course in Romantic music, and to provide an overview of the transition from Romantic to Post-Romantic styles, as ChatGPT suggested, would take up much of the 2 hours allotted to the class. The critical study for that week (and the one that would set the tone for the remainder of the course) was how musical styles evolved from Post-Romanticism to produce the diverse ideologies and practices in the music that characterized the 20th century. Richard Wagner was a significant composer who not only represented the culmination of Post-Romanticism, but opened the way for new trends in the 20th century. Any discussion of this stylistic shift necessarily included his contributions, alongside those of his contemporary, Richard Strauss. Expressionism was associated with the Avant-Garde, specifically with the Serialism of Schoenberg, who was not only a composer, but also a painter whose visual art embodied the Expressionist style.

The next step was to create a lesson plan for Week 1 of the syllabus. It was not necessary to follow all of the steps of Kotzeva and Anders's (2023) formula because the conversation was an ongoing one with the bot. Figure 3 provides the final page of the lesson plan.

ChatGPT's response required extensive refining. The lesson plan included all the elements that one would expect: course objectives, learning outcomes, and materials needed (see Appendix II for the entire lesson plan). The syllabus specified that Week 1 should include an "overview of historical context [sic] and major musical trends". It lacked content to fulfill this requirement. The course instructor gathered information from journal articles and the course textbook for the overview. ChatGPT did supply an extensive listening list in support of the listening exercises for the week, and divided them into 15-minute segments. However, it was too long to fit within a 2-hour class, that necessarily included an overview of the historical context for this music.

The instructor had to decide which pieces would be culled from the list. Appendix II shows the abbreviated listening list, which allowed more time to do the listening and discussion portions of the class. Reducing the number of listening exercises to a manageable size provided greater cohesion to the class structure, as students could then connect definitions and explanations with the actual music. The ensuing discussions that inevitably became part of the listening exercises generated lively responses.

For students to complete the instructions enclosed in the box in Figure 3, they would need to have the necessary vocabulary to articulate what they heard in the music. Much of the repertoire would be new to the students, and while they would most likely be able to aurally detect the musical events within a composition, they would not have the vocabulary to discuss the music. A glossary was therefore deemed necessary. Figure 4 shows a sample page from the glossary.

ChatGPT's extensive glossary did not prove helpful for students to orally articulate their aural experience. For example, both a tone poem and an excerpt from a ballet in numbers 5 and 10 in the glossary are purely instrumental forms; and, unless the students happened to be familiar with the music chosen for the listening exercise, both genres would be indistinguishable to them. The definition for "harmony", number 13, where the chord structure supports the melodic line best describes the music of 1650–1913. That definition would not be helpful in discussions of much of the experimental music, such as Serialism and electronic music of the 20th century. The prescribed course textbook had a more useful definition for harmony as a series of vertical sounds that focused on intervallic relationships.

ChatGPT omitted a few items from the glossary. The course outline, for example, included a section on Minimalism in Week 7, but the term was omitted from the glossary. Minimalistic pieces have a distinctive, almost hypnotic sound. ChatGPT omitted that genre's representative music from the listening exercises it generated for the Week 1 lesson plan. Minimalism influences

**Figure 3***Listening List*

4. Igor Stravinsky - "The Rite of Spring" (1913)
  - One of the most revolutionary and controversial ballets of its time, this piece by Stravinsky marks a significant departure from traditional harmony and rhythm, leading to the rise of modernism.
5. Arnold Schoenberg - "Pierrot Lunaire" (1912)
  - An important work in atonal music, "Pierrot Lunaire" employs sprechgesang (spoken singing) and showcases Schoenberg's development of his twelve-tone technique.
6. Béla Bartók - "Music for Strings, Percussion, and Celesta" (1936)
  - Demonstrating Bartók's fascination with folk music and use of contrasting timbres, this piece exemplifies the fusion of folk elements with modern compositional techniques.
7. Claude Debussy - "Prelude to the Afternoon of a Faun" (1894)
  - Another significant Impressionist piece, this orchestral work reflects Debussy's innovative approach to melody and form.
8. Sergei Rachmaninoff - Piano Concerto No. 2 in C minor (1901)
  - Rachmaninoff's lush and expressive romantic style can be heard in this concerto, representing the lingering influence of the Romantic era into the 20th century.

During the listening exercises, encourage students to take notes on the stylistic features, emotions evoked, and the composer's intentions. After each piece, hold discussions to analyze the musical elements and discuss the connections between these early 20th-century compositions and the broader musical context of the time.

🔄 Regenerate response

many compositions of the 21<sup>st</sup> century, and the term has also been adopted by society as a way to describe a lifestyle. The term needed to be added to the glossary. The textbook's definition of minimalism highlighted the short repetitive rhythmic or melodic patterns that were repeated throughout the composition.

The textbook offered more helpful definitions than ChatGPT, and it was for that reason that the AI-generated glossary was abandoned in favor of the one supplied in the text. In a future offering of the course, a summative assessment could involve taking this AI-generated glossary and asking students to expand it to serve as an aural guide for listening to this repertoire. The exercise could require students to include one representative piece from the repertoire, and include a few salient features. To complete the task, students would be required to apply the information from the course lectures and textbook. They would need to analyze the representative music from the listening exercises and any other

music presented during the lectures, evaluate ChatGPT's glossary, then create a glossary that would help students aurally recognize differences in styles and genres.

Kotzeva and Anders's (2023) prompt formula was used to generate a second syllabus in August of the same year. The result was an improvement over the one discussed above. Figure 5 shows a section of the later response.

An "Introduction to Post-Romantic Music and its Characteristics" replaced the "Listening Exercises: Early 20th century Composition" listed as the third bullet point in week one of the original syllabus. This is shown in Figure 5. This was significant because students had already taken a course in Romantic music in a previous semester, and the critical study here was the movement from Post-Romantic Music to the 20th century. ChatGPT added the composers Mahler and Rachmaninoff to Week 2. Wagner was still omitted, and Expressionism remained

## Figure 4

### Glossary

5. **Tone Poem:** A piece of orchestral music that tells a story or evokes a mood or scene through music. It often follows a narrative or extra-musical idea.
6. **Orchestration:** The art of assigning musical ideas to different instruments or sections of an orchestra to create specific colors and textures.
7. **Modernism:** A broad cultural and artistic movement that challenges traditional norms and embraces experimentation and innovation. In music, it led to new styles and techniques that broke away from the conventions of the past.
8. **Sprechgesang:** Also known as "speech-song," it is a vocal technique where the performer partially speaks and partially sings the text, creating a unique expressive quality.
9. **Folk Music:** Traditional music of a particular culture or community, often passed down through generations by oral tradition.
10. **Ballet:** A theatrical dance form with a specific storyline, characters, and music. Ballet often combines dance, music, and stage design to create a cohesive performance.
11. **Timbre:** The quality of a sound that distinguishes one instrument or voice from another. Timbre contributes to the overall color and character of the music.
12. **Melody:** A series of single pitches that create a musical line and serve as the main focus of a piece.
13. **Harmony:** The combination of simultaneous musical pitches to create chords and progressions that support the melody.

beside Impressionism. The refining process to the first syllabus was done without the aid of AI. That could account for the reappearance of the same problems as in the earlier version. The AI devoted two weeks to AI in Music in the updated syllabus instead of the single week in the original one. See Appendix III for the complete syllabus.

## Discussion and Limitations

Despite its limitations, ChatGPT proved a useful tool for creating a syllabus. In response to Research Question 1 (What are some of the issues that surfaced when using ChatGPT to create a course syllabus and lesson plan?), the

bot presented the material according to topics rather than chronologically. While this provided cohesion to an otherwise disparate set of ideologies and practices that characterized 20th century music, the syllabus did not align with the way that the material was presented in the course textbook. This would require the student to be selective with their reading and make extensive use of the book's index. The output was also unstable, as was demonstrated in the differences between the two iterations of the course syllabus at different time points. The bot did not distinguish between certain movements prevalent in 20th century music history, such as Impressionism and Expressionism, and instead

**Figure 5**

*Course Syllabus Generated in August 2023*

Course Title: Introduction to 20th-Century Music

Course Description:  
 This course provides an overview of the significant developments and trends in 20th-century music, focusing on post-romantic music and the role of artificial intelligence in shaping musical creation and performance. Through listening, analysis, and discussion, students will gain a deeper understanding of the diverse styles and techniques that have emerged during this dynamic era.

Week 1: Introduction to 20th-Century Music

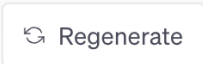
- Overview of the historical context and major movements in the 20th century
- Key composers and their contributions
- Introduction to post-romantic music and its characteristics

Week 2: Post-Romantic Music

- Late Romanticism and its transition to post-romanticism
- Analysis of post-romantic works from composers like Mahler, Strauss, and Rachmaninoff

Week 3: Early 20th-Century Avant-garde

- Exploring the emergence of impressionism and expressionism
- Debussy and his influence on the 20th century



grouped them. Some significant composers and movements were omitted altogether.

The syllabus proved more problematic in that it lacked the specific content and learning activities to fulfill the objective of presenting an overview. The instructor would need to use an iterative process to extract the needed information, bearing in mind that they would also be training the bot in the process. This raises issues of intellectual property. An alternative would be for the instructor to use their expertise

and personal resources to supply the missing content. It is for these reasons that using ChatGPT to create a lesson plan does not necessarily save time, but it gets the process started by providing a foundation on which the instructor can build.

In response to Research Question 2 (Is ChatGPT useful to the Western Classical music domain and worth integrating into the music history classroom?), the limitations of ChatGPT could be a useful tool for teaching critical analysis with thoughtful implementation by the

instructor. The findings of this study align with those of Guo (2024) and Washburn and McCutchen (2024) that ChatGPT lacks the nuanced insights that are required in humanities studies. Much of this Guo attributes to the paucity of open sources in the humanities. Much of the peer-reviewed research in the humanities, such as music, reside behind a paywall (Quigley, 2021) and as such is inaccessible to AI. This inaccessibility means that LLMs such as ChatGPT cannot train on the scholarly literature; consequently, AI trains on what it can access: blogs, wikis, websites, and open source articles – resulting in AI outputs that could be shallow, biased, or incorrect (Ferrara, 2024).

Some of ChatGPT's characteristics (such as its neural networks that bear affinities to the human brain, making it capable of generating human-like responses), while impressive, do not allow it to usurp the role of teachers in either online or blended classes. The bot is incapable of generating new knowledge, but merely recycles what it has learned on the web. Lund et al., (2023) have shown that ChatGPT will reproduce biases that it learns from web sources. It cannot read or interpret human emotions. According to the IBM website, there are three types of AI: Artificial Narrow Intelligence (ANI), Artificial General Intelligence (AGI), and Artificial Super Intelligence (ASI) (IBM Data and AI Team, 2023). The first is used to complete a specific task, like ChatGPT, and is considered a weak form of AI. The other two mimic human behaviors and emotions and perform on par (AGI), or surpass human intellect (ASI). The latter two do not currently exist, and humans still outperform existing AI. The next step in AI's development is AGI followed by ASI, but developments for AGI are still in their formative stages (Joshi, 2024). Although there are speculations about when AGI will come about, with dates ranging from 2025 to mid-century, most of these speculations lack supporting data (Eliot, 2025). Human beings' critical thinking skills, logic, and contextual sense are still required to effectively use AI. GenAI, such as ChatGPT, remains a useful tool for education and other industries.

While ChatGPT and other forms of GenAI are useful tools for many industries, it is just that: a tool. The user must have critical thinking skills and logic to manipulate the data to produce

results that are usable and accurate. Ironically, it is the very limitations of ChatGPT that make it a valuable teaching tool. It provides an opportunity for educators to model the necessary skills for their students by using it in their course preparation, and in their teaching. Until we arrive at ASI, which is anticipated to follow AGI (Joshi, 2024), educators will always have a place in the classroom.

The use of ChatGPT in the classroom does not preclude the use of traditional ways of learning, but rather, enhances them. It can be used alongside textbooks, journal articles, monographs, and laboratory experiments to teach students how to evaluate, correct, and present information and develop presentation skills as advocated by Halaweh (2023). ChatGPT can not only drive student engagement, but also promote the development of higher-order cognitive skills as outlined in Bloom's Revised Taxonomy – such as creating and refining prompts and evaluating AI's output (Elim, 2024).

This study is limited to the experiences of an individual, and as such, cannot be generalizable to a larger population. It was also limited to ChatGPT. Further studies could include comparing ChatGPT with another LLM, or by comparing several of the newer LLMs such as Claude and DeepSeek. Such a study could be a quantitative one that uses a larger sample drawn from faculty members from several music departments within a region.

## Conclusion

This paper outlined the ways that ChatGPT could assist teachers in their coursework preparation, by creating a course syllabus and writing a lesson plan. Despite its limitations in the music history domain, ChatGPT provides a helpful foundational course syllabus and lesson plan that the instructor can tailor to their specific context. The AI's limitations by no means diminished its value to either educators or students, but required critical thinking, logic, and expertise within the domain to use it effectively. The rapid development of GenAI does not preclude traditional methods of teaching and learning, but serves as an important adjunct. As it permeates daily life, AI literacy can no longer be the sole

preserve of students and professionals in the STEM domains, but must now be embraced, albeit cautiously, in the humanities, including music history. In a gray paper published by UNESCO, Simmons and Davis (2024) identified an AI-literate and skilled workforce among all sectors as one of the four pillars of AI integration in the Caribbean. To accomplish this, AI-literacy must extend beyond STEM domains. Such shifts will require educators to re-imagine education to drive transformation, create resilience in this rapidly changing technological culture, and create a future workforce that will not only survive, but thrive.

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## Appendix I

### Complete Course Syllabus for Introduction to 20th-Century Music generated June 2023

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Course Syllabus: Introduction to 20th Century Music

Course Description:

This introductory course explores the diverse and transformative world of 20th-century music. From post-romantic compositions to the integration of artificial intelligence in music, students will examine the significant musical developments and innovations that shaped the century. Through listening, analysis, and critical thinking, students will gain a deeper understanding of the evolution of musical styles, techniques, and technologies that have influenced contemporary music.

Week 1: Introduction to 20th Century Music

- Overview of historical context and major musical trends
- Introduction to key composers and movements
- Listening exercises: Early 20th-century compositions

Week 2: Post-Romantic Music

- Transition from Romantic to post-romantic styles
- Exploring Impressionism and Expressionism
- Analysis of works by Debussy, Ravel, and Strauss

Week 3: Avant-Garde and Experimentalism

- The emergence of avant-garde movements
- Study of atonality, serialism, and chance music
- Examination of works by Schoenberg, Webern, and Cage

Week 4: Jazz and Blues

- The influence of jazz on classical music
- The Blues as a musical form and its impact on 20th-century compositions
- Listening to jazz-inspired pieces by Gershwin and Copland

Week 5: The Birth of Recording Technology

- The impact of phonographs and radio on music dissemination
- Early experiments in electronic music
- Introduction to musique concrète and its pioneers

*Appendix 1 continued*

## Week 6: Neoclassicism

- Revisiting classical forms and structures in the 20th century
- Works by Stravinsky, Prokofiev, and Hindemith
- Integration of folk elements in neoclassical compositions

## Week 7: American Experimentalism

- The American Experimental music scene
- Exploration of minimalism and its characteristics
- Listening to works by Steve Reich and Philip Glass

## Week 8: Post-World War II Music

- Musical responses to World War II and its aftermath
- Analysis of works by Messiaen and Shostakovich
- Music of the Holocaust and its impact on composers

## Week 9: Music and Politics

- Examining the role of music in political movements
- The protest songs of the Civil Rights era and anti-war music
- Music censorship and its impact on artistic expression

## Week 10: Electronic Music and Synthesizers

- The rise of electronic music and synthesizers
- Exploring the works of Stockhausen and Wendy Carlos
- Introduction to algorithmic composition

## Week 11: Artificial Intelligence in Music

- Understanding the basics of artificial intelligence and machine learning
- AI-generated music and its implications
- Demonstrations of AI-based music composition tools

*Appendix 1 continued*

## Week 12: Contemporary Classical Music

- Contemporary trends in classical music
- Study of post-minimalism and spectralism
- Listening to works by John Adams and Kaija Saariaho

## Week 13: Integration of AI and Human Creativity

- The role of AI as a collaborator in music creation
- Ethical considerations in AI-generated art
- Final project presentations and reflections

## Assessment:

- Weekly listening assignments and reflections
- Quizzes on historical context and musical concepts
- Mid-term exam covering major composers and movements
- Final project: Students can choose to compose a piece using AI tools, write a research paper on a specific 20th-century composer or movement, or present a comparative analysis of AI-generated music and human-created music.

Note: This syllabus is designed to be flexible, and the topics can be adjusted based on students' interests and the availability of resources. The course aims to provide a comprehensive introduction to 20th



## Appendix II

### Lesson Plan



#### ChatGPT

#### Week 1: Introduction to 20th Century Music

##### Lesson Plan

**Objective:** To provide an overview of early 20th-century music, introduce key composers and movements, and discuss the stylistic features of selected pieces through listening exercises.

**Duration:** 2 hours

##### Materials:

1. Audio playback equipment
2. Projector or whiteboard for visual aids
3. Handout with vocabulary terms

##### Introduction (15 minutes):

1. Greet the students and provide an overview of the course.
2. Explain the importance of studying 20th-century music and its impact on contemporary musical styles.
3. Distribute the handout with vocabulary terms and briefly discuss their meanings.

##### Listening Exercise 1 (30 minutes): Impressionism and Post-Romantic Music

1. Play Claude Debussy's "Clair de Lune."
2. After the listening, lead a class discussion:
  - Ask students how the piece made them feel and what emotions or images it evoked.
  - Discuss the characteristics of Impressionism, such as its focus on color, texture, and atmosphere.
  - Highlight Debussy's innovative use of harmonic progressions and tonal ambiguity.
3. Play Maurice Ravel's "Boléro."
4. Repeat the discussion process, this time comparing the piece to Debussy's "Clair de Lune."
  - Encourage students to identify similarities and differences in style and emotional impact.
  - Discuss Ravel's orchestration and the gradual build-up of intensity throughout the piece.

*Appendix 2 continued***Listening Exercise 2 (30 minutes): Expressionism and Atonality**

1. Play Arnold Schoenberg's "Pierrot Lunaire" (selected sections).
2. Lead a class discussion:
  - Discuss the emotional intensity of the music and the use of sprechgesang.
  - Explore the concept of atonality and how it differs from traditional tonal music.
  - Encourage students to analyze the effect of the vocal delivery and the use of instrumental accompaniment.

**Break (10 minutes):** Provide students with a short break to refresh before the next segment.

**Listening Exercise 3 (30 minutes): Stravinsky and Early 20th Century Ballet**

1. Play Igor Stravinsky's "The Rite of Spring" (selected sections).
2. After the listening, facilitate a class discussion:
  - Discuss the significance of the ballet's premiere and its impact on the development of modernism.
  - Explore Stravinsky's use of rhythm, dissonance, and irregular meters.
  - Encourage students to share their interpretations of the music's primal and revolutionary qualities.

**Conclusion (15 minutes):**

1. Summarize the main points covered during the listening exercises.
2. Emphasize the diversity of styles and innovations present in early 20th-century music.
3. Encourage students to continue exploring the provided vocabulary terms and applying them in future discussions and assignments.

**Homework Assignment:**

Ask students to select one of the pieces discussed in class and write a short reflection paper (approximately 300-500 words) discussing its stylistic features, emotional impact, and its relevance in the context of 20th-century music. Encourage them to use the vocabulary terms provided in class to articulate their analysis effectively.

**Note:** Depending on the class size and level of engagement, you may adjust the duration of the listening exercises and discussions accordingly. Be flexible to encourage active participation and meaningful learning experiences.

## Appendix III

### Syllabus Generated in August 2023



#### You

You are a college professor in a performing arts department. Create a course syllabus for an introductory class on 20th century music for undergraduates. The course is thirteen weeks long. Break down the content into thirteen-week segments. The course must include post-romantic music and artificial intelligence in music. Do you understand?



#### ChatGPT

Absolutely, I understand! Below is a course syllabus for an introductory 13-week class on 20th-century music for undergraduate students in a performing arts department. The course covers various topics, including post-romantic music and artificial intelligence in music.

Course Title: Introduction to 20th-Century Music

Course Description:

This course provides an overview of the significant developments and trends in 20th-century music, focusing on post-romantic music and the role of artificial intelligence in shaping musical creation and performance. Through listening, analysis, and discussion, students will gain a deeper understanding of the diverse styles and techniques that have emerged during this dynamic era.

Week 1: Introduction to 20th-Century Music

- Overview of the historical context and major movements in the 20th century
- Key composers and their contributions
- Introduction to post-romantic music and its characteristics

Week 2: Post-Romantic Music

- Late Romanticism and its transition to post-romanticism
- Analysis of post-romantic works from composers like Mahler, Strauss, and Rachmaninoff

Week 3: Early 20th-Century Avant-garde

- Exploring the emergence of impressionism and expressionism
- Debussy and his influence on the 20th century

Week 4: Stravinsky and Neoclassicism

- The Rite of Spring and its impact on music and dance
- Neoclassical trends in the 20th century

*Appendix 3 continued*

2. Lead a class discussion:

- Discuss the emotional intensity of the music and the use of sprechgesang.
- Explore the concept of atonality and how it differs from traditional tonal music.

Week 5: The Second Viennese School

- Introduction to Schoenberg, Berg, and Webern
- Atonality, serialism, and twelve-tone technique

Week 6: Jazz and Blues

- The influence of jazz and blues on classical music
- Gershwin and other crossover composers

Week 7: Mid-century American Music

- Copland and the American sound
- Other American composers and their distinctive styles

Week 8: Electronic Music and Technology

- The advent of electronic music and its impact on composition
- Introduction to early electronic music pioneers

Week 9: Artificial Intelligence in Music - Part 1

- The intersection of music and technology
- How AI is used in music composition and production

Week 10: Artificial Intelligence in Music - Part 2

- Class participation and engagement in discussions (10%)
- Listening quizzes and analysis exercises (20%)
- Written assignments on specific musical topics (30%)
- Final project presentation (20%)

*Appendix 3 continued*

- AI-generated music and its implications on creativity and artistic expression
- Ethical considerations surrounding AI in music

## Week 11: Minimalism

- The rise of minimalism and its prominent composers (e.g., Reich, Glass)
- Analysis of minimalist works


## Week 12: Postmodernism and Global Influences

- Diversity in 20th-century music
- Exploration of world music influences and cross-cultural compositions

## Week 13: Wrap-Up and Final Projects

- Review of the course material
- Student presentations on AI-generated compositions or analysis of a post-romantic piece

## Assessment:

- Class participation and engagement in discussions (10%)
- Listening quizzes and analysis exercises (20%)
- Written assignments on specific musical topics (30%)
- Final project presentation (20%) 
- Final exam (20%)

Note: This syllabus is designed to be flexible, and the specific pieces and composers can be adjusted to accommodate the interests of the students and the availability of resources. It provides a well-rounded exploration of 20th-century music, including post-romantic music and its connection to artificial intelligence in music.

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## **It Starts at Home: Home Language and Literacy Practices in Jamaica**

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### **Abstract**

This study explores the nature of home language and literacy environments (HLEs) among primary school learners in Jamaica, contributing to the limited body of Caribbean-based research in this area. Grounded in ecological systems theory, the study considers how multiple contextual factors in the home interact to shape children's literacy development. Data were collected from 114 caregivers who completed an HLE questionnaire. Findings indicate generally low levels of print engagement and limited participation in formal literacy activities (practices known to support reading and writing), with many caregivers placing greater responsibility on teachers. Jamaican Creole was more frequently used in many homes than English, potentially influencing children's transition from conversational fluency to academic language proficiency in school. At the same time, community religious programs also emerged as important spaces for supplemental literacy engagement. The study underscores the need for culturally responsive approaches and tools in literacy research that reflect the broader sociocultural realities shaping language and literacy development in the Caribbean.

*Keywords:* home literacy, community literacy, literacy development, Caribbean, writing

### **Introduction**

In 2021, the Jamaica Education Transformation Commission published its report, "The Reform of Education", which stated that 56% of students leave primary school being unable to write. This report was followed by the Programme for International Student Assessment (PISA) 2022 outcomes, showing 50% of Jamaican students scoring below the minimum level of proficiency in reading. These results are consistent with the wider Caribbean region, where 55% of students are considered to lack basic reading skills (Inter-American Development Bank, 2023; World Bank,

2023). As research has confirmed the key role of home literacy environments in improving child literacy outcomes, researchers and policymakers alike have acknowledged the need to enlist caregivers and local communities in addressing this "literacy crisis" in low- to middle-income contexts (Friedlander & Goldenberg, 2023; Murphy, 2023; Nag et al., 2019). Indeed, in October 2023, the Jamaican Ministry of Education in partnership with the Jamaican National Parenting Support Commission identified parental involvement as one of the pillars of a new comprehensive strategy aimed at addressing poor student outcomes across the educational sector (Jamaica Information Service, 2023).

Beyond the classroom, home literacy environments are known to be significant predictors of language and literacy outcomes for children (Butler & Le, 2018; Sénéchal & LeFevre, 2002). However, as observed in a recent systematic review by Stone et al. (2020) exploring “what works” for literacy development in the Caribbean and Latin America, only one Caribbean intervention study was identified that investigated the role of home literacy practices, despite the reality that so many learners in the region continue to struggle with the development of literacy skills. Therefore, little is known about home literacy practices in the Caribbean context and their role in literacy development. More work is needed to understand the impact of cultural and contextual factors that characterize the region and shape home literacy practices, such as the more communal nature of many societies relative to the Global North and the unique linguistic landscape of the Caribbean region where oral Creole languages which share somewhat blurred boundaries with the languages of literacy are spoken. Such work could clarify the wider literacy ecology of children in the Caribbean and provide insights into the literacy outcomes of learners in the primary years. It could also help clarify the challenges parents may experience in supporting their children’s literacy in the home and identify existing contextual traditions and practices that may be harnessed to support literacy development. Accordingly, this exploratory study aims to investigate the nature of home language and literacy practices experienced by Jamaican primary school learners by highlighting the literacy trends and practices that characterize local home environments.

## Literature Review

Home literacy environments include practices and beliefs within the home that are predictive of literacy outcomes. Parental involvement in literacy activities, literary materials in the home, and adult beliefs and attitudes about literacy are all known to have significant effects on child literacy development (Butler & Le, 2018;

Esmaeeli, 2023; Nag et al., 2019; Puglisi et al., 2017; Sénéchal & LeFevre, 2002). Sénéchal et al. (1998) classified home literacy experiences into two categories: informal and formal. Informal home literacy activities most commonly include shared book reading, with a primary focus on meaning rather than on the “code” or print itself. Research has confirmed significant associations between storybook reading and the development of foundational oral language skills such as vocabulary and comprehension (Aram & Levin, 2004; Flack et al., 2018; Sénéchal & LeFevre, 2002, 2014).

In contrast, formal home literacy activities include direct parent tutoring with an explicit focus on print (e.g., letter-sound correspondence) (Puranik et al., 2018; Sénéchal & LeFevre, 2002). Research has confirmed that these practices have positive effects on the development of more code-based literacy skills such as writing (Aram & Levin, 2004, 2001; Dunsmuir & Blatchford, 2004; Puglisi et al., 2017; Sénéchal et al., 1998; Sénéchal & LeFevre, 2014). In addition to these classifications of formal and informal home literacy environments, Puglisi et al. (2017) noted that home literacy experiences can also be classified as indirect or passive, and that parent-related factors (including attitudes and beliefs concerning literacy, as well as personal engagement in literacy activities) also influence the nature of the home literacy environment, and ultimately child literacy outcomes (Phillips & Lonigan, 2009; Wells, 1987). The limited research from low- to middle-income contexts suggests that beyond formal and informal home literacy practices, context-specific factors including parental literacy and proficiency in the language of schooling (Nag et al., 2019); the skill of the family tutor (Aram & Levin, 2001, 2004; Nag et al., 2019); cultural practices (such as oral traditions) (Buvanewari & Padakannaya, 2017); and socioeconomic factors such as access to running water and educational resources (Ngorosho, 2011; Roopnarine & Dede Yildirim, 2018; Wells, 1987), all affect the efficacy of home literacy activities.

While findings and models from the Global North are informative, and parallels exist across many regions in the Global South, distinct variables and cultural structures within the Caribbean highlight the need for more contextualized investigations. For instance, the Caribbean's unique linguistic landscape presents challenges and opportunities for home literacy development. Additionally, the prominent role of religious institutions and intergenerational family structures further differentiate the region. Single-parent households are especially prevalent, often with fathers absent (Roopnarine & Dede Yildirim, 2018), and many children are raised by extended family members, particularly grandparents (Ricketts & Anderson, 2009; Samms-Vaughan, 2001). These family dynamics have implications for both financial stability and the availability of time and support for home literacy engagement. Despite these distinct sociocultural and linguistic realities, the Caribbean has frequently and ineffectively been grouped with Latin America in educational research, potentially obscuring important contextual differences (Tucker et al., 2025).

### **Home Language & Literacy Environments in the Caribbean**

In the Caribbean, research on the role of the home in education has primarily centered on the concept of parental involvement — an umbrella term encompassing a range of parental activities in both the home and school (Hoover-Dempsey & Sandler, 1997), rather than focusing specifically on home language and literacy practices. Overall, parental involvement in children's education is often described as suboptimal across the region (Brooks & Roofe, 2022). Studies examining parental involvement have identified several influencing factors, including parents' financial and employment status (Campbell & Kinkead-Clarke, 2022; Cook & Jennings, 2016); levels of education (Samms-Vaughan, 2008); and perceived efficacy or competence in supporting their children's education (Cole, 2021, 2022). Additionally, school-related barriers, such as

limited opportunities and invitations for parent-teacher communication further constrain engagement (Johnson & Carpenter, 2006). Despite these constraints, research has shown that students believe that parental involvement is important for improving their reading outcomes (Lewis-Smikle, 2003).

In a longitudinal study, Cole (2022) considered the impact of early parental involvement on the reading outcomes of 116 Jamaican learners in Grades 1, 4, and 6. The findings showed that relative to parents' reports of involvement and invitations for participation, only teachers' reports of parents' efficacy in helping children had a direct relationship with learner outcomes across grade levels — a finding consistent with reports from other low- to middle-income countries where the skill of the family tutor has been found to moderate the effects of parental involvement in child achievement (see Nag et al., 2019 for a research synthesis). While the study drew on the Hoover-Dempsey and Sandler (1997) model of parental involvement, less is known about the specific nature of items used to measure parental involvement in the study. Providing greater clarity on the nature of these items, particularly in relation to domain-specific home literacy practices, may help explain the limited predictive relationship observed between parental involvement and reading outcomes. As such, greater research is needed that offers insight into the nature of home language and literacy practices. Such work can provide critical insights for educators and policymakers seeking to address persistent literacy challenges in Jamaica and the wider Caribbean.

In one of the few studies directly exploring home literacy practices in the Caribbean, Roopnarine and Dede Yildirim (2018) used secondary categorical data from the UNICEF Multiple Indicator Cluster Survey (MICS), to explore the relationship between parent-child play, book reading, storytelling, and emergent literacy development in five Caribbean islands — Belize, Dominican Republic, Guyana, Suriname, and Jamaica. Child literacy outcomes were based

on maternal reports (yes/no responses) of their child's ability in early literacy skills (e.g., identify 10 letters). Results showed inconsistencies in parental literacy practices across Caribbean islands with both mothers and fathers in Belize being more likely to read to their children, and mothers in Jamaica being more likely to tell stories to their children. Parental engagement in literacy activities in the other islands was comparatively low. In terms of the relationship between literacy practices in the home and early literacy skills in children, mothers' book reading in the Dominican Republic and storytelling in Jamaica were significant predictors of letter identification skills. Similarly, mothers' book reading in the Dominican Republic and storytelling in Jamaica and Guyana were significant predictors of word reading. The researchers pointed out that while the effects of home literacy practices on student outcomes were mixed across countries, SES-related factors such as household wealth (e.g., access to drinking water, house materials, toilet facilities), as well as the number of educational books in the home and preschool involvement often moderated the effects of home literacy practices.

While insightful and seminal, given the research design of this study, there are still some gaps in our understanding of the nature and impact of home literacy environments on literacy development in the Caribbean. As the study relied on secondary categorical information, no information is provided on the nature or the quality of parental engagement in home literacy activities – factors which likely impact the efficacy of these practices for child literacy development. Additionally, and of key importance, is the absence of home language information in the study – a likely confounding variable which may be linked to inconsistencies in findings concerning the role of home literacy environments across Caribbean islands. Given that Creole languages are spoken in all the included countries and considering findings from low- to middle-income contexts showing that home language factors such as parents' proficiency and literacy in the language of schooling can influence the efficacy of parent tutoring (Nag et al., 2019), the efficacy

of home literacy practices across homes in the Caribbean was possibly moderated by parents' levels of English proficiency and literacy. There therefore remains a need for more primary research focusing on home literacy environments in the Caribbean.

In a recent systematic review on parental involvement and family engagement in Jamaica, Lewis-Fokum and Morgan (2022) highlight this gap, calling for deeper investigation into the specific forms of family engagement that support educational achievement. Such research is critical for developing a more nuanced understanding of how home-based practices contribute to literacy development in the Caribbean. The present study aims to contribute to filling the gap in this area of research by exploring the nature of home language and literacy environments of Jamaican primary school learners.

## Research Question

1. What is the nature of home language and literacy environments experienced by Jamaican primary school children?

## Theoretical Framework

This study is grounded in the ecological systems approach to literacy development (Bronfenbrenner, 1979). This approach draws from the socio-cultural research tradition to consider the dynamic and interdependent relationships between individuals and wider societal systems; and how all of these affect individual development, behaviour, and perceptions (Bronfenbrenner, 1979; Nero & Stevens, 2018). Within this framework, the child is situated at the center of a set of nested systems that influence development directly and indirectly. The microsystem encompasses the most immediate settings in which the child actively participates, such as the home, school, peer groups, and faith-based institutions like churches or Sunday schools. These environments directly affect the child's daily experiences and

learning opportunities. The mesosystem refers to the interactions and relationships among these microsystems (such as the connections between home and school) which can either reinforce or undermine a child's developmental trajectory.

Beyond these more immediate environments are the exosystem and the macrosystem. The exosystem includes settings that the child does not directly engage with, but that still exert influence on their development. These might include factors such as a parent's workplace, financial constraints, parental education levels, and access to community services. For example, a parent's long work hours may limit their capacity to support home literacy practices, even though the child is not directly involved in that setting. Finally, the macrosystem encompasses the broader cultural, ideological, economic, and political contexts that shape all other systems. This includes societal beliefs about literacy and education, language ideologies (such as the relative status of Jamaican Creole and English), national education policies, and socioeconomic structures related to class and race (Jaeger, 2016). Although children are not active agents of this system, the macrosystem powerfully shapes their opportunities for language and literacy development.

Of particular theoretical relevance to this study, and connected to an ecological approach to literacy, is Cummins' (1979, 2017) distinction between Basic Interpersonal Communicative Skills (BICS) and Cognitive Academic Language Proficiency (CALP). While BICS refers to conversational fluency used in everyday settings, CALP involves the more abstract, decontextualized language skills required for academic tasks such as reading comprehension and writing. This distinction is especially salient in the Jamaican context, where many children may develop strong BICS in Jamaican Creole at home, yet be expected to demonstrate CALP in English at school.

As Syverson (1999) argues, literacy cannot be fully understood by examining individuals in isolation. Building on this insight, the ecological

approach adopted in this study views literacy development as being shaped by a range of nested influences, including individual learner characteristics, instructional factors within schools, and sociocultural practices within homes and communities. This theoretical orientation provides a valuable lens through which to explore the multifaceted and context-dependent nature of home language and literacy environments in Jamaica.

## Methodology

The data for this study is drawn from a larger sequential mixed-methods study that explored the nature of writing challenges experienced by Jamaican primary school learners and the ecological factors impacting literacy development (Tucker, 2023). Findings from the larger study showed concerningly low performance in narrative writing at the Grade 6 level (the mean score was 53%), with students experiencing significant challenges across the component skills of writing with well over half the sample receiving ratings at the lower end of the analytic rubric in spelling (66%), grammar (76%), vocabulary (59%), organization (86%), and ideation (78%). Adopting a survey design, the present study focuses on data concerning the home literacy environments of these students.

## Sample

The sample consisted of 114 parents and caregivers of students from two primary schools in a rural Jamaican town who opted-in to complete the questionnaire. All participants were recruited on the basis of being either the parents or the main caregiver for students in Grade 6 who participated in the larger study.

## The Study Context

All parents and guardians were residents of a rural town near the north coast of Jamaica. The centre of commerce in the bustling rural town is the popular local market that attracts farmers, vendors, and shoppers from across the

island particularly on "Market Days". The town's proximity to the North Coast (the tourism hub of the island) and its status as an agricultural and educational centre in the parish means that in addition to farming and vending, residents generally work as teachers and in the service industry as hotel staff domestic workers, taxi drivers, and as civil servants. Given the nature of these jobs, most residents generally have a low to modest income. Regarding access to pertinent resources, many homes still do not have running water. However, residents are generally able to access water tanks or "stand-pipes" in the community. The main universities on the island are located in the nation's capital city, therefore students who are able pursue higher education must move away from the area and tend to remain in the city after completing their degrees for greater job opportunities and the possibility of upward social mobility. The town therefore has a flatter socioeconomic spread compared to more metropolitan areas of the island, with wider variation in income, education levels, and household resources.

## Home Language and Literacy Environment Questionnaire

The questionnaire for parents and caregivers was divided into two sections – with Part 1 soliciting information about language usage in the home and participant demographics, and Part 2 soliciting information on home literacy practices and beliefs. The instrument was shared with parents online via the Qualtrics platform.

### Section 1: Home Language Environment

In addition to demographic information (e.g., highest level of education), the questionnaire explored learners' language input from parents (or main caregivers), adult relatives, siblings, and playmates. This wide scope proved particularly relevant for the Jamaican context, given that in many cases multiple generations live together in homes and children are often

raised by grandparents or other relatives. Given the unique linguistic context of Jamaica where language usage is generally conceptualized along a continuum — with the pure usage of Jamaican Creole and English at either end, and various levels of mixing in-between (DeCamp, 1971), a 5-step Likert scale was used wherein responses indicating more dominant use of Jamaican Creole were given lower scores and responses indicating more dominant use of English in the home were given higher scores<sup>1</sup>.

### Section 2: Home Literacy Environment

The home literacy section of the questionnaire addressed literacy practices in the home; the nature of parent-child interactions during literacy activities; and parents' beliefs concerning literacy development and instruction. The instrument was adapted from the Buvanewari and Padakannaya (2017) home literacy environment questionnaire for kindergarteners in India, with Tamil as a home language. Buvanewari and Padakannaya's tool was found to be particularly suitable for this study due to significant contextual parallels: the tool was specifically created for a lower income context and for children whose home language differed from English (the language of schooling). The questions in the instrument address the five dimensions of a home literacy environment outlined in the literature: "physical literacy environment, parent literacy habits, child's own literacy habits, parent-child interaction for language and literacy activities, and parental beliefs about literacy" (Buvanewari & Padakannaya, 2017, pp. 6–7). The instrument was adapted to suit the Jamaican context (e.g., questions were added regarding Sunday School attendance, reading the local newspapers, and specific writing activities) but also reduced (e.g., culturally irrelevant items removed) to suit the online platform and to encourage survey completion.

A Likert scale format was used for responses in the HLE questionnaire, with parents and caregivers indicating the frequency with which

<sup>1</sup> The assignment of numerical scores was not value laden.

they engaged in or observed particular literacy activities or behaviours in their home, and their beliefs about literacy. Each scale step was rated 1-5, with responses indicating disagreement or low frequency receiving lower scores and responses indicating frequency and greater agreement receiving higher scores. Once the survey was completed, a total score was calculated for HLE with higher scores indicating a richer or more supportive home literacy environment. Once consent was obtained, classroom teachers shared the link to the survey with parents.

## Findings

### Home Language Environments

The first section of the questionnaire which solicited information on language usage in the home as well as participant demographics was completed by 114 parents. As seen in Table 1, all family members more commonly reported using equal amounts of Jamaican Creole and English when speaking to children in the home. Consistent with the creole continuum, few speakers reported the exclusive use of Jamaican Creole or English. While both mothers and fathers showed relatively similar language usage patterns, fathers generally used more Jamaican Creole than mothers when speaking to their children. Siblings tended to use equal amounts of Jamaican Creole and English, but also appeared to speak more English than adult caregivers. Among homes where another adult (most often a grandparent) served as a main caregiver (60% of the sample), caregivers reported using more Jamaican Creole than English in their interactions with children. In these cases, only 20% indicated that English was the primary language used when speaking to the child. These findings suggest that over half of the children in the sample are more frequently exposed to Jamaican Creole than English in their home environments.

While these findings likely give a general approximation of child language input in the home, a note of caution is given here for a few

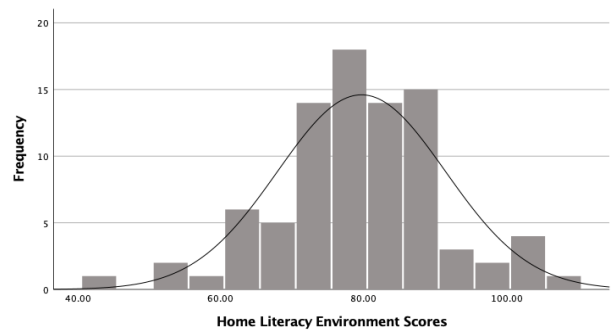
reasons: 1. Since the findings are based on self-reporting within a context where the use of English is generally associated with higher social status (Nero & Stevens, 2018), it is possible that responses concerning the use of English are inflated. 2. As Nero (2014) points out, owing to the creole continuum, there is a mismatch between perceived and actual language proficiency and usage for many Jamaicans. As a result, many Jamaicans deem themselves fluent speakers of English and at times believe that they are speaking English when this may not be the case. Similar concerns arise in parent responses to questions concerning home literacy practices.

### Home Literacy Environments

In total, 86 parents completed the home literacy environment portion of the online survey. Higher scores represented richer home literacy environments. The mean score was 79.39 out of a possible score of 110 and scores ranged from 43–106, with most scores clustering near the centre of the distribution as seen in Figure 1.

**Figure 1**

*Frequency Distribution of Home Literacy Environment Scores*



**Table 1***Language Input at Home*

Language Input	Always JamC <sup>1</sup>	JamC usually	Equal amounts of JamC & English	English usually	Always English
Mother	0.84%	18.49%	57.98%	22.69%	0.00%
Father	6.93%	21.78%	45.54%	23.76%	1.98%
Other adult caregiver	8.57%	28.57%	40.00%	20.00%	2.86%
Siblings <sup>2</sup>	5.38%	17.58%	42.98%	27.76%	6.31%

<sup>1</sup> *JamC — Jamaican Creole*

<sup>2</sup> *Siblings — In cases where more than one sibling was present in the home, the average of language used by all siblings was used.*

## Reliability

The home literacy questionnaire consisted of three subscales from the Buvanewari and Padakannaya (2017) home literacy environment questionnaire: parent literacy habits, parent tutoring and engagement in literacy activities, and parental beliefs concerning literacy. Buvanewari and Padakannaya (2017) reported high item-level and overall scale validity; however, as items were adapted to suit the Jamaican context, it was important to explore the internal consistency of the measure. Cronbach's alpha calculations were conducted for the three subscales in the home literacy environment questionnaire. In keeping with Field's (2013) guideline that alpha values of 0.7 and above indicate good reliability, findings showed that the parent tutoring and parental beliefs subscales yielded high alpha coefficients of 0.8 and 0.9, respectively, while the home literacy practices scale yielded a lower alpha coefficient of 0.6. A similar trend was observed by Buvanewari and Padakannaya (2017), where parent's literacy practices showed wide variation. In addition to wide variation of parent literacy practices, the relatively lower alpha coefficient for the literacy practices subscale was due in part to the addition of a contextual item concerning Sunday School attendance. As expected, child Sunday School attendance (a religious practice) was not correlated with other parent literacy practices that were included in the home literacy subscale (e.g.,

playing word games, reading the local newspaper). However, based on personal and insider knowledge of the central role played by Sunday School in Jamaican communities and the significant emphasis placed on literacy skills by many Sunday school teachers, as well as the fact that the alpha coefficient was not considerably lower than 0.7, the item was retained.

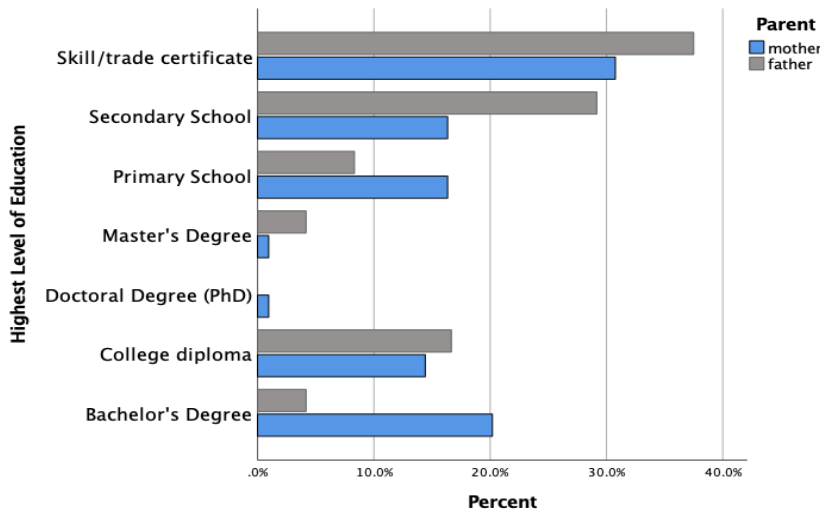
In subsequent sections, the findings concerning the key dimensions of home literacy practices and emerging trends are discussed. At the end of the questionnaire, parents were invited to share any additional thoughts and concerns. These responses were also weaved into the findings to provide a thicker description of the home language and literacy environments and to add explanatory power to some of the observed trends in the data.

## Parental Levels of Education

As seen in Figure 2, the most common qualification acquired by parents was a skill or trade certification (e.g., hairdressing, auto mechanics, chef). Following skill or trade certificates, primary school and bachelor's degrees were also common levels of education for mothers, while secondary school (and to a lesser extent, diplomas) were held by fathers. For both groups, postgraduate degrees were uncommon. Of note, almost 40% of mothers in the sample had either primary or secondary schooling as their highest level of education — a pattern that was not observed among fathers.

**Figure 2**

*Parent’s Highest Level of Education*



**Parents’ Personal Literacy Habits**

Parents’ personal literacy habits have been conceptualized as passive or indirect components of home literacy environments (Puglisi et al., 2017) that are correlated with child literacy outcomes (Phillips & Lonigan, 2009; Wells, 1987). Parents most commonly reported writing or typing (61%), playing word games (41%), or reading non-work-related materials such as books (36%) either often or very often, while being observed by their children. However, as the questionnaire did not specify the nature or medium of writing, it is somewhat unclear how parents’ home writing practices might impact student literacy outcomes in the present study. For example, it is not clear whether parents were referring to texting, engaging in extended writing (e.g., narratives), writing notes, or lists, nor is it clear whether some forms of writing, such as texting for example, may impact child writing outcomes.

**Parents Engagement in Literacy Activities at Home**

Helping with language arts homework and functional activities such as reading product

labels, street signs, and signboards, were the most common activities that parents reported engaging in with their children. The least practiced literacy activities were those more oriented towards formal or direct parent tutoring — such as engaging in extended or creative writing activities with children (e.g., writing stories, songs, poems) and shared book reading that involved pointing to letters and words as well as making explicit letter-sound connections.

**Parents Beliefs about Literacy**

In the current study, while most respondents (over 75%) strongly agreed that parents could help their children with literacy tasks at home and should encourage interest and confidence in reading and writing, parents were less supportive of statements that put the instructional onus on themselves through the direct teaching of literacy skills at home (e.g., “children do well at reading because their parents teach them to read”; (62% strongly agree). Consistent with such findings, parents provided comments underlining their beliefs concerning the central role of the teacher as the primary source of instruction and the secondary role of parents in providing encouragement and reinforcement:

**Howard:** Teachers are there to teach, whilst parents are to reinforce what was taught.

**Lisa:** Parents should always ensure that their children are doing well in school and check their books to see if they have completed their homework.

**Marie:** I often tell my child to reflex [reflect] on how her day went at school and analyse if she was comfortable and if not try and do better the next [next] day.

Parents' beliefs concerning their role in literacy development may be grounded, at least in part, in their own challenges with providing facilitative home literacy environments.

### **Barriers to Facilitative Home Literacy Environments**

Most comments provided by parents addressed the challenges that they experienced in providing a facilitative literacy environment. Among these responses, the difficulty of balancing the demands of providing for their families and providing a supportive literacy environment was the most common concern, as seen in the excerpts below:

**Paul:** I am a security guard so am always working to make ends meet, I hardly find time to teach my children but when I do, I teach them different topics and leave work for them which they don't complete most times.

**Anne:** I strongly agree in helping my child, yes am a single parent an [and] I have to go out there an fen [and fend] for them. When I come home there a lot of shore [chores] to be done an [and] I help them but the 100% what I should be doing is not there but I encourage her to do her best an help in whatever way I can.

Parents consistently acknowledged the importance of fostering facilitative home literacy environments for their children despite their limitations. In addition to the demands of supporting the family, some parents commented on the difficulties of providing facilitative home literacy environments when they themselves struggled to understand school assignments and

had low levels of English literacy. This issue is especially pointed in the study context, where a considerable number of mothers reported primary school as their highest level of education, and where numerous children, particularly those with elderly caregivers, received a greater amount of input in Jamaican Creole relative to English — the language of literacy. For many such parents, the role of the teacher in their child's literacy development was paramount due to their limitations in providing additional support at home, with one parent commenting that their child was simply "better off in front of the teacher."

### **Community Literacy Practice**

Jamaica is known for having the most churches per square mile in the world (Lowe, 2021; Olsen, 1999) and the relatively small town in which this study is situated is no exception, with over 20 churches in the area. In response to this contextual feature and research highlighting the importance of using context-sensitive measures of home literacy environments (Nag et al., 2019; Ngorosho, 2011), a questionnaire item addressing Sunday (or Sabbath) School attendance was added to the instrument, given its central role in the lives of many Jamaican children and the research showing the benefits of religious literacy activities for child literacy development (Papen, 2018). In the present study, Sunday School emerged as one of the most common literacy practices outside of the classroom. Only 15% of parents reported that their child did not attend Sunday School, while the rest of the sample reported attending sometimes (42%) or every week (43%).

## **Discussion**

### **The Nature of Home Language and Literacy Environments**

Overall, the study findings suggest low levels of print engagement in the home, with both formal code-based activities such as writing

and informal meaning-focused activities such as shared storybook reading being relatively uncommon. Instead, literacy practices were often functional in nature, such as reading signs, labels, or instructions—activities that may support the development of Basic Interpersonal Communicative Skills (BICS), but offer limited opportunities for fostering the more abstract, academic language skills encompassed by Cognitive Academic Language Proficiency (CALP). Relatedly, in terms of beliefs about literacy, parent responses suggested a greater onus on teachers, particularly for print-focused literacy activities. Findings showing less facilitative home language and literacy environments may add an explanatory piece to the larger ecological puzzle of the poor writing outcomes observed among primary school learners from the larger study, and by extension, across the island (see Jamaica Education Transformation Commission, 2021). Indeed, research has consistently shown that formal home literacy practices are more strongly correlated with, and predictive of, the development of code-based literacy skills such as writing (Aram & Levin, 2004, 2001; Puglisi et al., 2017).

The findings of this study echo those reported in other low- to middle-income contexts in the Global South, where home language and literacy environments are influenced by a confluence of factors including parental levels of education, proficiency in the language of literacy, and economic constraints (Friedlander & Goldenberg, 2023; Nag et al., 2019). More specifically, the findings align with previous Caribbean research pointing to the moderating role of parental socioeconomic status and parental self-efficacy in supporting children's learning (e.g., Cole, 2021, 2022). The findings also underscore the value of using an ecological systems framework to interpret child literacy development in the Caribbean, which emphasizes the nested and interacting environments that shape child development.

## Home Language Practices

Findings related to home language use highlight the need for context-sensitive measures of language and literacy practices. In the Caribbean, research has shown that in addition to a high prevalence of single-parent households, many children are raised by older caregivers — particularly grandparents (Lewis-Fokum & Morgan, 2022; Samms-Vaughan, 2001). At first glance, the data suggest relatively balanced exposure to Jamaican Creole and Standard Jamaican English (the language of instruction) with 58% of parents reporting equal use of both languages in parent-child interactions. However, a more nuanced examination reveals that 60% of the children in the sample were raised by older caregivers in the home, primarily grandparents, who reported using Jamaican Creole more frequently than English when communicating with children. As such, most children represented in the sample are exposed to and primarily speak Creole in the home.

While this is not inherently problematic, and research in second language acquisition underscores the value of home language maintenance in supporting additional language learning, Jamaica currently lacks a ratified language education policy. Although a draft policy was developed in 2001 and has now been updated (MoEY, 2022), it has not yet been formally approved. In practice, Jamaican Creole is largely excluded from Language Arts classrooms, reflecting broader societal attitudes toward language. This creates a significant mismatch between the languages of the home and school, particularly in environments where caregivers have limited English proficiency or formal literacy skills. Indeed, in the present study, some parents and caregivers noted challenges in helping their children with homework due to their own limited proficiency in English. In such contexts, caregivers may avoid engaging in print-rich literacy activities to prevent feelings of inadequacy or shame.

Cases where caregivers frequently engage in oral interactions in Jamaican Creole and to a lesser extent, English, may primarily support the development of BICS. However, less frequent engagement in literacy practices that foster CALP — such as shared reading in English, writing activities, or explicit vocabulary development, could help explain persistent challenges in academic literacy performance. This mismatch between the language of the home and the cognitive-linguistic demands of the school environment may further compound difficulties, particularly for children raised by caregivers with limited proficiency in English. In the larger study (Tucker, 2023), children who spoke Jamaican Creole as their dominant home language scored significantly lower in narrative writing compared to their English-dominant peers. These children demonstrated marked challenges in oral language skills, particularly in grammar and vocabulary diversity — areas that are closely associated with both code- and meaning-based activities such as writing and shared storybook reading (Sénéchal & LeFevre, 2014).

### **Sociodemographic Factors**

Research from low- to middle-income contexts has consistently identified parental socioeconomic status (SES) and levels of education as strong predictors of both the richness of home literacy environments and children's academic outcomes (Nag et al., 2019; Roopnarine & Dede Yildirim, 2018). In particular, maternal education has been widely used as a proxy for SES (Hoff, 2006) and is positively associated with literacy practices and outcomes in both the Global North (Dunsmuir & Blatchford, 2004; Tizard et al., 1988) and the Caribbean (Roopnarine & Dede Yildirim, 2018). In the present study, 40% of mothers reported primary or secondary school as their highest level of education — a finding that may help explain, at least in part, the lower levels of print engagement and more formal literacy activities observed in many homes. While it is not assumed that lower levels of parental education automatically result

in less facilitative home literacy environments, it is possible, in line with wider research, that many mothers within this context (particularly those with primary school level education) may feel less efficacious in supporting the language and literacy development of children. Such a finding lends support to research from Cole (2022) wherein teachers' reports of parental efficacy to help children was one of the strongest predictors of reading outcomes of Jamaican learners across the primary school years.

Beyond educational background, socioeconomic constraints also shaped the nature of home literacy environments in this study. Echoing findings from the wider Caribbean (Campbell & Kinkead-Clarke, 2022; Cook & Jennings, 2016; Roopnarine & Dede Yildirim, 2018), parents reported significant challenges in balancing the demands of working to “make ends meet”, managing their homes, and being present to support the language and literacy development of their children. Given these circumstances, it is unsurprising that parents were generally less likely to endorse questionnaire items that placed greater onus on themselves in supporting the literacy development of their children. However, it is important to recognize that socioeconomic disadvantage does not uniformly result in poor literacy outcomes. Evidence from a synthesis of studies in low- to middle-income countries (Nag et al., 2019) suggests that some families and communities manage to make efficient use of limited resources, supported by positive attitudes toward literacy. This is particularly relevant to the present study, where community-based literacy experiences such as Sunday Schools appear to play a notable role in the literary lives of children.

### **Opportunities for Literacy Enrichment in the Community**

While the findings point to generally less facilitative home language and literacy environments, they also underscore opportunities for literacy development beyond both the classroom and the immediate home. Consistent

with research highlighting the influential role of the broader community in child development in low- to middle-income contexts (Friedlander & Goldenberg, 2023), study findings showed that 85% of children attended a local Sunday School — making it the most common literacy-related event outside of school.

Friedlander and Goldenberg (2023), in their work with children in Rwanda, advocated for the inclusion of religion in ecological models of literacy development in the Global South, where religious institutions often play a central role in everyday life. Indeed, such a perspective is particularly poignant in Jamaica — the country known for having the most churches per square mile in the world (Olsen, 1999; Lowe, 2021). Additionally, with most teachers in the larger sample reporting volunteering as Sunday School teachers on a weekly basis (Tucker, 2023), it was important to account for this contextual experience of children as a source of community literacy practice. Sunday School in Jamaica serves not only to transmit Christian beliefs to younger generations but also facilitates literacy development. Activities such as Bible reading, memorization of scripture, poetry, singing, and reading, offer children meaningful, sustained engagement with print (Reid, 2022). Prior research supports the value of such religious literacy activities, which have been shown to strengthen foundational language skills like phonological awareness and oral language (McMillon & Edwards, 2014), as well as support higher-order skills such as reading comprehension (Papen, 2018).

### **An Ecological Understanding of Jamaican Home Literacy Environments**

The findings underscore the value of using an ecological systems framework to interpret child literacy development in the Caribbean. This perspective emphasizes the nested and interacting environments that shape child development. In this study, influences ranged from proximal settings, such as the home, to broader sociocultural and economic conditions

— all of which jointly shaped children’s language and literacy experiences.

In line with Bronfenbrenner’s ecological framework, the findings point to the potential influence of multiple microsystems on literacy development, particularly the home and faith-based community programs. While caregivers in this study appeared to provide less facilitative language and literacy environments, particularly in terms of print engagement and code-/meaning-based literacy practices, local community programming such as Sunday Schools emerged as an important source of supplemental literacy enrichment.

Within the mesosystem, the findings suggest both interconnectedness as well as tensions among microsystems. Teachers, for instance, were key figures in both school and Sunday School settings, demonstrating overlapping and interconnected roles across microsystems. At the same time, the data also highlight tensions within the mesosystem, particularly the misalignment between home and school language practices. While Jamaican Creole was more commonly spoken in homes — particularly among children raised by older caregivers (60%), the language of instruction, learning, and assessment in schools remains Standard Jamaican English. This disconnect may limit caregivers’ ability to provide literacy environments aligned with the language expectations of the formal education system.

Beyond these more immediate systems, both the exosystem and macrosystem influence children’s experiences of home language and literacy environments. Study findings showed that exosystemic influences, such as financial constraints, employment demands, and limited formal education also constrain the ability of some parents to participate in, or prioritize home-based literacy activities. Consequently, greater responsibility for supporting children’s literacy development was often placed on teachers, particularly for print-focused practices like storybook reading and writing. At the macrosystemic level, overarching cultural influences such as societal views on the role of

teachers and parents in literacy instruction; the cultural significance of religious institutions; the status of Jamaican Creole versus English; as well as patterns of intergenerational caregiving likely shape caregivers' beliefs and practices related to literacy support. Taken together, the findings demonstrate how the interaction of factors across the microsystem, mesosystem, exosystem, and macrosystem contributes to a more holistic and context-sensitive understanding of home literacy practices and child literacy development in the Jamaican context.

## Conclusions and Implications

In 2023, the Jamaican Ministry of Education named parental involvement as a crucial and indispensable factor in addressing poor student performance across all levels of the sector (Murphy, 2023) – an acknowledgement consistent with the ecological systems approach to literacy development and the relatively large body of research highlighting the key role of home literacy environments in student outcomes. In response, this exploratory study sought to address a significant gap in the literature by examining the nature of home language and literacy environments among primary school learners in the Jamaican context. A key contribution of this study is that the findings provide a window into the nature of more domain-specific home language and literacy practices in the Jamaican context, relative to a more general account of parent involvement. As such, the findings can contribute to a more holistic understanding of reading and writing outcomes on the island. The findings also point to the potential of community- and faith-based programs as meaningful contributors to children's literacy development—offering promising avenues for intervention locally and regionally.

The findings have implications for research and practice. Considering the concerning literacy outcomes in Jamaica and the wider Caribbean region (Inter-American Development Bank, 2023; World Bank, 2023) and research highlighting the key role of home environments in literacy development, parents, caregivers, and communities may benefit from resources

providing guidance on creating more facilitative home literacy environments that support both reading and writing skills among children. Such resources would need to be context-specific, using varied accessible mediums (e.g., websites, videos, social media) to highlight activities and tips for incorporating both formal and informal literacy practices into daily family routines.

Based on the study findings, future research is needed to explore the nature and role of cultural and community practices in literacy development. Exploring the efficacy of already existing and culturally sustainable resources in communities such as Sunday Schools may prove to be particularly useful in contexts like Jamaica where the church plays a central role in community development, libraries are few and under-resourced, and where schoolteachers often volunteer as Sunday School teachers (Tucker, 2023). While the present study only used Sunday School attendance as a proxy for community literacy, it may be worthwhile to explore other context-sensitive community literacy practices and their possible role in supporting literacy development in similar contexts. Similarly, in future research, it may be worth exploring the role of storytelling — another cultural hallmark of oral cultures, that may serve to facilitate literacy development in both the home and school languages, while facilitating cultural transmission across generations.

A key implication emerging from this study is the need for contextually grounded tools to understand home language and literacy environments. Typical predictor variables from Global North contexts may overlook key community-driven forms of literacy engagement, such as faith-based education, that play a substantial role in children's literacy trajectories in the Caribbean and similar settings. As such, researchers are encouraged to adapt, develop, and validate tools that are better able to capture the nature of child development in the Caribbean context — considering contextual features such as family structures, linguistic landscapes, language policies, and the impact of the wider community.

The Jamaican Ministry of Education has already acknowledged the critical role of parents and caregivers in addressing the island's persistent literacy challenges. As efforts continue, there is a need to broaden the definition of meaningful parental engagement, particularly in rural and low-resource communities. In collaboration with researchers, the Ministry should work to develop culturally and contextually responsive frameworks and guidance that recognize diverse forms of engagement, including oral storytelling, functional literacy activities, and participation in faith-based programs as legitimate and valuable contributions to children's literacy development. At the same time, and as previously discussed, greater efforts should be made to provide accessible training and resources to caregivers, to strengthen their confidence and capacity to engage in home-based literacy practices.

This study was not without limitations. A key limitation of the present study concerns the likelihood of sampling bias. In administering the questionnaire online rather than in-person (orally) or using a paper format, it is likely that numerous caregivers may have been excluded as the task not only required traditional literacy skills (i.e., reading) but also technological literacy, and access to devices. Future studies may consider diverse modalities to reduce sampling bias. Additionally, as the current exploratory study adopted a survey design that relied on self-reporting — future research in the field may benefit from the triangulation of various ethnographic data collection methods (e.g., observation, interviews) which would possibly allow for deeper engagement with participants and thicker descriptions of Caribbean home literacy environments.

Finally, it is important to underscore that this study was conducted in a rural Jamaican town and does not seek to offer a comprehensive account of home literacy environments across the island. To develop a more representative understanding, future research would benefit from inferential designs that incorporate a range of locational contexts (e.g., urban vs. rural, across multiple islands).

## Ethical Approval

Ethical Approval was granted by the Departmental Research Ethics Committee for Education at the University of Oxford (Reference no.: ED-CIA-21-033). Study participants provided written consent (online) after reviewing the study information documents and consent forms. Study information forms outlined the nature of the study, the reasons for requesting participation, information confidentiality procedures, as well as on the storage and usage of data. All participants were fully aware of their right to withdraw from the study at any time. Pseudonyms are used throughout.

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## Declaration of Interest Statement

The authors report there are no competing interests to declare.

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## Book Review — *A Child at a Time: Understanding Temperament* by Professor Loraine D. Cook, published in 2024 by UWI Press

**Sharline Cole**

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### Introduction

This book's nine chapters and 194 pages provides an understanding of temperament from interactions at home and school. It also details how parenting and teaching practices can affect children's reactions and how these practices can be improved when parents and teachers understand children's temperament traits. In clear and simple language the book provides readers with information guided by research and practice on the importance of understanding temperament in addressing personal differences and managing behavioural challenges in children at home and at school. It highlights the interconnection between temperament, personality, attachment parenting styles, and teaching practices in addressing the education of children.

The layout of the book is simple and straightforward. In its preface, the author advocates for a deep understanding of temperament to address children's behaviour. This book is written for parents and teachers and can appeal to a wider audience. The language used can connect with all readers interested in understanding temperament. Every argument put forward is substantiated with the relevant references. The chapters in the book concisely present literature and empirical evidence on temperament in young children, and the influence of parents and teachers in accommodating the different temperaments in their interactions and

disciplinary practices. It also advocates for the implementation of the INSIGHTS into Children's Temperament Programme in schools.

In **Chapter 1** the book provides a contextual understanding of temperament and its differences. In addition, it traces the history of temperament and how it is manifested in newborns and its association with intelligence, personality, and social emotional skills. This chapter succinctly explains the influence of genetics and temperament and how matching the environment with children's temperament (Goodness of Fit) ensures optimal development of children. This chapter also explores the impact of stressors on children's behaviour and concludes that individuals' vulnerability to certain stressors or environments can be associated with their temperament.

An exploration of interactions across ecological systems (mainly the micro-system) on temperament and its influence on the psychological wellbeing of families and students was documented in **Chapter 2**. This chapter details the influence of the development of attachment patterns based on interactions with parents and the regulatory skills of parents. It also explores the role temperament plays in the parent-child interaction and the association between temperament and attachment. Furthermore, parenting styles influence childrearing practices which support parents' understanding of their roles and responsibilities in creating an environment that fosters positive emotional growth.

**Chapter 3** explores the importance of positive relationships between the student and the teacher, and the role that school environment plays in children's behaviour. From this chapter it is evident that the approach of teachers to education and learning can significantly impact students' sense of wellbeing and belongingness in their classroom; and how not having goodness of fit can create behavioural and academic challenges in the classroom.

In **Chapter 4** the author explains the landscape of early childhood education in Jamaica and the different school-based intervention programmes/projects that were implemented to reduce behavioural problems and aggression in schools. This chapter points to the importance of early intervention in reducing behavioural challenges, aggression, and violence in schools. All the programmes/projects reported on in the book confirm the importance of social emotional learning (in particular emotional self-regulation) in addressing behaviour challenges, aggression, and violence in schools.

**Chapter 5** discusses teachers' assessment of children's temperament based on data collected from a sample of Jamaican students. This chapter focusses on the dimensions of temperament (negative reactivity, shyness, activity level, task persistence, and sociability) and how children with different or mixed dimensions are likely to behave in class and the influence on their academic outcomes.

**Chapters 6-8** present detailed descriptions and the approach to the implementation of the INSIGHTS into Children's Temperament Programme. These chapters report teachers' and parents' understanding of temperament and their assessment of the effectiveness of the INSIGHTS Programme. The book reports on teachers' assessment of temperament in some Jamaican children, from which there is a clearer understanding of the core attributes (dimensions) of temperament (negative reactivity, shyness, activity level, task persistence, and sociability) and how children with different dimensions are likely to behave. The book clearly articulates how INSIGHTS into Children's Temperament Programme was instituted in schools and how it

improved parenting and teaching practices. The influence of INSIGHTS on parenting practices provided research evidence on how parents rated the INSIGHTS Programme and how it helped them to change how they approached interacting and disciplining their children. Chapters 7 and 8 seamlessly integrate the quantitative and qualitative findings on the impact of INSIGHTS on their parenting and teaching practices. From the parents' report, the programme was extremely useful and beneficial because it helped them to "reframe how they viewed their children's negative reaction" (p. 105).

The book sought to ensure objectivity in reporting by providing both the positives and negatives of the INSIGHTS Programme, which could help its revision for future implementation. In addition, Chapter 9 reports a case study of one school that integrated INSIGHTS and the outcomes of the students who transitioned to other schools. This chapter is both encouraging and enlightening, because the evidence from one school can provide a framework for future investigation and institutionalization of INSIGHTS into other Jamaican schools.

*A child at a time: Understanding temperament* adds to the literature on temperament and bridges the gap in research on temperament in Jamaica. The book carefully outlines the landscape of research on temperament by exploring the differences in temperament and the theoretical explanation and understanding of temperament. In addition, it provides a snapshot on how children's attachment styles are related to their temperament and how parenting styles can impact children's behaviour. The importance of self-reflection in reframing our thoughts and approaches when working with children is an important feature of INSIGHTS that should be replicated in academic engagements. Self-reflection contributes to a change in perception about children and encourages more optimal responses from teachers and parents in their interactions with children.

Although the book explains two major theories (Goodness of Fit and the Diathesis-Stress Model), for academics the book could be enhanced with more details and explanations on

how the theories are applied and further empirical data added about their efficacy. In addition, other theories on temperament and personality traits applicable to children could be addressed in the book.

As a result of the gap in research highlighted in the book on temperament in Jamaica, a second volume could be written that provides comparisons of temperament in other Caribbean territories. Additionally, an evaluation of international research on temperament and the application of theories and institutionalization of other programmes similar to INSIGHTS could be considered.

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## **Book Review — *Reimaginative Leadership - Concepts and Applications* by Professor Canute S. Thompson, published in 2024 by UWI Press**

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The book titled *Reimaginative Leadership - Concepts and Applications* by Professor Canute Thompson, the Pro Vice-Chancellor (BUS) at the University of the West Indies, is an insightful exploration of leadership in the modern, rapidly changing world. The author, a scholar with years of leadership experience, introduces the idea of "Reimaginative Leadership," providing far-reaching insight for leaders who are in search of a new transformative approach. The book invites leaders to move beyond traditional frameworks and embrace innovative, adaptable leadership strategies that meet the needs of diverse teams and environments in the Caribbean.

This book's strength lies in part in the fact that leadership is examined from perspectives different from the traditional leadership approach and the Caribbean context, using case studies as practical scenarios to support the discussions. The book situates reimaginative leadership within a transformative framework that prioritises visionary thought, creative action, and collective engagement over traditional leadership with authoritarian control. Central to this conceptualisation is the strategic and ethical reliance on inspirational influence rather than coercive power, a theme that runs throughout the book and is central to reconfiguring leadership in contemporary, pluralistic society. The structural design is divided into 3 parts and subdivided into 12 chapters, with each part-title addressing in-depth the various aspects of imaginative leadership in each chapter.

The introduction provides an overview of what leadership entails and presents good insight into *reimaginative leadership* as different from *leadership reimagination*, as the word "reimaginative" qualifies leadership in terms of action or behaviour. This book is built upon several scholarly works and similar work from the author's previous books, which include "Leadership Reimagination: A Primer of Principles and Practices" and "Locating the Epicentre of Effective Educational Leadership in the 21st Century". The book is thought-provoking and deals with exigent leadership issues, providing a roadmap to reimagining leadership from contemporary to global contexts.

In **Part 1** — "Wither Leadership in the 21st Century", the author posits that leadership in the 21st century contends with major issues of Chaos, Conflict, and Courage (3Cs), thus 21st-century leadership calls for approaches to leadership which differ from previous periods in human history. Leadership must be redefined from a broad context to address complexity; interconnectedness; ethical challenges stemming from globalisation, digitalisation, and socio-political disruptions; and within the context of the apparent need to examine the leadership approaches that may be responsive to the needs and interests of 21st-century workers and citizens. A paradigm shift from the traditional command-and-control model has become necessary in volatile, uncertain, complex, and

ambiguous environments. In the context of the Caribbean's colonisation and history of resistance, reimaginative leadership as responsiveness and radicalism connotes a call for a change of approach.

Drawing on the philosophical roots of reimaginative leadership and Alcoff's (2019) work that aligns with Dussel's non-ideal theory to tackle the limits and dangers of philosophical theorists such as Thomas Moore and John Rawls who focus on "imagined generic thought experiments unconstrained by sociological realities"; the author argues that leaders must cultivate the capacity for adaptive sensemaking, rather than prescriptive solutions, by engaging the place of non-ideal theory in their attempts to come to terms with the realities of Caribbean society. One section of this part includes primary and secondary sources of data drawn from teachers who shared their experiences of leadership using different constructs. These data provide insightful information that could assist education authorities, illustrating how participatory, flexible, and data-driven decision-making yielded better outcomes than rigid hierarchies in leadership that influence and advocate for justice.

**Part 2** focuses on "Nine Concepts of Reimaginative Leadership," in which the author examines the major qualities of reimaginative leadership, including alternatives-thinking, people empowerment, influence, mutual accountability, change catalysation, courage, care, justice, and trust. Alternatives-thinking, which is more inspirational than instructional, is the fundamental basis of reimaginative leadership. All these qualities represent its philosophical ideology, personality, and passion — thereby creating an environment for trust between the leader and the led.

In **Part 3** — "Application of Reimaginative Leadership Qualities", the author argues that imaginative leadership is a transformative capacity which empowers individuals and organisations to envision and co-create alternative futures. Rather than reacting to problems, imaginative leaders engage in anticipatory thinking, moral

courage, and symbolic action to redefine what is possible. Imaginative leaders must engage in world-making, offering narratives that contest the status quo and inspire new paradigms of thought and practice. The author defines and defends the reimaginative use of influence as a transformative leadership modality by examining its potential to catalyse systemic change, promote shared ownership, and foster growth of a nation and its institutions. The 3M company's philosophy provides a blend of theory and practical applications, offering readers actionable tools to cultivate creative thinking and become innovative and inspirational leaders who can foster collaboration and drive the organizational transformation that is much needed in the Caribbean and worldwide. The book emphasizes the importance of mutual accountability, adaptability, and trust-building in effective leadership. The Reimaginative Leadership Qualities section elevates the role of creativity, ethics, and relational influence.

The book is both conceptually rich and praxis-oriented. It integrates critical leadership theories and pushes the boundary of imagination from a cognitive skill to a moral and political act, while making a convincing case that reimaginative leadership is essential for nations and institutions seeking to foster equity, resilience, and creativity in the 21st century. "Leadership in the 21st Century" offers a systems-based recalibration of leadership functions. The book contributes significantly to leadership scholarship by offering a holistic, interdisciplinary, and socially conscious vision of what leadership must become to proffer lasting solutions to the complex social, political, and cultural issues facing the Caribbean region. By alternative-thinking influence over power, imagination over compliance, and ethical foresight over expediency, this model can foster transformative leadership across sectors.

I recommend *Reimaginative Leadership* as a must-read and a compelling resource for the general public, leaders, educators, students, and anyone looking to enhance their leadership style and make a meaningful impact in today's fast-paced world. Private and public libraries, and institutional heads are implored to order copies of this book for their libraries.

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