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The Impact of Teachers' Personalities and Parents' Factors on Senior Secondary School Computer Science Students' Performance

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ABSTRACT: *As secondary education institutions try to educate students about the demands of a rapidly changing digital world, it is crucial to understand the factors that influence students' progress in computer science. Students' success in the study of computer science is influenced by a variety of factors outside of the curriculum and instructional methods. Two significant elements that have drawn attention in the education sector are the personalities of teachers and parental involvement. These factors play a significant role in how children learn, act, and succeed academically as a whole. To determine the effects of teachers' personalities and parental influences on senior secondary school computer science students' performance, this study was designed. The research employed a mixed-methods strategy that includes both quantitative surveys and qualitative interviews to collect information from a representative sample of the targeted demographic. A total of 150 respondents, including 100 students and 50 teachers, were chosen at random from five senior secondary schools to make up the study's sample. Four research questions and two research hypotheses served as the study's guiding principles. Data were gathered using a self-structured questionnaire the researcher constructed based on perceptions of students and teachers that examined how parents and teachers might influence students' academic progress in computer science. The four (4) research questions that were posed for the study were evaluated using descriptive statistical methods such as mean and standard deviation, whereas the two study hypotheses were evaluated using the Pearson Product Moment Correlation (PPMC) index coefficient using SPSS Version 23 at the 0.05 level of significance. The results of this study showed that factors such as teachers' academic backgrounds, personalities, and parents' socioeconomic level have an impact on students' academic success in computer science. The study's findings also indicated a correlation between parents' socioeconomic level and their children's academic success and between the qualifications of teachers and students' academic success. As a result, it was recommended among other things, that teachers be encouraged to pursue higher education because doing so will have a significant impact on how they instruct their students.*

KEYWORDS: teachers' personalities, parents' factors, senior secondary school, computer science, students' performance

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INTRODUCTION

The multifaceted interplay of several variables within the realm of education exerts a significant influence on the academic achievement of students. Teacher personalities and parental engagement have a pivotal role in shaping students' learning experiences and academic achievements. The examination of the impact of teachers' personalities and parental influences on students' academic achievement has significant importance within the realm of senior high school computer science education. The educational environment is undergoing rapid transformations, notably within the domain of computer science. The inclusion of computer science education in the senior secondary level is of paramount importance as it equips students with the necessary skills and knowledge to effectively navigate the challenges posed by the digital era, given the pervasive integration of technology in all aspects of contemporary society. However, it should be noted that the effectiveness of children's learning outcomes and overall achievement cannot be solely attributed to curriculum and resources. The influence of parents and teachers, who play both direct and indirect roles in a student's educational journey, is of considerable importance.

The personality of an educator may exert a substantial influence on the level of student involvement, motivation, and comprehension, which can be attributed to a range of attributes, behaviours, and instructional approaches. Educators may employ diverse pedagogical approaches, communication philosophies, and instructional settings, contingent upon their individual dispositions. These factors, in turn, can significantly influence students' comprehension of computer science concepts and their ability to retain acquired information. The level of parental engagement in a child's educational pursuits has a crucial role in influencing their academic performance. Parental support, direction, and encouragement have the potential to significantly enhance students' confidence, enthusiasm, and devotion to their academic pursuits. Moreover, the extent of parental involvement might potentially influence students' dispositions towards computer science and their enthusiasm for further exploration in the field.

In recent times, the field of education has experienced significant transformations due to advancements in technology and the development of new pedagogical approaches. Computer science is a discipline that is currently at the vanguard of this evolutionary process and has emerged as a vital skill set for the twenty-first century (Alake & Olojo, 2021). Gaining insight into the factors that influence students' performance in computer science is crucial, given the imperative of secondary education systems to provide learners with the necessary skills to navigate a rapidly advancing digital landscape. There are other factors beyond the curriculum and teaching methodologies that exert an influence on the academic achievement of students in the field of computer science. The examination of teacher personalities and parental involvement has garnered considerable interest within the field of education (Nja, 2019; Oyekan, 2000; Edoho, 2020). These aspects have a pivotal role in shaping the overall academic learning, behaviour, and performance of students.

Amasuomo, (2017) posited that in addition to imparting knowledge, teachers serve as mentors, role models, and motivators. According to Amasuomo, (2017) the classroom environment and students' interest in the subject matter can be significantly influenced by teachers' personality, In addition, a teacher's passion, approachability, flexibility, and communication abilities might influence students' interest in and confidence in mastering computational ideas in the setting of computer science. Therefore, designing effective educational strategies requires an understanding of how teacher personalities and students' computer science performance interplay (Edoho, 2020). Parents are essential to their children's educational development. Their encouragement, participation, and expectations can have a big impact on how children feel about learning and how well they do in school. Parents' support, an interest in technology, and knowledge of the importance of computer science education can all influence students' attitudes and motivations (Olojo, & Ojo, 2011). Parents' participation in their children's education and the provision of resources can also have an impact on their overall computer science achievement.

A comprehensive examination is warranted to specifically explore the collective influence of teacher personalities and parental factors on the academic achievement of senior secondary school students studying computer science. This investigation is necessary despite the existing body of research that has examined various factors impacting students' academic performance. This study aims to address the lack of knowledge by offering valuable insights into the interplay of these variables and their impact on students' academic achievement in this significant field of study. The examination of the interplay between teacher personalities, family influences, and student achievement in the field of computer science holds potential advantages for parents, educators, and lawmakers alike. The findings of this study offer significant insights that can guide the development of teacher training programmes emphasising the need of cultivating robust teacher-student relationships, while implementing ways to enhance parental engagement in computer science education. Ultimately, the outcomes of this study might contribute to the advancement of more effective approaches in equipping pupils with the necessary competencies to thrive in an increasingly digitised society.

Despite the existence of research on the influence of teachers and parents on students' academic performance in general education contexts, there is a lack of comprehensive studies specifically investigating the effects of teachers' personalities and parental factors on the performance of senior secondary school computer science students. The current body of research often focuses on parent engagement and teacher qualities as independent entities, overlooking the intricate interplay between these two crucial aspects within the specific domain of computer science education.

The purpose of this study is to better understand how teachers' personalities and parental influences interact to affect the performance of senior secondary school computer science students. The goal of the study is to pinpoint particular teacher personality traits that are associated with improved student engagement and understanding of computer science. It also seeks to investigate how

various degrees of parental involvement, communication, and support affect students' perceptions of computer science and their general academic performance.

The study examined the effects of teachers' traits and student parents' factors on senior secondary school computer science students in Ondo State. The study was specifically created to:

i. ascertain whether teacher expertise impacts students' academic performance in computer science;
ii. ascertain whether teacher attitude affects students' academic performance in computer science;
iii. determine the impact of parents' socioeconomic position on the academic success of computer science students;
iv. establish a link between students' academic success in computer science and their parents' educational attainment.

Research Questions

The following research questions were posed by the researcher in order to investigate the problems brought up in the study:

1. Does a student's academic performance in computer science depend on the teacher's credentials?
2. How does a teacher's disposition affect the academic success of students in computer science?
3. Does a student's academic performance in computer science depend on their parents' socioeconomic status?
4. Do students' academic achievements in computer science depend on their parents' educational backgrounds?

Research Hypotheses

1. There is no correlation between students' academic success in computer science and the teachers' credentials.
2. There is no correlation between pupils' academic success in computer science and their parents' socioeconomic level.

LITERATURE REVIEW

Ukeje (2018) posits that teaching is an intentional action that enhances the probability and efficacy of the learning process. Teachers have a pivotal role in shaping various professions, so assuming the responsibility of becoming the primary architects of these vocations. Consequently, it is imperative for teachers to possess a combination of ethical and professional qualities. According to Stringfield and Teddlie (2021), it is widely believed that professional educators possess a greater

capacity to effectively tailor their instructional approaches to accommodate the diverse talents, prior knowledge, and backgrounds of their pupils. Furthermore, according to the research conducted by Darling-Hamond (2019), it has been determined that enhancing students' academic achievement necessitates the presence of teachers who possess the appropriate academic qualifications. According to Olatunbosun (2020), possessing expertise in the subject matter is a crucial attribute for a teacher to possess. Conversely, Charles (2017) argued in favour of regular certification for teachers, as it has been shown to have a positive influence on students' academic achievements. Given these circumstances, the author posited that it is imperative for educators to possess an understanding of the individualised requirements of each student, so as to provide the requisite degree of attention and assistance.

The expertise of educators is closely linked to their academic qualifications. Cubbons (2017) discovered a favourable correlation between the level of teaching experience and the academic achievement of pupils. The researcher discovered a positive correlation between academic performance and the level of experience of teachers. This relationship may be attributed to the teachers' comprehensive understanding of the subject matter and their adeptness in managing classroom dynamics, enabling them to effectively address a wide range of challenges.

Research has indicated that within the context of educational settings, the personalities of teachers may exert a significant influence on the academic achievements of their pupils. According to the research conducted by Eggen and Kauchak (2021), it was observed that educators who possess positive, amicable, and supportive attitudes are more inclined to cultivate a classroom atmosphere that promotes active engagement and facilitates the acquisition of knowledge. It has been posited that conversely, professors who lack interest or exhibit authoritarian tendencies may have a detrimental impact on student motivation and overall academic achievement. Research has shown evidence that many personality traits, such as empathy, adaptability, and communication aptitude, have a significant role in influencing the quality of interactions between students and teachers. Adeusi (2014) conducted a study which revealed that a child's academic performance in school is significantly influenced by their socioeconomic level and family environment.

Research studies also emphasise the importance of teachers' competence in the subject matter they teach and their ability to adapt their instructional approaches to accommodate diverse student learning preferences. A significant correlation has been identified by researchers between student self-efficacy and academic achievement, as well as the influence of teachers who possess a growth mindset and maintain faith in their students' capabilities. The influence of teachers' personalities on student behaviour and engagement in the classroom, ultimately impacting academic outcomes, has been extensively examined in the literature (Adediwura & Tayo, 2017; Adu & Olatundun, 2017; Lockhead & Komenan, 2018; Schacter & Thum, 2014; Starr, 2012; Akiri & Ugborugbo, 2019; Olatubosun, 2020).

A substantial body of research exists that provides evidence for the impact of teachers' personalities on the academic achievements of their students. Pons (2022) conducted a study that

examined the correlation between teacher personality traits and student academic achievements. The study revealed that educators who demonstrated enthusiasm, adaptability, and effective communication skills exerted a positive influence on the motivation and academic achievements of their pupils. Rentfrow's (2011) study focused on the examination of the correlation between the Big Five personality traits of teachers and their impact on students' classroom experiences. It was shown that pupils held a more favourable perception of professors who exhibited elevated levels of agreeability and emotional stability, hence contributing to the cultivation of a pleasant educational setting.

Although teachers play a significant role in determining students' academic achievements, various factors such as socioeconomic status, family support, a student's intellectual abilities, personality traits, self-confidence, and the quality of instruction they receive, which are also influenced by their parents' characteristics, have been identified as having either positive or negative effects on students' performance in examinations (Starr, 2012). In support of this assertion, Blankstein (2016) argued that the assessment outcomes and academic performance of students should not be seen as dependable indicators of the quality of teaching provided by educators. The significance of parental support and engagement in relation to students' academic achievement has been consistently recognised. As to Taylor's (2021) findings, parental involvement in their children's education through activities such as homework supervision, engagement in school-related events, and maintaining effective contact with teachers has been shown to contribute to enhanced academic achievements among children. The researcher arrived at the determination that the household plays a pivotal role in the comprehensive development and achievement of a pupil. Effective parent-teacher connections can lead to heightened student motivation and a heightened feeling of responsibility. Lockhead and Komenan (2018) conducted a study that examined the impact of parental involvement on students' academic performance. The study underscored the correlation between parental participation, encompassing activities such as assisting with academic tasks and attending school functions, and enhanced student academic outcomes. A study conducted by Amini and Ntibi (2015) examined the impact of parental participation on the academic achievement of high school students. Research findings indicate that parental engagement has a significant role in enhancing academic achievement. Active involvement of parents in their children's education, such as engaging in discussions about their educational goals and aspirations, has been found to have a substantial impact. Blankstein (2016) conducted a study that investigated the influence of parental expectations and engagement on students' academic motivation. The study revealed a positive correlation between enhanced student effort and achievement and the presence of parents' elevated expectations, as well as their supportive behaviours such as monitoring homework completion and maintaining high expectations for their children.

Furthermore, it is worth noting that socioeconomic factors inside households might potentially exert an influence on the academic achievement of pupils. There is often a positive association between the educational resources and support networks available to students and the educational

backgrounds, employment status, and income levels of their parents. Youngman (2021) posits that students from homes with higher socioeconomic levels tend to achieve superior academic performance due to their access to abundant resources, more chances for extracurricular activities, and favourable study conditions. The individual arrived at the determination that parental influence plays a substantial role in shaping a child's academic achievement, as evidenced by the parents' own scholastic achievements. The academic outcomes of students can be impacted by the relationship between parental expectations and the self-perceptions of children. It is commonly observed that students tend to cultivate more robust academic self-perceptions and exert greater effort in order to meet the elevated expectations set by their parents regarding their educational achievements.

The complexities of academic accomplishment are further compounded by the interplay between teachers' personalities and familial influences. A collaborative approach between parents and teachers, fostering open and sincere communication and a mutual commitment to pupils' academic success, can provide favourable outcomes. The educational setting for pupils is enhanced and made more holistic when there is a collaborative effort between parents and teachers to consistently offer assistance. Nevertheless, conflicts or a lack of effective communication between parents and educators can impose significant strain on pupils and impede their scholarly progress. Hence, it is important to understand the intricate interplay between these elements in order to devise interventions that might enhance students' scholastic achievements. In their study, Lassa (2018) conducted a comprehensive meta-analysis to investigate the interaction between teacher qualities and parental engagement in relation to student accomplishment. The study aimed to analyse how the personalities of teachers and parental influences combine to effect academic outcomes. Research has indicated that there is a positive correlation between student involvement and academic achievement when teachers and parents participate in good collaboration and communication. Furthermore, the study conducted by Owolabi (2017) emphasised the significance of consistent parental and teacher support in influencing children' academic motivation and achievement. The research elucidated that a lack of congruence between the domestic and educational environments might provide challenges for students in achieving academic success. The academic achievement of children is significantly influenced by the interplay between parental conditions and the personalities of teachers. A conducive and enriching learning environment, facilitated by teachers who possess good dispositions, in tandem with engaged and supportive parents, has the potential to provide improved learning outcomes. This underscores the need of cultivating robust connections between educators and families in order to create a supportive atmosphere conducive to children' academic achievements.

Collectively, these studies show how closely teachers' personality, parental participation, and students’ academic success are related. They emphasize the value of fostering strong relationships between teachers, parents, and children to build a nurturing educational environment that improves learning results. The consensus is that a collaborative approach between schools and families has a good impact on student's overall progress in education, even though specific findings may vary.

There may have been separate studies on the influences of teachers' and parents' personalities on students' academic achievement, but none are known to have been done in the domain of computer science which is the subject of the inquiry. Therefore, the goal of this study was to ascertain how teachers' personalities and parental influences affected the performance of senior secondary school computer science students.

Theoretical Framework

Several theoretical frameworks that serve as a foundation for understanding how these factors affect students' outcomes can be used to guide this investigation. However, the following two key theoretical pillars served as the researcher's anchors for this study:

1. **Social Cognitive Theory:** Albert Bandura first suggested the Social Learning Theory in the early 1960s. It highlights the significance of interactions between people, their environments, and their cognitive processes. This idea contends that students' academic performance can be affected in the setting of their studies by seeing and imitating the attitudes and behaviours of their parents and professors. The behaviours that students imitate from their parents and teachers may affect their motivation, engagement, and learning techniques.

This theory also places a strong emphasis on self-efficacy, or having faith in one's capacity to complete things successfully. Academic performance can benefit from teachers with personalities that promote a growth attitude and boost students' self-efficacy. Parents' encouragement and faith in their students' skills can also influence students' self-efficacy beliefs and general performance.

2. Ecological Systems Theory: Ecological Systems Theory, developed by Urie Bronfenbrenner in 1979, focuses on the multiple layers of influence that shape human development. It suggests that individuals are influenced by various systems, ranging from immediate environments (Microsystems) like family and school, to broader societal contexts (Macrosystem). In your study, this theory underscores how both teacher personalities and parental factors operate within these systems to impact students' academic performance.

The direct contacts that students experience with teachers and their parents are represented by the microsystems. Parental support and supportive teacher personalities help create a nurturing microsystem that can improve students' performance and engagement. The macrosystem emphasizes how societal values and cultural norms affect schooling. Cultural norms about parental engagement and teaching styles, for instance, can influence how pupils experience learning and perform.

Understanding the complex relationships between teacher personalities, parental variables, and student achievement is made possible by these theoretical frameworks. They give context to the study's findings and shed light on the intricate web of factors that influence students' academic performance.

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METHODOLOGY

The study was conducted using a mixed-methods approach that included both quantitative surveys and qualitative interviews. The study covered several senior secondary schools and included a variety of students, teachers, and teachers in positions of administrative responsibility. All Senior Secondary School II (SSSII) computer science students, computer science teachers, and teachers in administrative cadres' at all public secondary schools in Akure North Local Government Area of Ondo state made up the population of this study. Because they do not have any external exams, like WEAC or NECO to write during the year of the research, the class would be available and accessible, hence the reason for their choice. The study's sample included 20 administrative teachers (Principals, Vice-Principals, and Heads of Departments), 30 computer science teachers, and 100 computer science students, all of whom were chosen from the study's target population. The participating students were chosen at random from five schools that had previously been purposefully chosen. Materials accessibility and the presence of computer science teachers are factors considered for the school selection. The teachers who participated were chosen using a purposive sampling technique.

A self-made questionnaire with twenty (20) items and a scale of Strongly Agreed (SA), Agreed (A), Disagree (D), and Strongly Disagree (SD) was utilized as the research instrument for this study. There were two portions, A and B, to the instrument. Section A of the survey asked for demographic details about the respondents, including their class, gender, and the name of their school. 20 assertions totaling 20 items made up Section B, which discussed how parents and teachers might affect students' academic achievement in computer science. Positively worded comments received a score of 4, 3, 2, 1, whereas negatively worded statements received a score of 1, 2, 3, and 4 for SA, A, D, and SD, respectively.

The researcher chose to utilize these instruments because they are the most effective ways to obtain trustworthy information in a study of this kind, where the variable being studied necessitates statements of fact. There were both closed- and open-ended questions on the survey. The researcher created the instruments, and two test and measurement specialists from the College of Education at the Bamidele Olumilua University of Education, Science, and Technology, Ikere Ekiti, received a copy of it for validation. This was done in order to confirm the accuracy of the instruments and clear up any potential ambiguity.

The test re-test method of assessing reliability was used to evaluate the instrument's reliability. This was accomplished by giving the test again within two weeks to 15 students from a nearby community who shared the same features but did not live in the research area. The results of the two subsequent administrations' scores were analyzed using Pearson Product Moment Correlation at a significance threshold of 0.05. With a reliability rating of 0.74, the instrument was deemed to be reliable for the study.

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The researcher administered the questionnaire to the participants with the help of research assistants who are also members of staff of the participating schools. However, the researcher briefed the assistants about the purpose of the questionnaire as well as assuring them of the confidentiality and anonymity of any information they supplied. The questionnaire was administered and collected immediately they had finished responding to the question items.

With the aid of research assistants who were also staff in the participating schools, the researcher delivered the questionnaire to the participants. However, the researcher informed the assistants of the questionnaire's objectives and assured them that any information they provided would be kept private and anonymous. After the participants had done answering the questions, the questionnaire collected back from them for analysis.

In order to gain a deeper understanding of the interactions between teachers' personalities, parental influences, and students' performance in computer science, statistical methods were used to evaluate the quantitative data and theme analysis was used to study the qualitative data. Both descriptive and inferential statistics were used to analyze the data collected. The four research questions that served as the study's direction were addressed using descriptive statistics, which included frequency counts, simple percentages, mean, and standard deviation. Using SPSS version 23, the two study hypotheses were assessed using the Pearson Product Moment Correlation (PPMC) index coefficient at the 0.05 level of significance.

RESULTS

Table 1: Respondents' demographic characteristics

Demographic Variable	Categories	Frequency	Percentage
Gender (Teacher)	Male	18	36.0
	Female	32	64.0
	Total	**50**	**100.0**
Gender (Student)	Male	60	40.0
	Female	90	60.0
	Total	**150**	**100.0**

Source: *Researcher's field survey (2023)*

Table 1 displays the demographic information about the respondents sampled for this study. The findings show that only 18 of the respondents (or 36.0%) were male teachers, while 32 of the respondents (or 64.0%) were female teachers. Similar to this, there are 60 respondents, or 40.0% of the total, who are male students, while there are 90 respondents, or 60.0% of the total, who are female students. This data indicates that the majority of teachers and students are female.

Descriptive Analysis

Question 1: Does a student's academic performance in computer science depend on the teacher's credentials?

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Table 2: Response to how teachers' qualifications affect students' academic performance

S/N	STATEMENTS	A (%)	SA (%)	D (%)	SD (%)	Mean	SD
1.	Teachers' qualification helps them bring in dynamism to classroom activities.	26 (52.0)	22 (44.0)	1 (2.0)	1 (2.0)	1.51	.595
2.	Teachers' qualification enables them to organise their instruction very well	28(56.0)	16 (32.0)	5 (10.0)	1(2.0)	1.57	.742
3.	Teachers' qualification helps them to teach their students effectively and results in good performance by their students	23(46.0)	22 (44.0)	4(8.0)	1 (2.0)	1.63	.677
4.	Teachers' experience helps them to perform their duties well	20 (40.0)	26 (52.0)	4 (8.0)	0 (0.0)	1.68	.618
5.	Students taught by teachers with higher qualifications performed better than those taught by teachers with lower qualifications	23 (46.0)	24 (48.0)	1 (2.0)	2 (4.0)	1.60	.667

The mean and standard deviation for items 1 through 5 indicating the impact of teachers' credentials on students' academic achievement are shown in Table 2. The 50 participating teachers responded to these questions. The table displayed mean scores between 1.51 and 1.68 as well as standard deviation ranges between 0.595 and 0.742. According to an analysis of the statement, the majority of respondents (96.0%) thought that teachers' qualifications enable them to inject dynamism into classroom activities, while the rest (4.0%) had the opposite opinion.

It was further concluded that (88.0%) of respondents said that a teacher's education allows them to organize their instruction very well, (90.0%) of respondents said that a teacher's education allows them to teach their students effectively and results in good performance by their students, (92.0%) of respondents agreed that teachers' experience helps them to perform their duties well, while (94.0%) of the entire respondents held that students taught by teachers with higher qualifications performed better than those taught by teachers with lower qualifications.

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In summary, Table 2 displays the response to the question of how teachers' credentials impact students' academic success. It was discovered that teachers' credentials enable them to organize their lessons very well, enable them to teach their students effectively, enable them to do so in a way that results in positive student performance, and enable them to carry out their duties effectively. The data also showed students who had teachers with greater qualifications than those with lower qualifications did better.

Research Question 2: How does a teacher's disposition affect the academic success of students in computer science?

Table 3: Response to how teachers' attitude influence students' academic performance

S/N	STATEMENTS	A (%)	SA (%)	D (%)	SD (%)	Mean	SD
1.	Teachers who are always absent from class hardly cover their syllabus and this affects students' academic performance.	75 (75.0)	22 (22.0)	2 (2.0)	1 (1.0)	1.29	.556
2.	Students understand the subject being taught very well when they have good relationships with their teachers.	55 (55.0)	39 (39.0)	6 (6.0)	0 (0.0)	1.51	.611
3.	Students' performance in exams is always poor when their teachers are not friendly and approachable.	57 (57.0)	35 (35.0)	6 (6.0)	2 (2.0)	1.53	.703
4.	Students tend to perform poorly in exams under a teacher who abuses them on every slight and trivial issue.	51 (51.0)	45 (45.0)	1 (1.0)	3 (3.0)	1.56	.671
5.	Students perform poorly when their teachers do not show deep interest in the subject they teach.	57 (57.0)	39 (39.0)	2 (2.0)	2 (2.0)	1.49	.643

The mean and standard deviation of the responses given by the participating students to questions 1 through 5 about how teachers' attitudes affect students' academic achievement are shown in Table

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3. The mean scores, which ranged from 1.29 to 1.56, and standard deviation values (0.556 to 0.703), were displayed in the table. The results of the statement's analysis showed that, while 3.0% of respondents disagreed, 97.0% of respondents said that teachers who are regularly absent from class barely cover their curriculum and that this has an impact on students' academic achievement.

Further, it was determined that (94.0%) of respondents said that students perform better on exams when they have good relationships with their teachers, (92.0%) of respondents said that students perform poorly on exams when their teachers are unapproachable and unfriendly, and (96.0%) of respondents agreed that students tend to perform poorly on exams when they are subjected to abuse from their teachers over minor and trivial matters, while the majority of respondents (96.0%) agreed that when teachers do not have a genuine interest in the subject matter they are teaching, it affects students' performance.

The response on how teachers' attitudes affect students' academic performance is summarized in Table 3. It was shown that teachers who regularly miss class barely cover their material, which has an impact on students' academic performance. It was also discovered that students learn a subject very effectively when they have positive relationships with their teachers. Additionally, it was discovered that students consistently score poorly on exams when their teachers are unapproachable and unfriendly, and they frequently perform poorly on exams when their teachers reprimand them for even the most minor offences. It was also discovered that when teachers do not have a genuine passion for the subject matter they are teaching, students struggle academically.

Research Question 3: Does a student's academic performance in computer science depend on their parents' socioeconomic status?

Table 4: Responses to whether the socio-economic statuses of parent affect the academic achievement of students in Computer Science

S/N	STATEMENTS	A (%)	SA (%)	D (%)	SD (%)	Mean	SD
1.	Parents with good jobs always enrol their children in very good schools.	29 (58.0)	18 (36.0)	2 (4.0)	1 (2.0)	1.46	.610
2.	Parents with low-income levels seldom find it very difficult to pay their children's school fees and buy their prescribed books.	23 (46.0)	21 (42.0)	5(10.0)	1 (2.0)	1.65	.702

3.	Parents' income level has a direct influence on the students' academic performance.	23 (46.0)	23 (46.0)	2(4.0)	2(4.0)	1.65	.744
4.	Employing a home lesson teacher for children will greatly enhance their academic performance in school.	27 (54.0)	18 (36.0)	3 (6.0)	2 (4.0)	1.59	.753
5.	Adequate parental support and financial encouragement can enhance children's academic performance in school.	27(54.0)	15 (30.0)	6 (12.0)	2 (4.0)	1.63	.812

Table 4 provides the mean and standard deviation for the responses to questions 1 through 5 asking whether parents' socioeconomic circumstances have an impact on their children's academic performance in computer science. The participating teachers provided answers to the question items. The table displayed mean scores ranging from 1.46 to 1.63 as well as standard deviation ranges between 0.610 and 0.812. According to an analysis of the statement, the majority of respondents (94.0%) agreed that parents who have strong employment enrol their children in excellent schools without fail, while the minority (6.0%) disagreed.

Further, it was determined that (92.0%) of the respondents believed that parents' income level has a direct impact on their children's academic performance, and that (90.0%) of all respondents believed that hiring a home lesson teacher for children will greatly improve their academic performance in school. It was further held that (88.0%) of the respondents indicated that parents with low income levels rarely find it very difficult to pay their children's school fees and buy their prescribed books. However, (84.0%) of the respondents believed that adequate parental support and financial encouragement can enhance children academic performance in school.

In conclusion, Table 4 presents the results of the question of whether parents' socioeconomic circumstances have an impact on their children's academic performance in computer science. It was shown that parents with strong employment always enrol their children in top-notch schools, contrary to popular belief that low-income parents rarely struggle to pay for their students' tuition and purchase the required textbooks. It was discovered that hiring a home lesson teacher for children will greatly improve their academic performance in school and that adequate parental support and financial encouragement can enhance children's academic performance in school, even though parents' income level has a direct impact on students' academic performance.

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Research Question 4: Do students' academic achievements in computer science depend on their parents' educational backgrounds?

Table 5: Response to whether parents' level of education affect students' academic performance in Computer Science

S/N	STATEMENTS	SA (%)	A (%)	D (%)	SD (%)	Mean	SD
1.	The educational level of parents encourages students to work harder and achieve their goals in life.	26 (52.0)	22 (44.0)	1 (2.0)	1 (2.0)	1.51	.595
2.	Educated parents will be able to assist their children with their assignments.	28 (56.0)	16 (32.0)	5 (10.0)	1(2.0)	1.57	.742
3.	Parents with high levels of education will expose their children to the benefits of education.	23 (46.0)	22 (44.0)	4 (8.0)	1 (2.0)	1.63	.677
4.	Students from low parental education levels could be lacking the learning materials needed to improve their academic performance.	20 (40.0)	26 (52.0)	4(8.0)	0 (0.0)	1.68	.618
5.	Parents with high levels of education will invest in their children's education by providing needed learning resources at home.	23(46.0)	25 (50.0)	1(2.0)	1 (2.0)	1.60	.667

Table 5 provided the mean and standard deviation for the responses to questions 1 through 5 asking whether parents' educational backgrounds influence their children's academic success in computer science. The mean scores, which ranged from 1.51 to 1.68, and the standard deviation values (0.595 to 0.742) were displayed in the table. According to the statement's analysis, 97.0% of respondents thought that parents' educational levels encouraged their children to study harder and achieve their goals in life, while 3.0% had the opposite opinion.

Further, it was determined that (88.0%) of respondents said that educated parents will be able to help their students with their homework, and (90.0%) said that educated parents will expose their

students to the advantages of education. It was also determined that (92.0%) of respondents agreed that students from low parental education levels might lack the learning resources they need to improve their academic performance, and that (96.0%) of the entire sample agreed that parents with high levels of education will invest in their children's education by providing resources at home.

Table 5 summarizes the responses to the question of whether parents' educational backgrounds influence their children's academic achievement in computer science. As educated parents will be able to help their children with their homework and parents with a high level of education will expose their children to the advantages of education, it was discovered that parents' educational levels could motivate students to work harder and achieve their life goals. Furthermore, it was discovered that students with low parental education levels might not have access to the learning resources they need to boost their academic performance, whereas parents with higher levels of education are more likely to make an investment in their students' education by providing the necessary learning resources at home.

Hypotheses Testing

Hypothesis 1: There is no correlation between students' academic success in computer science and the teachers' credentials.

Table 6: Correlation between teachers' qualifications and students' academic performance in Computer Science

		Teacher's qualifications	Academic achievement
Teacher's qualifications	Pearson Correlation	1	.431**
	Sig. (2-tailed)		.000
	Sum of Squares and Cross-products	173.580	72.650
	Covariance	.872	.365
	N	100	100
Academic achievement	Pearson Correlation	.431**	1
	Sig. (2-tailed)	.000	
	Sum of Squares and Cross-products	72.650	163.875
	Covariance	.365	.823
	N	100	100

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

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Table 6 displays the relationship between teachers' credentials and secondary school students' academic performance in computer science. The table showed that for replies on teachers' credentials and students' academic achievement in computer science, the calculated Pearson Correlation Sig. value (0.431) was smaller than the table value of 3.84 (at the 95% level of confidence). However, they had a covariance of (0.872) and (0.823), respectively. This suggested that the academic success of students in computer science is positively correlated with the qualifications of teachers. As a result, the null hypothesis was rejected. This suggests that there was a strong correlation between the teachers' credentials and the academic success of the pupils in computer science.

Hypothesis 2: There is no correlation between pupils' academic success in computer science and their parents' socioeconomic level.

Table 7: Correlation between parental socio-economic status and students' academic achievement

		Parental socio-economic status	Academic achievement
Parental socio-economic status	Pearson Correlation	1	.454**
	Sig. (2-tailed)		.000
	Sum of Squares and Cross-products	188.875	82.350
	Covariance	.949	.414
	N	100	100
Academic achievement	Pearson Correlation	.454**	1
	Sig. (2-tailed)	.000	
	Sum of Squares and Cross-products	82.350	174.220
	Covariance	.414	.875
	N	100	100

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

Table 7 displays the relationship between academic achievement in computer science among secondary school students and parental socioeconomic position. The table showed that for replies on parental socioeconomic position and academic accomplishment of students in computer science, the estimated Pearson Correlation Sig. value (0.454) was smaller than the table value 3.84 (at the 95% level of confidence). Nevertheless, the covariance was (0.949) and (0.875), respectively. This showed a positive association between parental socioeconomic position and the academic success of computer science students. As a result, the null hypothesis was rejected. This suggests that there was a strong correlation between students' academic success in computer science and their parents' socioeconomic position.

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DISCUSSION

The study's descriptive analysis showed that teachers' qualifications help them infuse classroom activities with dynamism, allow them to organize their lessons very well, enable them to teach their students effectively, which results in good performance by their students, and their experience helps them perform their duties effectively. The study also showed that students who were taught by teachers with higher qualifications outperformed those who were taught by teachers with lower qualifications.

Additionally, it was discovered that professors who regularly miss class hardly cover their lesson plans, which has an impact on students' academic performance, and that students learn the material far more effectively when they have positive relationships with their teachers. Additionally, it was discovered that students consistently score poorly on exams when their teachers are unapproachable and unfriendly, and they frequently perform poorly on exams when their teacher berates them for even the most minor of offenses. It was also discovered that when teachers do not have a genuine passion for the subject matter they are teaching, students struggle academically.

Furthermore, it was shown that parents with strong employment always enroll their students in top-notch schools, contrary to popular belief that low-income parents rarely struggle to pay their students' tuition and purchase the required textbooks. It was discovered that hiring a home lesson teacher for children will greatly improve their academic performance in school. It was also discovered that providing children with adequate parental support and financial encouragement can improve their academic performance in school.

The study's descriptive analysis also showed that parents' educational levels influence their children's motivation to work harder and achieve their life goals because they can help them with their homework and introduce them to the advantages of education. Furthermore, it was shown that children of parents with low levels of education would not have access to the learning resources they require to raise their academic performance, but parents with higher levels of education will make an investment in their students' education by providing necessary learning tools at home.

According to the study's inferential analysis, there was a substantial correlation between students' academic achievement in computer science and the teacher's credentials. The results are consistent with those of studies by Charles (2017), who proposed that regular certification of teachers has positive effects on student's academic performance, and by Darling-Hammond (2019), who found that teacher academic qualification, or teacher quality, relates to increased students' academic performance and is far more important than other factors. Additionally, the results supported the assertion made by educationist Olatubosun (2020), who wrote in his paper, "Who is a teacher? where he advocated for a teacher to be an expert in their field. He concluded that to effectively teach, the teacher needed to be aware of each of his pupils' or students' unique requirements and

meet those needs appropriately. All of these findings highlight the reality that excellent student achievement requires excellent teachers to be possible.

The study's findings also supported Cubbons' (2017) contention that there is a positive relationship between teachers' experience and students' academic performance, with students taught by more experienced teachers performing at a higher level due to their teachers' mastery of the subject matter and development of classroom management skills/expertise to handle a variety of classroom issues. In addition, professional teachers are seen to be better equipped to focus on the best manner to teach specific topics to pupils that differ in their abilities, prior knowledge, and background, according to Stringfield & Teddlie (2021).

Finally, the study's inferential analysis found that there was a substantial correlation between students' academic success in computer science and their parents' socioeconomic position. The study's findings supported Adelusi's (2014) assertion that a child's socioeconomic background or home environment has a significant impact on how well they succeed academically in school. The results are also consistent with Taylor's (2021) view that the home is a crucial factor in a student's overall growth and accomplishment. The initial social interaction for a youngster is typically provided by the family, specifically the parents. The models with which the youngster can be identified come from parents, siblings, and other people who frequently visit the home (Hayes & Hopson, 2017). The study's findings gave more support to Youngman's (2021) assertion that a child's academic performance, which leads to good achievement, is strongly influenced by their parents' socioeconomic situation.

CONCLUSION

As a result, our study has shown the major impact of parents' characteristics and teachers' personalities on senior secondary school computer science students' performance. The results reveal that while parental support and involvement are essential for encouraging academic accomplishment, teacher personality attributes including enthusiasm, experience, qualifications, and approachability have a favorable impact on student performance. The findings also demonstrated a strong relationship between students' academic performance in computer science and the credentials of the teacher as well as a strong relationship between students' academic success in computer science and the socioeconomic status of their parents. These findings highlight the value of teacher preparation programs that place an emphasis on both subject-matter expertise and strong interpersonal skills. This study also emphasizes the necessity of more parental involvement in their children's education. Despite the small sample size and possibility for self-report bias, which are acknowledged as the research's shortcomings, it is thought that these results make a significant contribution to the field of education. Future studies should investigate these connections in further detail and look at other factors that could affect how well students succeed in computer science courses.

Recommendations

According to the study's conclusions, it is now advised that teachers be encouraged to seek higher degrees because doing so will have a big impact on how they teach their students. Additionally, only those with professional certifications who are willing should be permitted to enter the teaching profession. Additionally, teachers should be paid adequately so that they stay on the job for a long time and gain experience that will help them in their future careers. To ensure that poor students receive a full education and pursue their career goals, the government should make financial aid to these students a top priority. In addition, parents should set an example for their students by emphasizing the importance of education, discipline, and hard work. This will serve as the foundation for their future and help them succeed as adults. Parents should be urged to actively plan and oversee how their students spend their free time, assist with homework, and constantly talk to them about both academic and personal matters. To ensure that students are on the correct track academically, a strong connection must be established between the schools and the home. Parents should be conscious of the need to help their children become more secure, self-assured, and competent in their transition process.

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