Socio-economic status of parents and academic performance of students in technical institutes, Ghana

Alfred Kuranchie

akuranchie@uew.edu.gh

University of Education, Winneba, Ghana

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ABSTRACT

The study was executed to examine the relationship between socio-economic status of parents and academic achievement of students in technical and vocational education and training (TVET) institutes. Leveraging on the positivism paradigm, correlational research design guided the conduct of the study and analysis of data. Final year students of technical institutes in the Central Region of Ghana constituted the study population and data was gathered using a questionnaire which was self-developed, pre-tested, and administered. The Resource Dilution Model and Family Investment theory underpinned the conduct of the study. Diverse analytical tools were used for the data analysis. The results unveiled that a disproportionate chunk of the students hailed from middle class families with a very small portion from high socio-economic bracket with implications for the students' education and progress. The findings also evinced a statistically significant positive correlations between socio-economic standing of parents and students' academic gains. It is concluded that students of technical institutes would do well if their parents' socio-economic conditions improve necessitating the need for the state to create jobs for parents to be gainfully employed and earn handsome incomes to finance their children's technical education. If more parents are able to finance their children's technical education well, it would aid the children's studies, which could result in improved academic performance, which is a desire of stakeholders of education.

Keywords: Academic Performance, Socio-Economic Status, Technical and Vocational Education and Training (TVET), Technical Institutes

I. INTRODUCTION

It is unequivocal that the relevance of both general, and technical and vocational education has been felt in the post-modern era more than any other period in human's history. The quest for good quality education (both general and technical and vocational) to accelerate growth and development of economies has been re-enforced and re-invigorated by the United Nation's Sustainable Development Goal four (SDG4), which motivates member countries to ensure inclusive, equitable quality education, and promote lifelong learning for all by the year 2030 (Saini et al., 2022). It is believed that education helps to develop knowledge, skills, and leadership competencies of people (Miller et al., 2021, Allahnana & Okpe (2018). So when more citizens' knowledge, abilities, and values and attitudes are well shaped, they are able to contribute meaningfully to the society's development (Abdu-Raheem, 2015) and this is true in both developed and developing countries. Roshan ad Rahman (2025) also hold the belief that education is a vital determinant of people's social and economic gains as it offers a means to increased prospects, higher living standards, and a path to upward social mobility for students insinuating that education benefits both individuals and societies. Therefore, education is essential in one's life as it leads to various chances, good wealth, and better life (UNESCO, 2014).

The family is the first vital social unit of children responsible for the development of their intellectual or mental, physical, social, and moral disposition (Vertel et al., 2024; Utomo & Alawiyah, 2022; Roostin, 2018). This means family or parents' responsibility transcends to investment in formal education. Parents do that to prepare the children for a brighter future. As this investment rests on parents, their socio-economic standing comes to play. Socio-economic status is the standing of people or family concerning their educational level, income, occupation, and access to resources (Ulla et al., 2025, Udayakumar et al., 2022). Others contend that parents' socio-economic status comprises variables such as parents' occupation, education, wealth, prestige, and household resources (Adebassah, 2025; Mukanziza & Singirankabo, 2024). It is noteworthy that socio-economic status of parents matters as students' access to essential resources that promote educational attainment defines how well they perform in school (Barua et al., 2023). It is therefore a function of the child's educational progress, buttressing the assertion that family's educational background and other socio-economic variables play pivotal and profound roles in the education of children (Adebassah, 2025; Asikhia, 2020; Liu et al., 2020).

Investment in children's education is supposed to yield dividend both in school and after completion. The dividend expected of education is the academic achievement of students, which serves as a means of ascertaining their

progress and success in school. Academic performance is used to determine how proficient students are doing especially in the three domains of education: cognitive, psycho-motor, and affective (Okyere et al., 2018), which corresponds to Martha's (2019) idea that students' academic performance is their gain or place in an examination, a test, and a course work. It is regarded as the knowledge and skills gained from instructions which are ascertained from marks that students obtain (Narad & Abdullah, 2016, Yusuf et al., 2016). It usually comprises scores attained by students in assessments such as exercise, test, mid-semester examination, mock examination, and end of semester examination. These forms of assessment are categorised into formative and summative both of which are used to determine the gains that students make in the course of study (Okyere et al., 2018). These forms of assessment are applied in both general and technical education in some countries including Ghana.

Formative assessment which is conducted in the course of teaching helps ascertain learners' progress, which shapes students' academic growth and development. In the Ghanaian pre-tertiary educational sector, the series of activities teachers offer students to ascertain their academic progress are termed as continuous assessment while at the end of every term, students are assessed on all the subjects studied. At the end of the programme, however, students sit for final examinations (Okyere et al., 2018), which are conducted by external bodies. For the general secondary education also known as senior high school, students write the West African Senior School Certificate Examination (WASSCE) administered by the West African Examination Council (WAEC) while their counterparts in the technical institutes write Commission for Technical and Vocational Education and Training Examination (CTVET) conducted by the Commission. Students in both categories of second cycle education offer the same four core subjects: Integrated Science, English Language, Mathematics, Social Studies, and as well as four elective courses applicable to their respective programmes. The certificates earned from the respective examinations are used for further studies or/and employment. In other words, successful students of both WASSCE and CTVET have the opportunity to pursue further studies in any appropriate higher education institution, either home or abroad. For instance, students in technical institutes can pursue technical education courses including Science, Technology, Engineering, and Mathematics (STEM) programmes at relevant higher educational institution.

Students' academic performance is influenced by multiple factors including parental socio-economic background of students. Literature is replete with empirical evidence supporting the relationship between socio-economic status of parents and students' academic performance (Bimpong cited in Adebassah, 2025; Munir et al,, 2025; Byiringiro & Andala, 2025; Chzhen & Leesch, 2023; Iddrisu & Alhassan, 2023; Oduro-Ofori et al., 2023; Sawray & Telford, 2022; Turner & Flemming, 2019; Allahnana & Okpe, 2018; Azikiwe, 2016; Goni & Bello, 2016). The systematic review by Tank (2024) provides further evidence to buttress the argument that parental socio-economic standing benefits students' education, which partly accounts for the variation in the academic performance of students from low and high income families. Diverse perspectives have been attributed to the differences in the academic performance of students from the various socio-economic brackets which are the fact that parents in high social standing are better able to support and guide their children's education at home than those in low social standing (Munir et al., 2023), parents in low socio-economic status show little interest in their children's education as compared to those in high socio-economic status (Pant, 2020), and parents in low socio-economic group are unable to provide the educational needs of their children unlike those in high socio-economic group (Li & Qiu, 2018).

However, some studies have revealed no significant differences in the academic performance of students from low and high socio-economic brackets (Alvarez, 2025; Enuma et al., 2023; Raj & Chand, 2023; Darko-Asumadu & Sika-Bright, 2021; Ego et al., 2020; Neupane & Gurung, 2021; Lawson's (2020); Baraiywok & Orora, 2019; Abosede, 2015). These studies unveiled that students from low socio-economic background performed at par with those from high socio-economic bracket. Osaro-Martins et al.'s (2024) study even discovered that students from poor socio-economic status outperformed their colleagues from the high socio-economic standing.

It can be gleaned from the prior studies that there is no conclusive evidence that parental socio-economic standing accounts for the variations in students' academic performance. Whereas some studies have established a connection between parental socio-economic status and students' academic performance, others have proven otherwise. The contradictory findings of prior studies on the nexus between parental socio-economic status and students' academic performance necessitated further study to strengthen the evidence. It is also discernible from the literature that previous studies have focused mainly on parental socio-economic status of students in universities and general secondary or grammar schools and their academic performance as opposed to students in technical and vocational institutes. Studies such as (Byiringiro & Andala, 2025; Osaro-Martins et al., 2024; Chzhen & Leesch, 2023; Iddrisu & Alhassan, 2023; Raj & Chand, 2023; Perry et al., 2022; Lakhan et al., 2021) focused on the socio-economic status of parents of students in senior high school and their academic achievement. Some of the studies also focused on basic school students' parents' socio-economic standing and academic gains (Adebassah, 2025; Ntahemuka, 2024; Owusu, 2020; Enuma et al., 2023; Miller et al., 2021). Besides, a conglomerate of studies on the link between students' academic performance and parental socio-economic status concentrated on university students (Ullah et al., 2025; Barua et al., 2023; Rumbaoa et al., 2022).

Evidently, the plethora of studies reviewed shows no ambiguity and doubt that prior studies have focused on the relationship between socio-economic status of parents and academic performance of students in basic schools, general or grammar secondary schools, and universities sidelining that of students in technical and vocational schools. In Ghana, as in some other economies, technical and vocational education and training (TVET) at the second layer of education takes its students from the junior high schools just as the senior high school does. Also, as a variant of second cycle education, the technical and vocational institutes attract students from the junior high school using the students' Basic Education Certificate Examination (BECE) results. Furthermore, students in the technical institutes enjoy the state's policy of free education as their counterparts in the senior high school do. Additionally, students of the technical institutes have the opportunity to pursue further education at the Universities, Technical Universities, Polytechnics, and Colleges of Education. In spite of these similarities of the senior high school and technical and vocational schools, there is dearth of empirical studies on the nexus between parents' socio-economic status and academic achievement of students in the TVET schools.

1.1 Research Objectives

i. Identifying the socio-demographic characteristics of students in the technical institutes.
ii. Determining the socio-economic status of parents of students in the technical institutes.
iii. Determining the academic performance of students in the technical institutes.
iv. Examining the relationship between parents' socio-economic status and students' academic performance.

II. THEORETICAL REVIEW

The study is underpinned by the resource dilution model and the family investment theory. The resource dilution model propounded by Blake (1981) posits that resources of families are finite so as the number of children increases, the portion of the resources to each child reduces. Thus, the number of children in the care of parents competes for the parents' resources: money, energy, and time (Downey, 2001) and consequently the portion of parents' resources that children receive tend to reduce when additional child or children are introduced into the family (Powell et al., 2004). Gibbs et al. (2023) support this view by asserting that as parents' resources are scarce, bringing up more children divides the resources. Implicitly, more children in the household dilute parental resources that results in low quality education (Blake, 1989) which is consistent with Iyoboyi (2013) assertion that the bigger the family size, the more constraint the family resources become. The theory emphasises the correlation between family size and resource allocation to children's education which is very essential for this study. It is expected that the more children parents have, the less resources they can allocate to their children's technical education. Coincidentally, technical education is a resource demanding endeavour due to the immense practical components of the programme. Hence, students need more and adequate resources to be able to proficiently pursue the programme.

Munir et al. (2023) links parents' socio-economic status to investment in children's education and predicts that educational outcomes advantage children from high socio-economic families. This standpoint implies that parents in high socio-economic status are more capable of engaging in the educational considerations of their children in technical schools than those in the low socio-economic background. This point fortifies the idea that differences in academic achievement of students may be accounted for by the disparity in parents' socio-economic status (Iddrisu & Alhassan, 2025), hence, the need for a study to examine the nexus between socio-economic status and academic performance of students in technical institutes.

III. METHODOLOGY

The study aimed at analysing parental socio-economic status of students in technical institutes and its correlation with students' academic performance. Consequently, the quantitative study adopted correlational research design to guide the conduct of the study and data analysis. The design facilitated numerical analysis and helped check relationship between the independent and dependent variables. The study was undertaken in technical institutes in the Central Region of Ghana. Out of the 19 functional technical institutes, 16 met the set inclusion criteria: mixed sex school (admits both male and female students) and existed for not less than 20 years. Simple random technique was then used to select 50% (8 technical institutes), from which the sample was drawn. The final year students of the selected technical institutes were 9,410. The sample size was determined using Slovin's formulae to ensure enough statistical power to detect significant correlation. This formula is good for estimating statistics based on acceptable margin of error (Kuranchie, 2021; Pallant, 2011). A margin of error of 5% and 95% confidence level were used and the calculation of the sample size using Slovin's formulae is as follows:

$n = N/(1+N(e)^2)$
$n= 9{,}410/1+9410(0.05)^2$
$n = 384$

Stratified and simple random techniques were used to select the institutes and the students ensuring fair representation of male and female students in the study. In each stratum, simple random sampling technique was used to the students to avoid bias and improve external validity. Per the intent and purpose of the study, the stratification criterion was only sex. The selection processes resulted in getting the 384 students from the eight (8) technical institutes.

Parental Socio-economic Status and Student Academic Performance Questionnaire (PSESSAPQ) was developed, pre-tested, and used to gather the primary data on the socio-demographic information (sex, age, basic school attended, location of the basic school attended, family size, and the parents that the students stayed with) and socio-economic status (parental education, occupation, and income), while the secondary data (students' academic performance) was obtained from the students' academic records at the institutes. Both validity and reliability evaluations were rigorously pursued to ensure accuracy and consistency of the questionnaire that was used to generate the primary data. The items on the questionnaire were examined for clarity, relevance, and alignment with the study's purpose. Construct validity was examined through exploratory factor analysis (EFA) using principal component extraction with varimax rotation. The analysis confirmed that all items loaded on their anticipated dimensions with factor loadings ranging between 0.72 and 0.87 indicating a sound construct representation. Upon inspection, cross-loadings and errors were excluded prior to the final data analysis. Pre-testing was conducted in two (2) technical institutes in the region that were not part of the main study and the data gathered were analysed to check the instrument's reliability. Cronbach's alpha co-efficient was computed for internal consistency, which yielded r=0.84, that transcends the minimum threshold of 0.70 as postulated by Nunnally and Bernstein (1994), indicating the instrument's stability and consistency. The validation processes ensured the instrument's psychometric robustness and appropriateness for the study population.

Data collection assistants were trained on data collection emphasising respondent engagement, data handling processes, and ethical issues prior to the commencement of the exercise. Ethical approval was secured from the researcher's university and ethical considerations including obtaining informed consent, ensuring anonymity, confidentiality, and voluntary participation. During the data collection, the respondents spent between 20 and 30 minutes to fill the questionnaire. The demographic data and parental socio-economic status data were analysed descriptively (frequency counts and mean and standard deviation) whereas Pearson's correlation was used to explore the relationship between socio-economic status and students' academic performance, and the statistical significance was set at $p<0.05$ and two-tailed. Out of the 384 questionnaires administered, 345 were found useable representing 89.8% return rate.

IV. FINDINGS & DISCUSSION

4.1 Finding

4.1.1 Socio-Demographic Information of the Respondents

The first objective of the study was to unveil the socio-demographic characteristics of students pursuing technical education at the technical institutes. To achieve this intention, data on the respondents' sex, age, and basic school attended, location of the basic school, family size, and parents they stayed with were elicited. The outcomes of data analysis are presented in Table 1.

Table 1

Respondents' Demographic Information

Sex	**Frequency**	**Percent**
Male	227	65.8
Female	118	34.2
Total	**345**	**100.0**
Age range		
>16 years	54	15.6
16 - 18years	183	53.1
> 18years	108	31.3
Total	**345**	**100.0**
Type of JHS Attended		
Public	275	79.7
Private	70	20.3
Total	**345**	**100.0**
Location of JHS Attended		
Rural	156	45.2
Semi-urban	104	30.1
Urban	85	24.7
Total	**345**	**100.0**

Household size		
2-4	26	7.5
5-7	93	27.0
8-10	184	53.3
> 10	42	12.2
Total	**345**	**100.0**
Living with		
Both parents	171	49.6
Single parent	112	32.4
Other relatives or non-relatives	62	18.0
Total	**345**	**100.0**

The results demonstrate that more male students accounting for approximately 66% participated in the study while the female representation was about 34%. Thus, the male students constituted the majority of the respondents which is characteristic of patrons of technical education. More male students in basic school opted for technical education at the second cycle than their female counterparts do hence the large imbalance of the male and female student numbers in the technical institutes. Concerning the age-range, the majority of the students were within 16 and 18 years which is the normal age range of students of the second cycle education in the country. *Ceteris paribus*, children complete primary education at age 12 and junior secondary school at age 15 (both constitute the basic education). The results show that at the second cycle education, students are supposed to complete at age 18. However, about one-third of the students were above 18 years. These students either may not have started school early or may have repeated some classes along the way. Any of these situations may have contributed to those students' late completion of the first cycle education which makes them over aged at the second cycle of education.

The data analysis also revealed that a disproportionate chunk of the students accounting for almost 80% had their education in state owned, funded, and managed basic schools while about one-fifth of them had theirs in privately owned, funded, and managed basic schools. This result suggests that the percentage of private basic school students who opt for and pursue technical education is not encouraging. Some technically gifted students from private basic schools may miss out technical education. The results further indicate that the majority of the respondents, representing 45.2%, attended basic schools in rural communities, about 30% of them had their education in basic schools in peri-urban communities, and only a few attended basic schools located in urban centres. The finding suggests that many students who patronise technical education had their basic education in rural and semi-urban communities.

Not all, the results illustrate that more than 50% of the students hailed from large households and 27% hailed from relatively large households. It is only about 7.5% of the students who were from small households. The findings mean that the majority of the students hailed from large households which is not good for the students' technical education as it has implications on their education. Finally, students who live with intact families were a little above 30% who have the opportunity to access both parents' time and educational care. The results further disclosed that the majority of the students (49.6%) did stay with single parents and 18% stayed with other relatives or non-relatives insinuating that the disproportionate chunk of the students did not live with both parents, which is not good for their technical education and progress. The results insinuate that the combined parental financial support and care for their education may elude the majority of the students.

4.1.2 Socio-economic Status of Parents of the Students

The second objective of the study was to unravel the socio-economic status of parents of students in the technical institutes. To achieve that end, information on the parental education, occupation, and income of the students' parents was gathered and analysed. The following tables display the outcomes of the analysis.

Table 2

Parental Education

Level of Education	Frequency	Percent
None	54	15.7
Basic education	86	24.1
Secondary education	135	39.1
Tertiary education	70	20.3
Total	**345**	**100.0**

The results demonstrate that the largest group, 39.1% of the parents, had secondary education, while significant portions, 24.9% and 20.3%, had pursued basic and tertiary education respectively. The table indicates that

only 15.7% of the parents had no formal education. Generally, the results portray that the majority of the parents had moderate level of education.

Table 3
Parental Occupation

Level of Education	Frequency	Percent
Unemployed	12	3.5
Subsistence farming/Informal employment	145	42.0
Large-scale farming/commercial activity	86	24.9
Professionals/Government employment	102	29.6
Total	**345**	**100.0**

The data shows that the majority of the students (42%) have parents involved in subsistence farming/informal employment and their counterparts who were in large-scale farming/commercial activities form almost 25%. A good percent of the parents representing almost 30 percent were professionals/government employees. The results show that the majority of the parents of the students in the technical institutes were in the informal sector of the economy.

Table 4
Parental Income

Estimated Income	Frequency	Percent
Up to 5,000	58	16.8
5,000 - 10,000	194	56.2
More than 10,000	93	27.0
Total	**345**	**100.0**

The results illuminate the distribution of parents' monthly incomes across various groups. The data shows that 16.8% of the parents earn up to GHC 5,000.00 putting them in the low income group while only 27% earn monthly incomes more than GHC 10,000.00 placing them in the high income group. The majority of the parents constituting 56.2% earn monthly incomes between GHC 5,000.00 and 10,000.00 indicating a higher concentration in the low to moderate income bracket. The overall results of the three variables indicate that the majority of the students in the technical institutes are from middle socio-economic background. This suggests the need for improvement in the economic conditions in the country to positively affect the socio-economic backgrounds of parents of students pursuing technical education.

4.1.3 Academic Performance

The nature of the study's intention and purpose triggered ascertainment of the students' academic performance to enable correlating it with parents' socio-economic gains. In view of that the academic performance of students in the technical institutes was sought for. The students' results for the first, second, and third terms of the second year examination were used. The results which covered the four core subjects (English Language, Social Studies, Mathematics, and Integrated Science) were computed to determine their academic performance and the results are presented in Table 5.

Table 5
Academic Performance of Students

Subject	Mean(M)	Standard Deviation (SD)
English Language	63.4	10.7
Social Studies	67.3	9.8
Mathematics	60.3	14.3
Integrated Science	62.2	12.9

The results in Table 5 portray a broad spectrum of the students' performance in the core subjects. The results indicate that the mean scores of the subjects are 63.4 in English Language; 67.3 in Social Studies; 60.3 in Mathematics; and 62.2 in Integrated Science. The mean scores demonstrate that the students' performance is moderate with unevenness as evidenced in the respective standard deviations. Overall, the results illuminate an average performance of the students in the core subjects suggesting a massive and significant room for improvement.

4.1.4 Relationship between Socio-economic Status and Academic Performance

Having obtained the parents' socio-economic status and students' academic performance, correlation between the variables was checked. A hypothesis was formulated based on the objective.

Ho: There is no significant relationship between socio-economic status and students' academic performance.
The results of the analysis are presented in Table 6.

Table 6
Relationship between Socio-economic Status and Academic Performance

	Academic Performance	Parental Education	Parental Occupation	Parental Income
Academic performance	1			
Parental education	0.56**	1		
Parental occupation	0.49**	.273*	1	
Parental income	0.64**	.322**	344**	1

**Correlation is significant at the 0.05 level (2-tailed), N=345

The results disclose significant relationship between parental education and students' academic performance (r= 0.56, p<.000), parental occupation and students' academic performance (r= 0.49, p< .001), and parental income and students' academic performance (r= 0.64, p<.000). Generally, the study revealed a significant positive correlation between parental socio-economic variables (income, education, and occupation) and students' academic performance implying that the better the socio-economic status of parents of students in the technical institutes, the better the students' learning outcomes. In line with the results, the null hypothesis is rejected. The decision for rejecting the hypothesis is that there is a clear connection between socio-economic status and academic performance. There is a significant positive correlation between parental socio-economic status and academic performance.

4.2 Discussion

4.2.1 Socio-demographic Information

The study revealed a male student dominance in the technical institutes. The males constituting almost two-thirds of the student population is not encouraging for female technical education in the country. Apparently, the drive for female education is not being felt much in the technical education as it is the case for the general secondary education. At the senior high school, girls outnumber boys (Ghana Statistical Service, 2021), contrary to what prevails in technical institutes supporting the discovery that male students show high preference for TVET as opposed to female students (Tigtig, 2025; Kesarwani & Komeraiah, 2020). This finding seems to form the idea that the affirmative actions toward high enrolment of girls have favoured the senior high school more than the technical school. The finding also confirms Masud et al.'s (2018) discovery that technical education courses are more popular among male students than female students.

The study also unveiled that although a high percentage of the students fall within the normal second cycle school age corroborating Ghana Education Service (2020) report that the modal age for senior high school students is between 16 and 18 years. However, a sizeable percentage of the respondents was above the expected age which may be due to class repetition as observed by Osei-Mensah (2019) and Kyereko et al. (2022) that needs to engage the attention of education authorities due to its implications for students' behaviour and conduct. A study by Erasmus and Fourie (2025) discovered that over-aged students in technical institutes demonstrated more aggressive behaviours than their younger peers. They further indicated that the older students intimidated, harassed, and maltreated the younger ones, which can undermine the latter's education. This discovery has policy implications for school regulations. The findings also indicated that only a few students in the technical institutes had basic school education at private schools suggesting a low interest in technical education among such students. Students who pursued basic education at private schools do not seem to appreciate the relevance of technical education although some of them may have the potential for this variant of education, which is not good for both individuals and the country's socio-economic development.

The findings further unveiled that the majority of the students were from large and relatively large households which is consistent with the national demographic patterns in Ghana, where average household size tends to exceed five persons (Ghana Statistical Service, 2021). This situation has implications for children's education as the resource dilution theory posits, the more children in a household lead to limited educational resources to the individual children. Also, as espoused by the resources dilution model, the number of children in the care of a family or parents competes for the family or parents' resources in the form of money, energy, and time (Powell, 2004, Downey, 2001). As family size increases, resources allocation to the children respectively dwindle and that may account for the low level of education that children from large family sizes obtain as compared to those from small family sizes (Gibbs et al., 2023; Blake 1981). Larger household sizes may result in resource constraints, minimal parental attention, and increased responsibilities for children, which can negatively affect the children's education.

Adding to the unfavourable situation is the fact that the majority of the students do not live with intact families, where both parents' economic resources could be combined to take care of the children's education. This is not good for the education of the students as articulated by the resource dilution model: more children in a family

compete for the scarce resources which makes each of them receive small portions of the resources for education and other needs (Gibbs et al., 2023; Powell et al., 2004; Yeung et al., 2002). The finding confirms Neondo's (2019) study finding that the majority of the students hailed from large family sizes.

4.2.2 Socio-economic Status of Parents

The findings disclosed that the majority of the students were from low to middle socio-economic class as evident in the moderate level of educational background of the parents; most of the parents working in the informal sector, most of whom earn monthly incomes less than GHC10,000.00. The majority of the students were from the middle income class means their parents may hardly be able to provide appreciable learning resources for their technical education which would not aid students to perform well in school. This development resonates in the family investment theory, which postulates that parents with strong financial strength are better able to invest in their wards' education than those with less financial capability (Yeung, 2002). The theory links parents' investment in education to students' academic achievement (Munir et al., 2023), which supports Udayakumar et al. (2022) finding that parents from higher socio-economic background were better able to adequately provide educational resources for their wards' education which helped improve the academic performance of the children. When parents have the financial buoyancy, they are able to acquire educational resources such as textbooks, tools, and drawing materials that would help promote both theoretical and practical work. The findings also confirm studies which found that most of the respondents were not from high socio-economic status (Osaro-Martins et al., 2024; Iddrisu & Alhassan, 2023; Iyoboyi, 2013) which negatively affects their wards' academic performance. This revelation has implication for technical education as Lakhan et al. (2021) observed that socio-economic status levels were linked with academic achievement. Studies have unraveled that parents with low socio-economic status showed little interest in their wards' education (Byiringiro & Andala, 2025; Pant, 2024) and were also unable to meet the educational needs of their children (Li & Qiu, 2018), which has the propensity to affect students' education.

4.2.3 Academic Performance of Students

The study revealed that the students perform averagely in the core subjects. The performance in Mathematics which is very essential for technical education is not encouraging which needs urgent attention. Mathematics serves as a pre-requisite for the learning of some related subjects, which needs to be taught and learned well. Both the teaching and learning processes of the subject need to be upscaled through strong training of teachers as well as provision of requisite resources. The students' performance in Integrated Science is also not too encouraging. The average performance of students in the subject requires critical attention as the subject is also essential for technical education. Science is also a pre-requisite for the learning of some technical subjects and expectedly, students' performance needs to be good in the subject to able to fare well. There is also no denying the fact that English Language is central in technical education and that students ought to do well in the subject to enhance their studies in the technical school. However, the students' performance in the subject is not encouraging drumming home the point that steps need to be taken to bring about improvement in the performance.

4.2.4 Relationship between Parental Socio-economic Status and Students' Academic Performance

The study established significant positive correlation between parents' socio-economic status and students' academic performance, which means that high parents' socio-economic status positively correlates with high students' academic performance and vice versa. Again, the result demonstrates that parents' level of education has moderate positive correlation with students' academic performance supporting the works of Chzhen and Leesch (2023), and Iddrisu and Alhassan (2023). The results also show that parental occupation has a slight positive relationship with students' academic performance, which buttresses extant literature on the nexus between socio-economic status and academic performance (Byiringiro & Andala, 2025; Chzhen & Leesch, 2023; Iddrisu & Alhassan, 2023; Kwarteng et al., 2022; Rumbaoa et al., 2022). Students from low socio-economic status consistently attained subpar academic results across the four core subjects as opposed to their counterparts from the middle class families who performed averagely. This trend of the results underscores the crucial role that socio-economic variables play in shaping educational triumph of students and buttresses the family investment theory's assertion that differences in the academic achievement of students could be as a result of disparities in parents' socio-economic status (Iddrisu & Alhassan, 2025).

V. CONCLUSION & RECOMMENDATIONS

5.1 Conclusion

The relevance of technical education in the 21st century demands authorities to put premium on both general secondary and technical education to prepare students for higher education and all avenues of job opportunities. When students pursue these variants of education, they are able to meaningfully contribute to the social, political, and

economic development of countries. Students from diverse socio-economic backgrounds pursue technical education with marked variations in terms of gender, location and type of basic school attended. Parental socio-economic backgrounds are quintessential in the learning outcomes of students, which need to be a concern for stakeholders of education; parental socio-economic conditions are relevant in the education of students in technical institutes as well. It is also observed that the no parity in male and female students' preference for technical education may require orientation for girls on the relevance of technical education. Besides, the indifference attitude of students from private basic schools toward technical education would not help the nation to amass the quantum of students who should pursue technical and STEM programmes at the tertiary level of education. The country needs a critical mass of technical and STEM graduates to contribute to the socio-economic development of the country. Lastly, although most of the students were not from high middle socio-economic brackets, their performance is moderate illuminating that with improvement in parents' socio-economic standing, students in the technical institutes would perform well.

5.2 Recommendations

Based on the findings, it is recommended that the state should introduce textbook subsidies for students in technical schools to relieve parents. Civil Society Organisations (CSOs) and Non-governmental Organisations (NGOs) should also supply technical institutes with equipment and facilities to help in the provision and delivery of technical education. In addition, the state should embark on industrialisation agenda in rural and peri-urban communities where the majority of students in the technical institutes hail to enable parents have well-paying economic activities to in turn help improve students' educational pursuit. Lastly, the state needs to introduce educational equity initiatives and programmes such as cash transfer to brilliant but needy students to enable them benefit fully from technical education.

The study provides initial evidence and understanding of the nexus between parental socio-economic status and academic success of students of technical institutes. However, the study was conducted in only eight technical institutes in a region which is not representative of such schools in the country. Future research should have technical institutes in all the 16 regions of the country in order to unveil the national picture of the phenomena studies. Similarly, the sample size of the study was not large enough to warrant generalisation of the findings on all technical institutions. Further studies with large sample size are suggested for more enhanced, reliable, and applicable outcomes. Findings from very large sample from many technical institutes would elicit a more robust generalisation. In addition, the secondary data was collected on only the core subjects that students study at the technical institutes to determine their academic performance, which limits the scope of assessment of students' academic achievement. Future study should add students' performance in their elective subjects to broaden the scope of students' academic performance. Future research should also explore the parental socio-economic status of students in technical institutes located in rural, peri-urban, and urban communities to inform policy and practice. If these studies are executed, it would immensely enhance understanding of the complex connection between parents' socio-economic standing and students' academic gains in technical institutes. Finally, the study acknowledges the weakness of the Slovin's formulae that was used to determine the sample for the study. Some authors criticise it as simplestic. Consequently, future research should use a more robust formulae to calculate the sample size.

Declaration of Interest

The author declares that he does not have any known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

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