

## Impact of Family Income Level on Students' Academic Performance in Public Secondary Schools in Kicukiro District of Rwanda. A case Study of Masaka Sector (2022-2023)

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**ABSTRACT :**The purpose of this study was to investigate the impact of selected family income level on academic performance of students in public secondary schools in Masaka sector, Kicukiro district, Rwanda. Three secondary schools were assessed namely: Group Scolaire Masaka I, Group Scolaire Masaka II, and Group Scolaire Rusheshe. The study sought to determine the influence of parents' income, educational level and academic support facilities in the homes on students' academic performance. A descriptive survey design was used to execute the study. Simple random sampling technique was used to select respondents from 3 public secondary schools, to give a sample size of 213 students and 3 head teachers, 21 class teachers. Data were collected through three sets of questionnaires for parents, students, teachers and head teachers. Quantitative data were analyzed using descriptive using SPSS and correlation was used to establish the relationship between the variables of the study. The findings of this study were that: Parental income is strongly associated with academic performance; 66.7% (142/213) of parents had income of less than 100,000 Rwf and 76% (108/142) of their students scored below 60 marks (Grade F, S, E, D). Those parents with higher income (above 100,000 Rwf), the performance of their children was generally higher than those who belonged to lower income families. It was also observed that 55.4% of parents had attained primary level of education and 84.7% (100/118) of their children scored less than 60 marks while students from those parents with higher level of education scored higher grades. Therefore, level of parent's education impacted on the student academic performance. 100% of students who had no supporting home materials scored lower grades (F, S, E). None of those who had enough facilities scored less than 50 marks: 97% (95/98). It observed that provided home facilities positively also impacted on the student academic performance. The study therefore concluded that parental income, parental education, and availability of home facilities were important antecedents of students' academic performance to a great extent. In order to improve students' academic performance, it was recommended that the government needs to boost the economic status of households through investing much on income generating activities and the country needs to put in place appropriate systems to enhance parental education like adults' education so the parents could be equipped with basic formal education.

**KEY CONCEPTS:** Family income, level of education, home facilities and academic performance.

### I. BACKGROUND OF THE STUDY

Education is transformative asset and generally fertilizes the mind to bear good fruits; yet, specialization at higher level trims the mind for specific skills to perform better. Every seed has the potential to germinate, grow and bear fruits when favorable environment is available. Every branch of a tree feeds on the mother tree's nutritional level. Similarly, at the flowering and fruiting stage of every tree, there is a great need of care, support and favorable environment so as to bear good fruits. (Adzido et al, 2016). Poor academic performance has remained a challenge to education despite the adoption of free and subsidized education policies in both developed and developing countries. Both scientific and empirical evidences argued that family status contributes to the education of children. In fact, parental involvement in education of their children because pertinent in learners learning outcomes owing to effective cooperation between teachers and parents or guardians (Vadivel et al., 2023).

The relationship between family background and academic achievement of children has been a subject of extensive research worldwide and especially in African countries.

In the United States, the link between parental income and students' outcomes has emerged as an important area of study. Dahl and Lochner (2012) investigated how family income impact child achievement. The study results established that parental income had a significant influence on students' achievement (Dahl & Lochner,

2012a). On other hand, research has demonstrated that family income has a significant influence on children's education level, and increasing family income can improve their education (Duncan et al., 2011).

One study done in Thailand; parents play a crucial role in the academic success of their children. In support of this line of argument, parents exert a significant influence on the performance of their children because of the authority and skills they have to shape and develop their children into motivated, inspired, and lenient people (Naite, 2021). In China, Parental level of income is a major source of educational inequality. Students whose parents are poor are educationally disadvantaged. Along this line of argument, (Li & Qiu, 2018) argue that poor parents do not invest adequately in their children's education which leads to poor educational outcomes. In Japan, a study concluded that parents' level of income is positively correlated with students' academic performance. By including a sample of 300 students from two high schools who were randomly selected, (Machebe et al., 2017) investigated the impact of parental level of income on students' academic performance in high schools. The study findings showed that greater academic achievement for a student was attained by students from high-income families.

So far as Africa is concerned, In Ghana, (ADZIDO et al., 2016b) designed a study to investigate how family income influences the academic performance of tertiary students. The study findings suggested that family income positively affects students' academic performance. This study concluded that high parental income helps improve students' motivation and learning processes and hence leads to better academic performance. In Ethiopia, the research investigated the effect of family socioeconomic status on students' academic achievement at Haramaya University, Eastern Ethiopia. The study results showed that there was a weak positive relationship between family income and students' academic achievement (Sciences & Abera Gobena, 2018). In Kenya, educated parents are more willing to take their daughters back to school even after teenage pregnancy. However, the amount of time and money available to a parent to support the academic enterprise of their children may depend on many factors. A parent's level of income has a more direct influence on students' academic performance (Mutei Ngangi et al., 2023). Dr (MRS) B.O. Abdu-Raheem confirmed that that low income of parents contributes to high dropout and repetitions rate of secondary school students in Ekiti state Nigeria (DR (MRS) B.O. Abdu-Raheem, 2015). Similar results were reported in Uganda where the study found that family income was a significant determinant of the variation in students' academic performance (Nason Masereka et al., 2023).

As far as Rwanda is taken into account, family income is measured through Ubudehe categories. Ubudehe categories are witnessing the income level of the household in the country where, the population of the country grouped into four categories of Ubudehe. Category one and two embodied people with lower income, Category three is for people with medium income and category four is for people with higher income. The purpose of Ubudehe program was to provide information on the level of support families receive through government social protection programmes. In 2021, Faustin et al. in their study on the influence of parental incomes on internal efficiency of public primary schools revealed that there is a significant relationship between parental incomes and internal efficiency (Faustin et al., 2021). However, there no current study carried out, to establish influence parental incomes levels (Ubudehe categories) on academic performance in Masaka public secondary schools.

It is upon this background that this research provided much-needed knowledge on how parental level of income impacted on academic performance of Masaka public secondary schools namely Group Scolaire Masaka I, Group Scolaire Masaka II, and Group Scolaire Rusheshe.

## II. PROBLEM STATEMENT

The greatest impediment in Rwandan education system, is the growing problem of secondary school under performance. The low academic achievement may be attributed by the parent's socio-economic status. Masaka is among the regions in Kicukiro district whose majority of inhabitants belong to low socio-economic status. In particular, most of researches on relationship between academic performance in the City of Kigali, Kicukiro District and parental socio-economic status is not well studied. Much has been done to improve the level of education in public secondary schools and at the same time the government and other stake holders have done much in terms of funding and put in place efficient administration just like any other parts of the Kigali. In spite of all these, student performance has not significantly improved (Manirakiza et al., 2023). Poor parental income position with gross deprivation of social and economic needs of a child, usually yield to poor academic performance of that child (Misbah et al., 2017). Human capital is globally perceived to be the most important resource for the socioeconomic development of a nation. It is however important to understand that for citizens to acquire human capital, through mass education, there has to be interplay of both the state and other actors in the educational field (Evertsson, 2015). Children of a one-parent family or experiencing divorce are negatively related to the level of schooling attained (Brand et al., 2019). It is also noted that the number of siblings, religiousness, schooling and the presence of books at home are found to have large and significant effect on children performance (Evans et al., 2010). It is important to establish other factors that influence academic performance outside those that are perceived. The study therefore, specifically focused on elements of: level of

education of parents, level of income, availability of academic facilities at home and students' performance in the said area. The findings of this research may be beneficial for government, educators, parents and students to identify their own problems and how to defeat them.

### III. RESEARCH OBJECTIVES

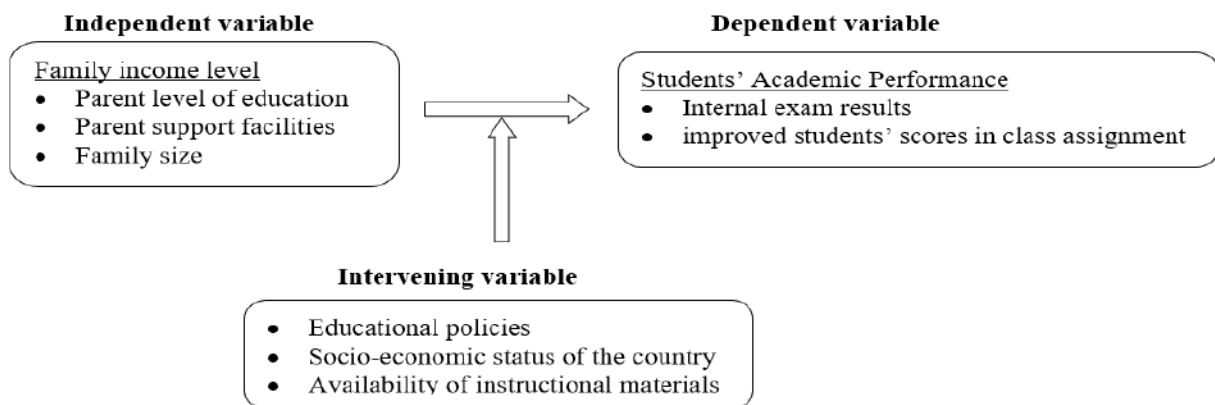
The general objective of the research is to assess the influence of family income level on students' academic performance in Masaka secondary schools. Specific objectives are: (i) to establish how family income impacts on the performance of students in Masaka secondary schools; (ii) to find out the effect of parents' level of education and students' academic performance in Masaka secondary schools; (iii) establish the impact of academic support facilities in the homes on students' academic performance in Masaka secondary schools.

### IV. RESEARCH FRAMEWORK

The study was conducted based on the relationship between dependent, independent and intervening variables. The conceptual framework shows the relationship between the family background and academic performance of learners. Hence, it briefly explains the relationship between family financial status, parental education level, availability of home facilities and academic performance of students in Masaka secondary schools. Then, the figure below shows variables whose interrelation research intends to explore.

**Figure 1. Conceptual Framework**

The independent variable was family background, which was divided into the following components; family



financial status, parental educational level and parent support facilities while the dependent variable was academic performance of students which was categorized into seven grades as provided by NESA: Grade A (70-100%), B(65-69%), C(60-64%), D(50-59%), E(40-49%), S(20-39%), F(0-19%). The intervening variables were the psychological factors of students and the moderating variable was student's aptitude, the school setting made up of the characteristics of individual school such as the type of school, school facilities, class size school rules and regulations and government educational policies.

### V. CONCEPTUAL REVIEW

**Family:** a group of persons united by the ties of marriage, blood, or adoption, constituting a single household and interacting with each other in their respective social positions, usually those of spouses, parents, children, and siblings. A group consisting of blood related people including those adapted to the group.

**Family income level:** Family income is a measurement of economic position of individuals who are considered to be part of one familial unit. Income is broadly inclusive of wages, pensions, investments, governmental assistance or benefits, rent earnings, and any other source of finances.

This is the money that a family earns at a given time. It can be in form of monthly salary or wages as well as returns got from a business.

**Academic:** The process of teaching and learning in school involves reading, studying and examinations. Academic is used to describe things that relate to the work done in schools, colleges, and universities, especially work which involves studying and reasoning rather than practical or technical skills.

**Performance:** This refers to the accomplishment of a given task measured against preset standards of accuracy, completeness, cost and speed. Education performance is deemed to be the fulfillment of an objective in a manner that ensures that the performer has attained the set goals in the given level of education. Performance in education is always accompanied by an academic certificate to show that the performer has successfully completed the grade and has attained the stated grades,

## VI. THEORETICAL REVIEW

This research was based on (Walberg, 2011) theory of Educational Productivity that postulates that schools are the focal point for the positive influence on a student's academic success. There are many more factors in achieving success outside the realm of curriculum, and instructional strategies and practices. Community support, parental involvement, and the psychological characteristics of pupils also play a critical role in the academic achievement of all pupils.

Walberg's theory is useful in determining the different factors that affect academic achievement (Walberg, 2011). Walberg stated that the most important factor of academic success for pupils from low socioeconomic status is the home environment (Sun et al., 2012). It is more crucial than other factors affecting academic achievement, such as parental income and education. Schools cannot change the factors of parental education and income but can have a positive effect on the home environment by educating and working with parents. Walberg's opinion is that families from a high socio-economic background are more involved in the educational process than those from a low socio-economic background. The theory postulates that the success of a student's academic achievement is strongly dependent upon parental involvement. These individuals need to have parental involvement in their academic journey in order to attain a high level of educational success. Parental involvement in pupils' academic work may result to higher grades and test scores, long-term academic achievement, positive attitudes and behavior, more successful programs, and more effective schools.

From Walberg's theory, it is evident that there is strong linkage between students' academic achievement and their socio-economic background. This theory is relevant to the current study as the researcher uses it to conceptualize that the student's academic achievement may be influenced by the parent's income, education level of parents and family size. Similarly, other factors which have a bearing on students' academic achievement.

## VII. EMPIRICAL REVIEW

Family income plays a significant role in shaping students' academic performance, as evidenced by various research studies:

### Relevance of Parents' level of education

Parental level of education is known as a factor emphatically identified with the kids' academic performance. The educational level of parents is a capable factor impacting youngsters' academic achievement. According to the (UNESCO., 2011) education equips one with knowledge, skillsets and right attitude for the transformation of life. With these attributes one is able to secure a job, earn income, stay healthy, have access to credit, increase productivity, reduce poverty and participate fully in societal activities. An educated mother knows and understands the essence of anti-natal care, childhood vaccinations, family planning and the provision of a balanced diet for children, hence a decrease in fertility rate, malnutrition rate, maternal and child mortality.

The scholarly performance of the students intensely relies on the parental contribution of the scholastic exercises to achieve the larger amount of value in scholastic achievement (Henderson et al., 2018). (Asad & Tasneem, 2015) did an examination on the connection between the parents' level of education and scholarly performance of their kids in South Punjab town, Pakistan. The outcome demonstrated that there was a noteworthy positive connection between parents' level of education and students' scholastic performance. (Azhar et al., 2014) directed an investigation on the impact of parental level of education on students' scholarly performance in Norway. The after effects of the examination demonstrated that there was a positive relationship between parental level of education and their kids' scholarly accomplishment. (Muola, 2010) detailed that parental educational accomplishment related fundamentally with scholarly accomplishment. An informed parent turns out to be more engaged with education for a youngster that may aid schoolwork. Educated parents buy additional learning materials and stationeries for their youngsters that improve on the school environment to positively affect performance and yet the learning environment is good and provincial household. Youngsters that belong to parents of low educational fulfillment are caught off guard in school.

(F et al., 2015) explored the family based socio-economic factors that affect students' academic performance in public secondary schools in Rongo Sub County, Migori County, Kenya. The study used descriptive survey and correlational research designs. The targeted population was 45 head teachers, secondary school teachers, 14,523 secondary students, 5 Zonal Quality Assurance and Standards Officers (ZQASOs). The study found out that Parental level of education significantly affects academic performance 4.6(92%). The study concluded that parents and guardians should be more enthusiastic about their children's academic performance. The researcher therefore recommended that home environment should be made conducive for learning to supplement what the school provides. Parents' level of education has been said to have a multifarious impact on children's ability to learn in school. According to the study of (Choge & Edabu, 2023), Kenya, he recommends that education policymakers should enhance communication infrastructure to support learning in schools and ensure that

parents are sensitized to the need for enhanced parental occupations and the benefits of having positive desires towards a learners' academic journey.

Keter (2016) studied the influence of parents' educational level on pupils' academic performance county, Kenya. The study adopted a survey design targeting population 1821 pupils and 528 teachers from 74 public primary schools. Simple random sampling technique was used to select 22 public primary schools, 158 teachers and 273 class 8 parents. The instruments used for collection included 2 sets of a questionnaire, one for teachers and another for parents. The study found out that educational level of a parent did not significantly influence the academic performance of pupils.

### **Effect of family size and academic performance**

Family size is documented as a determinant of educational outcomes. Parent with a small family find it easy to provide for the physical needs of the child and is in a position to give him/her attention, encouragement, stimulation and support with his/her school work. They observed that this could have a motivating effect on a child from the small family in comparison with a child from a large family where the parents are always busy trying to find ways of meeting basic needs of the family (Baranowska-Rataj et al., 2014). Family size in this context refers to the total number of children in the child's family in addition to the child himself (Fwacn et al., 2015).

However, the family type that a child comes from either monogamous or polygamous family usually has impact on the child academic performance. It is important to note that either of the family type (monogamous or polygamous) family dictates the size of the family. Children from larger families are found to do worse than children from smaller families (Adenike, 2013). However, children from larger families have lower levels of education. Smaller family size has been linked with higher academic achievement. Students with fewer siblings are likely to receive more parental attention and have more access to resources than children from large families ((Shen, 2017). The additional attention and support lead to better school performance (Kakumbi et al., 2016) investigated pupil background characteristics and academic performance in senior secondary schools in Kitwe district with a view of recommending on how to improve pupils' performance. The analysis of the quantitative data revealed that there was a negative relationship between pupils' age and family size.

### **Relationship between home environment and academic achievement of students**

"Home condition" is, among other factors that affect a child's success during in learning achievement. Families with high socioeconomic status usually have books and educational materials around the home as part of the environment to which the growing child is exposed. Consequently, the children of such families are expected to do well in school. Poor academic achievement of children from large families is associated with poor housing condition, over-crowding, and poor clothing and feeding. It is observed that these factors particularly affect the reading and study habit of children. The home environment of a child affects his or her academic achievement. It is agreed that the socioeconomic background of homes where such conditions as great poverty, poor feeding, insufficient sleep and rest and general neglect are known to be the cause of the backwardness of children in school (Nawaz Khan et al., 2019). These studies collectively emphasize the crucial role of family income in shaping students' academic success, highlighting the need for interventions to mitigate the impact of socioeconomic disparities on educational outcomes.

### **Effect of family income and student performance**

Socio-economic factors have been cited as a determinant of students' performance in national examinations. (Njuguna, 2021) points out that poor parental care with gross deprivation of social and economic needs of a child usually yield poor academic performance of the child. Parental involvement in pupils' academic work may result to higher grades and test scores, long-term academic achievement, positive attitudes and behavior, more successful programs, and more effective schools. believes that good parenting supported by strong economic background could enhance strong academic performance of the child. According to author, students' achievements is predicted where the child is properly counseled in the choice of his or her courses and vocation that matches ability, interest and capability.

Low income of parent is a major impediment to academic success and development on the part of the students. Student's academic performance can be predicted by a chain of socioeconomic factors resident in parents, family income level (Pal Baliyan et al., 2015). Household income has a strong effect on academic performance due to the economic resources allowed for more academic components to be implemented. Resources available at home are an important indicator for the relationship between socioeconomic status and academic achievement. (Ali et al., 2018) noted children from low-income families are more likely to be preoccupied with environmental stressors within their neighborhood such as feelings on insecurity about their safety, housing status, and violence within their community to the detriment of their academic achievement.

Furthermore, research from China indicates a strong influence of family income on children's educational attainment family income has a significant influence on children's education level, and the increasing family income can improve their education level; the phenomenon of intergenerational transmission of education is not obvious, and the intergenerational mobility is good. It is also found that although the total sample and urban samples showed the level of family income has no significant influence on academic achievement of children, but in rural families, the increasing income does play a greater role in enhancing children's education level, which provides suggestions for China's education reform accordingly. Lv (2017)

We know from existing research that children from poorer backgrounds do less well in a number of dimensions than their peers and in the United Kingdom the simple correlation between low income and poor educational outcomes has been long established. In terms of completed education, children from low-income households go on to leave full-time education much earlier, and with fewer formal qualifications than their more affluent counterparts. (Blanden & Gregg, 2010)

(Dahl & Lochner, 2012b) indicate that children growing up in poor families are likely to have adverse home environments or face other challenges that would continue to affect their development even if family income were to increase substantially. Furthermore, year-to-year changes in family circumstances like parental job loss or promotion, illness, or moving to a new neighborhood may affect both family income as well as family dynamics and parenting behavior. The latter poses a problem for traditional empirical studies that fail to separately identify the effects caused by changes in income from the effects of changes in other unmeasured family circumstances.

### Critical review and gaps to be bridged in the study

There is clearly some evidence that socioeconomic status of parents plays a role in the performance of their children in schools. Even though there is a lot of research undertaken on socioeconomic status in general, more analysis needs to be explored specifically on family income in the education sector in Rwanda and how this relates to student performance. Empirical studies have contributed to knowledge of how socioeconomic status affects student performance, through approaching investigation into socioeconomic status with appropriate qualitative and empirical research techniques. There is still clearly a gap in the literature to be filled concerning in particular the relationship between family income level and academic performance of children in Rwanda. Research questions will attempt to fill this gap by addressing the relationship between socioeconomic status and students' academic performance in Masaka public secondary schools.

## VIII. RESEARCH METHODOLOGY

### Research design

The study applied a descriptive research design to reflect aspects of perception, feelings, experiences, facts and emotional feelings of the study respondents in finding out the influence of family background on secondary school students' academic performance in public secondary schools: A case study of Masaka sector, Kicukiro district, Rwanda. This was because the research questions that were generated necessitated observing explanatory, descriptive and analytical aspects of the research.

### Research Population

The study population involved all the students of ordinary level in Group Scolaire Masaka I, Group Scolaire Masaka II, and Group Scolaire Rusheshe and their parents and teachers in Masaka sector of Kicukiro district in Kigali city of Rwanda during school year (2022-2023).

### Sample size determination

The sample size of this study was determined by using Solving formula to get the respondents of this study ((Yamane, 1967).

$$n = \frac{N}{1 + N(e)^2}$$

Where:

**n**: Sample size, **N**: target population, **e**: Marginal error/level of precision.

When this formula is applied to the above sample, the formula assumes: 95% as confidence level and maximum variance (P= 0.05). Therefore, e= 1- precaution so, e= 1-0.05= 0.95 and the target population (N= 580 include parents, teachers, headteachers and students) to be sampled.

n= 580/[1+ 580 ( 0.005)<sup>2</sup>]; n= 580/ [1+(580 x0.0025)]; n=580/2.45; n= 237 respondents

**Sample selection techniques**

A sample size of 237 respondents from 3 selected schools in Masaka sector (Group Scolaire Masaka I, Group Scolaire Masaka II, and Group Scolaire Rusheshe) were selected by random sampling as it was deemed enough to provide information about the variables.

**Data collection techniques**

According to (Onen, 2016) research instrument is defined as the research tool used in the process of data collection. Therefore, this study employed two research instruments such as questionnaire as well as guided interview. Questionnaire as data collection instrument was used because it helped to get the quantitative findings from respondents while guided interview was used to get the qualitative data in order to achieve the research objectives. Secondary data collection explores the supplementary to the above method where data were obtained especially from annual reports, journals, text books, the internet and other materials. Secondary data collection methods provide researchers with a cost-effective way to access a wealth of information for analysis and interpretation.

**Data collection procedures**

Data were collected on the actual day of the fieldwork by the researcher who personally visit the locale, sought permission from the schools' administration before carrying on the process of data collection. Questionnaires were filled by respondents on the same day and returned to the researcher.

**Validity and Reliability tests**

The research instrument was developed by the researcher and validated. Each item of was assessed to ensure the clarity, merit and appropriateness of the questionnaire. The supervisor's inputs, corrections and modification were used to update the questionnaire and incorporated in the final copy. Reliability relates to the consistency of a measure. A participant completing an instrument meant to measure motivation should have approximately the same responses each time the test is completed. To maintain the reliability of the data collection instrument, the findings from the research instruments that were distributed in the process of conducting pilot study of 40 respondents. The research instrument was reliable at an average above 70 percent by using Cronbach's Alpha so as to get statistical reliability of the research instruments.

**Data Analysis**

The data were collected from the field was coded, entered in computer and analyzed using descriptive analysis options of SPSS version 16. Quantitative data were analyzed by using descriptive and inferential statistics. Descriptive statistics were done using frequencies and percentages while inferential statistics will be done using crosstabulations to measure the strength of the association between the variables of socioeconomic status and academic performance. Qualitative data were classified into major themes from which content analysis was used to present the data.

**IX. DATA ANALYSIS AND INTERPRETATION OF RESULTS**

This chapter presents, interprets and analyses the findings of the study based on the research objectives. These objectives were; to find out the relationship between family income and the student's performance, to find out the relationship between level of education of parents and their student's academic performance, to examine the relationship between the parent's marital status and student's performance, and to establish the impact of academic support facilities in the homes on students' academic performance in Masaka public secondary schools. Both descriptive and inferential statistics have been employed in the analysis. The response rate and the demographic characteristics of the study respondents are also given as a background to the analysis part. Presentations of the results are illustrated in tables. This study was conducted in purely day schools and only Ordinary levels students were involved in the study. It was designed to draw respondents from three public secondary schools that targeted 3 head teachers (1.3%), 21 class teachers (8.8%) and 213 students (89.9%). All the questionnaires issued to head teachers, class teachers and students. Questionnaires were administered personally and followed up to ensure they were filled and returned.

**9.1. Identification of respondents****Gender of Respondents**

Information presented in Table 4.1 indicates that most of the respondents were female as they formed 131 (55.3%) while the male respondents constituted 106 (44.7%). This implies that majority of respondents were females. This was due to the fact that the number of girls attending education is much more than the number of boys attending to it.

Table 4.1: Gender of respondents

Gender	Frequency	Percentage
Male	106	44.7
Female	131	55.3

<b>Total</b>	<b>237</b>	<b>100</b>
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Source: Author (2024).

### Age distribution of respondents

The study went on to establish the different age groups of the respondents and the findings were as presented in table below. The study also involved all respondents who are responsible and with mature understanding. The findings in Table 4.2 show that the respondents belonged to the age group of between 15-16 years at 71 (30%). This was followed by those between 12-14 years as they had 52(21.9%) composition. The third category under this parameter was those between 17-18 years, as they claimed 39(16.5%) composition. Respondents aged 19 years and above were 75(31.6%) and included only teachers and head teachers. The results give the impression that the majority of the students were 19 years and above.

Table 4.2:Age group of Respondents

Age	Frequency	Percentage
12-14	52	21.9
15-16	71	30
17-18	39	16.5
19 and above	75	31.6
<b>Total</b>	<b>237</b>	<b>100</b>

Source: Author (2024).

### Class of Students

Most of the students were in Senior Three at 77(36.2%), this was followed by those in Senior Two at 76(35.7%) and lastly the remaining 60(28.1%) were in senior one. This implies that majority of the students were in senior three since these were believed to be mature enough to adequately provide information on the study compared to the rest.

Table 4.3: Class of students

Class of students	Frequency	Percentage
Senior One	60	28.1
Senior Two	76	35.7
Senior Three	77	36.2
<b>Total</b>	<b>213</b>	<b>100</b>

Source: Author (2024).

## 9.2. Presentation of findings, analysis and interpretation

This section entails the analysis of the descriptive statistics relating to how the respondents answered to the questions as given in the questionnaires. The main used satisfices are frequency and percentages.

### School Performance

The study sought to determine the students' performance in Masaka sector using the following aspects; students mean grades in the exams from senior one, two and three. The findings indicate that 28.1% of the students scored grade D, 22.1% had grade B, 16.9% had a C grade, 12.7% had E and A grades respectively, 7% had S, and 0.5 % had a F plain. The findings imply that the majority of the students scored satisfactory grades.

Table 4.4: Average grade scored in examinations (academic year 2022-2023) Standards-based grading(SBG) system from NESAS

Grade (%)	Frequency	Percentage
Grade F (0-19)	1	0.5
Grade S (20-39)	15	7
Grade E (40-49)	60	28.1
Grade D (50-59)	47	22.1
Grade C (60-64)	36	16.9
Grade B (65-69)	27	12.7
Grade A (70-100)	27	12.7
<b>Total</b>	<b>213</b>	<b>100</b>

Source: NESAS (2024).

### Relationship between family income and the student's performance in Masaka sector.

The first objective of the study was on the relationship between family income and the student's performance.



**Descriptive Statistics for Parental Income**

The parents were asked to give their levels of income. The findings presented in table 4.5 indicate that 66.7% of the parents had income of less than 100,000 Rwf per month, 32.9% had income of 100,000-300,000 Rwf, while 0.4% had income of 300,000-500,000Rwf per month. According to (National Institute of Statistics of Rwanda, 2020) low-income households live on a monthly average income of only 55,460 Rwf per month. From the findings obtained, it was clear that most students came from low-income families.

Table 4.5: Monthly income of the parents

Responses	Frequency	Percentage
Below 100,000 Rwf	142	66.7
100,000 and 300,000 Rwf	70	32.9
Between 300,000 and 500,000Rwf	1	0.4
Above 500,000 Rwf	0	0
Total	213	100

Source: Author (2024).

**Where do parents get their income?**

In Table 4.6, findings revealed that 53% of the respondents were earning from selling farm outputs farming, 31% noted that their parents get income from monthly salary, 8% noted that their parents earn income from their businesses and the remaining 4.7% were earning from relatives. 3.3% earn from others sources. This implies that most of their parents earn from selling farming products. Further, the study sought to determine those who were involved in the payment of school fees in the schools for the students.

Table 4.6: Where do parents get their income?

Responses	Frequency	Percentage
Formal employment	66	31
Farming	113	53
Business	17	8
Relatives	10	4.7
Others	7	3.3
Total	213	100

Source: Author (2024).

**Who pays your school fees?**

The study findings indicated that 70% of the school fees were paid by the student parents, while 17% was paid by the guardians of the students, 8.4 % suggested relatives and 4.6% reported others. This implied that most students in the schools had parents who were responsible for the payment of their school fees.

Table 4.7: Who pays your school fees?

Responses	Frequency	Percentage
Parents	149	70
Guardians	36	17
Relatives	18	8.4
Others	10	4.6
Total	213	100

Source: Author (2024).

**Cross tabulations between parental income and academic performance of students**

The findings in Table 4.8 indicate that for those parents who had monthly income of <100,000 Rwf, 37.4% of their children scored grade E, 28.9% had grade D. For the parents with monthly income of 100,000-300,000 Rwf, 37% of their children scored grade A, 28.5% had grade B while 12.8% had C grade. Further, for those parents with monthly income of 300,000-500,000 Rwf, 1(100%) child had grade A. The study observed that those parents with higher income (above 100,000Rwf), the performance of their children was generally higher than those students who belonged to lower income families. This could be attributed to the reason that more income can allow parents to buy student resources that helps in their performance. Therefore, based on the above findings, it can be deduced that there is significant correlation between income of parents and children's performance in academic in Masaka secondary schools. It thus followed that the researcher rejected the null hypothesis and concluded that there exists a significant connection between the level of income earned by parents and their corresponding children's scores in academics in Masaka secondary schools. These results are in congruence with the findings of (Reardon, 2011) that stated that students from high-income families perform

better than those from low-income families. The findings of the study also align with those of Njuguna, 2021 who points out that poor parental care with gross deprivation of social and economic needs of a child usually yield poor academic performance of the child.

Further, (Jensen et al., 2013) confirmed that the distinction in nature effect of the families with high/low income to their kids learning. A few students from low-income experience issues to comprehend or catch on quickly as others. The findings of the study are in line with the findings earlier posited by (Akram Rana & Mahmood, 2015) who observed that parental income was an important indicator of student performance and reflected the potential for social and economic resources that are available to the student. The findings additionally concur with those of (Reardon, 2011) represented in his examination how students from families with high income were having best performance than low-income families' students.

Table 4.8: Parents Income and Students' Academic Performance

Monthly income (Rwf)	Frequency/%	Student performance							Total
		F	S	E	D	C	B	A	
Below 100,000	Frequency	1	13	53	41	27	7	0	142
	%	0.7	9.1	37.4	28.9	19	4.9	0	100%
100,000 and 300,000	Frequency	0	2	7	6	9	20	26	70
	%	0	2.8	10	8.5	12.8	28.5	37	100%
300,000 to 500,000	Frequency	0	0	0	0	0	0	1	1
	%	0	0	0	0	0	0	100	100%
Above 500,000	Frequency	0	0	0	0	0	0	0	0
	%	0	0	0	0	0	0	0	0%
Total	Frequency	1	15	60	47	36	27	27	213
	%	0.5	7.0	28.2	22.1	16.9	12.7	12.7	100%

Source: Author (2024).

#### **Findings on relationship between level of education of parents and their student's academic performance in Masaka sector.**

The second objective of the study was on the relationship between level of education of parents and their student's academic performance. The descriptive statistics analyzed herein provide a basis for the hypothesis testing which is done in subsequent sections of this report.

#### ***Descriptive Statistics for Parental Educational Level***

The presented study findings in Table 4.9 show that the majority of the respondents 55.4% who noted that the parents were at primary school level, this was followed by those who noted that the parents were at secondary level with 31.5%. This was also followed by those at university level with 9.8% level. Lastly, 3.3% had no formal education. The findings imply that most parents had at least attained basic education.

Table 4.9: Descriptive Statistics for Parental Educational Level

Parents' highest level of education	Frequency	Percentage
No formal education	7	3.3
Primary level	118	55.4
Secondary level	67	31.5
University level	21	9.8
Total	213	100

Source: Author (2024).

#### ***Highly educated parents tend to take their children to best schools within the area***

In table 4.10 above, majority 127 (59.6%) of the respondents agreed, 57 (26.8%) strongly agreed, 20(9.4%) disagreed and lastly 9 (4.2%) of respondents strongly disagreed that highly educated parents tend to take their children to best schools within the area. This implies that most of the respondents were of the view that when the parents are highly educated then, they often take their children to the best schools within the community. The study further cross-tabulated parents' education level and academic performance.

Table 4.10: Highly educated parents tend to take their children to best schools within the area

Responses	Frequency	Percentage
Strongly disagree	9	4.2
Disagree	20	9.4
Agree	127	59.6
Strongly agree	57	26.8
Total	213	100

Source: Author (2024).

#### ***Cross tabulations between Parents' Education Level and students' Academic Performance***

Table 4.11 indicate that for those who had no formal education, 28.55% of their children had grade D and E, 14.4 % had grade F, S and C while no student had grade A and B. For the parents with primary education level, 43.2 % of their children had grade E, 30.6% had grade D, while 11% of their children grade S in their previous exams. In addition, for the parents with secondary level education, 37.3% of their children had grade C, 30% had grade A while 11.9% of their children had grade D. The findings also indicate that for the parents with university level education 66.6% of their children had grade B, 28.8% had grade A while 4.8% had grade C and D. The findings show that the children from learned parents generally performed better than those from families with low levels of education. It can be deduced that the more the parents are educated the higher chances they appreciate the value of education and thus support their children in studies. Highly educated parents support their children in education through assistance with homework and setting home environment for learning. Children of low level educated parents may not experience what their counterparts go through no matter how good they may be performing because their parents may not know the value of education leading to decline in performance of these children. Therefore, based on the findings of the study, the study rejected the null hypothesis and hence deduced a significant connection between parents' level of education and academic scores of children in Masaka secondary schools.

The findings agree with those of (Akram Rana & Mahmood, 2015) who carried out a study on the relationship between the parents' level of education and academic performance of their children in South Punjab town, Pakistan. The result showed that there was a significant positive relationship between education level of parents and students' academic scores. Further, the findings agree with those of (Azhar et al., 2014) who conducted a study on the effect of parental level of education on students' academic performance in Norway. The results of the study indicated a positive link between level of parents' education and their children's academic achievement. The findings of the study concur with those of (Stephens et al., 2014) who showed that parent educational level, family structure/ status, and income extend affect their student's scholastic potential and accomplishment. Students whose parents had higher educational levels performed higher on government sanctioned tests than parents with low educational levels.

Table 4.11: Parents Education Level and Students' Academic Performance

Level of Education of Parent		Student performance							Total
		F	S	E	D	C	B	A	
No formal education	Frequency	1	1	2	2	1	0	0	7
	%	14.3	14.3	28.55	28.55	14.3	0	0	100%
Primary level	Frequency	0	13	51	36	9	7	2	118
	%	0	11	43.2	30.6	7.6	5.9	1.7	100%
Secondary level	Frequency	0	1	7	8	25	6	20	67
	%	0	1.5	10.4	11.9	37.3	8.9	30	100%
University level	Frequency	0	0	0	1	1	14	5	21
	%	0	0	0	4.8	4.8	66.6	23.8	100%
Total	Frequency	1	15	60	47	36	27	27	213
	%	0.5	7.0	28.2	22.1	16.9	12.7	12.7	100

Source: Author (2024).

#### **Impact of academic support facilities in the homes on students' academic performance**

The last objective was to find out the impact of academic support facilities in the homes on students' academic performance.

**Physical Facilities at Home for Students**

Among 213 students, 192(90.1%) had supporting home facilities, and 98(51%) of them reported to have enough home facilities. 21(9.9%) of 213 reported not to have required support facilities at home. Among those who had enough facilities 42% scored grade D, and none of them scored less than 50 marks. 66.6% of those who had no home facilities score grade S, and all of them (2.) scored less than 50 marks. These findings showed that having supporting equipment at home is associated with better academic performance. Above results strongly suggest that home environment of a child affects his or her academic achievement. It is agreed that the socioeconomic background of homes where such conditions as great poverty, poor feeding, insufficient sleep and rest and general neglect are known to be the cause of the backwardness of children in school (Nawaz Khan et al., 2019).

Table 4.12: Physical Facilities at Home for Students

Home facilities			Student performance							Total
			F	S	E	D	C	B	A	
Yes	Enough	Count	0	1	2	41	26	10	18	98
		% Within	0	1	2%	42	26.5	10.2	10.3	100%
	Not enough	Count	0	0	52	6	10	17	9	94
		% Within	0	0	55.3	6.4	10.7	18	9.6	100%
No	Count	1	14	6	0	0	0	0	21	
	% Within	4.8	66.6	28.6	0	0	0	0	100%	
Total	Count	1	15	60	47	36	27	27	213	
	% Within	0.5	7.0	28.2	22.1	16.9	12.7	12.7	100	

Source: Author (2024).

**X. SUMMARY OF FINDINGS**

The purpose of this study was to investigate the effect of parental socioeconomic status on students' academic performance in public secondary schools of Masaka sector, Kicukiro district in Rwanda. The study conducted analysis of the findings based on the objectives of the study, namely: to establish the connection between parental income and student's academic performance, to find out the link between parental educational level and student's academic performance and establish the impact of academic support facilities in the homes on students' academic performance in Masaka secondary schools, Kicukiro district. The first objective of this study was to establish the relationship between parental income and students' academic performance. The findings of the study indicated that most parents had monthly income of less than 100,000 Rwf, which is classified as low income per month by the National Institute of Statistics of Rwanda. The findings further indicated that those students whose parents had higher income had better performance than those students who belonged to lower income families. This could be attributed to the reason that more income can allow parents to buy student resources that helps in their performance. On Parental education and students' academic performance, the findings obtained in the study indicated majority of the parents had primary education as the highest level of education. The findings also showed that the children from more highly educated parents generally performed better than those from families with low levels of education. It could be deduced that the more the parents are educated the higher chances they appreciate the value of education and thus support their children in studies and thus set a more conducive learning atmosphere for their children and can help their children with assignments/homework as compared to their counterparts with lower education level. Considering the Impact of academic support facilities in the homes on students' academic performance, these findings showed that having supporting equipment at home is associated with better academic performance. Families with high socioeconomic status usually have books and educational materials around the home as part of the environment to which the growing child is exposed. Consequently, the children of such families are expected to do well in school.

**XI. CONCLUSION**

Based on the findings of the study, the following conclusions were made. The study findings showed that that parents' income had a significant influence on students' academic performance in Masaka sector. The study therefore concluded that the higher the family income, the higher the students' performance. The study also found out that there was a significant positive influence of parents' education on students' academic performance in Masaka sector. The study therefore concluded that the more the parents were educated the higher their children's performance. Finally, the study found that performance of the students was higher for those students with parents in formal occupations than the students with parents in informal occupations. Furthermore, families with low socioeconomic status usually don't have books and educational materials around

the home as part of the environment to which the growing child is exposed. Consequently, the children of such families are not expected to do well in school.

## XII. RECOMMENDATIONS

Based on the findings and conclusions made in the study, the following recommendations were made based on the objectives of the study. One of the major findings of this study is that parental income level has a great influence on students' academic achievement. In light of this, the study recommends that the government needs to boost the economic status of households through investing much on income generating activities. In this case, parents as a matter of importance should diversify their sources of income so that they can be able to provide funds and supporting home facilities to their children in school for better academic achievement. Since there was a strong positive relationship between the parents' level of education and academic performance, the study recommends that the country needs to put in place appropriate systems to enhance parental education like adults' education so the parents could be equipped with basic formal education.

## XIII. SUGGESTIONS FOR FURTHER STUDIES

More researchers need to be done in the following fields:

- 1) Impact of household incomes on academic performance of students.
- 2) Impact of motivation of teachers on academic performance of students.
- 3) The relationship of school background and academic performance of the students, in order to complete the circle of academic performance determinants.
- 4) Further, this study was conducted among secondary school students therefore the researcher suggested that a similar study on primary school pupils should be carried out to find out whether the results of the study can be replicated among primary school pupils.

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