

## *Full Length Research Paper*

# Contribution of Income Generating Activities on Teaching and Learning Environment in Public Secondary Schools in Moshi Municipality, Tanzania

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**ABSTRACT:** The goal of this study was to seek for the contribution of income-generating activities on teaching and learning environment in public secondary schools in Moshi Municipality, Kilimanjaro Region in Tanzania. To get data, the study was led by Innovation theory and a mixed research approach using a convergent parallel research design. In addition, a simple random sampling procedure was used to get a sample size of 141 participants from teachers and students to provide data. Key informants such as 4 school principals and 2 Ward Education Officers were selected using a purposive sampling technique making a total of 147 participants for the study. Interviews, questionnaires, observation and documentary reviews were used to gather information. Also, for qualitative instruments reliability was assessed using triangulation and member checking while quantitative instruments, reliability was tested using the split-half approach. The researchers protected the participants' anonymity, privacy and safety by ensuring the confidentiality for the information supplied. With the help of the Statistical Package for Social Sciences (SPSS), quantitative data was evaluated using descriptive statistics. Tables, graphs and charts were also used to present the findings. Furthermore, qualitative data was evaluated through thematic analysis with the results being incorporated into the debate as quotations and narratives. The findings for the study revealed that shops, stationery, poultry farming, crop farming, horticulture and canteens as the income-generating activities practiced in public secondary schools in Moshi. Income Generating Activities (IGAs) were found to contribute favorably to the development of the teaching and learning environment, however there was no effective policy that govern its usage in public secondary schools. The findings also revealed that IGAs aid in the upkeep of school infrastructure and the development of teachers working condition. The researcher recommended that policymakers should establish effective policies to manage IGAs in public secondary schools. In addition, school leaders, ward education officers, teachers and students should be taught how to use IGAs effectively to improve the teaching and learning environment.

**Keywords:** Income Generating Activities, Public Secondary Schools and Teaching and Learning Environment

## INTRODUCTION

Education is a vital component of human life in every country. Because of its importance, most countries seek to provide high-quality education to their citizens. The demand for education on the other hand, is out of proportion to the economic and physical resources available. As a result, income-generating activities increased in order to enable improvements in the

teaching and learning environment for effective provision of excellent education (World Bank, 2010; Chirchir et al., 2019). For example, all government-funded secondary schools in China have some sort of income-generating projects to help with teaching and learning. The goal is for these academic institutions to generate additional revenue in order to supplement state-funded school

resources. Horticultural businesses, manufacturing, printing press, running retail stores within the school and renting out idle classrooms are just a few of the operations carried out. Livestock rearing is also an element of the institutional programs (World Bank, 2010).

Except for those schools that are involved in agricultural operations and are meant to contribute to agricultural knowledge, it was observed in the Chinese Development Plan of 2010 that rhetorically IGAs lack a direct link in increasing academic achievement. IGAs on the other hand, are primarily concerned with assisting in the allocation of resources in schools in order to enhance a positive learning environment and thus increase students' performance (Chirchir et al., 2019).

Furthermore, Boldureanu et al. (2020) state that starting a business enables students to learn about the sources of business ideas, circumstances and reasons for beginning a firm in Romania. As a result, it enables schools to generate revenue which leads to an improvement in the teaching and learning environment.

According to Kavetuna (2013), increased financial resources from IGAs had a substantial influence on Namibia particularly in encouraging stakeholders, enhancing working condition and job quality, respect and appreciation.

In a similar vein, a research conducted in Kenya on the implementation of income-generating projects in public secondary schools in Bomet County found that IGAs projects improved financial resources, physical facilities and minimal job transfer, among other factors. Nonetheless, the IGAs have been shown to be effective in paying tuition fees to disadvantaged students, supplementing school costs and other forms of school improvement in order to promote good teaching and learning (Chepkwony, 2018).

Poultry, fish and dairy farming were among of the IGAs carried out in Kenyan public secondary schools (Kigotho, 2012). Similarly, Lwakasana and Getange (2017) state that money from IGAs reduced parents' financial obligations, improved academic achievements, accelerated enrolment and encouraged teachers and students in teaching and learning processes.

Since 1995, Tanzania has implemented a number of education reforms to increase access and improve the teaching and learning environment. There was the 1995 Education and Training Policy, the 1996 Vocation Education and Training Policy and the 2014 Free Basic Education and Training Policy, to name a few. Aside from that, there existed the Secondary Education Development Programme (SEDP II). All programs and reforms aimed at enhancing access to and the quality of education given in the country's public secondary schools. For example, to fund SEDP II, the schools turned from the federal government to local governments and private benefactors.

Many public secondary schools encountered major

obstacles in enhancing activities that may improve teaching and learning environment after the implementation of the Fee Free Basic Education Policy in 2014. To counteract this, numerous secondary schools around the country have started different initiatives. Moreover, Secondary schools in Moshi Municipality were in the same line however, there has been no information on how income-generating activities within the territory contributes to teaching and learning environments. This study examined the contribution of income-generating activities on teaching and learning environment in Moshi Municipality's public secondary schools.

### Statement of the problem

Tanzania's government has worked hard to improve the teaching and learning environments in public secondary schools since the country's independence. Various educational policies and reforms have been implemented to ensure that every student who completes elementary education has access to secondary education. The policies include the 1995 Education and Training Policy, the 1996 Vocational Education and Training Policy and the 2014 Free Basic Education and Training Policy.

These educational policies and reforms have resulted in the implementation of zero-fee education in elementary and ordinary secondary schools, among other things. Zero-fee schooling was implemented to ensure that all children from low-income and marginalized families had access to education.

However, the adoption of the zero-fee policy has resulted in a significant increase in number of students enrolled in schools and poor teaching and learning environment as a result of the government's budget deficit. To compensate, numerous secondary schools around the country have begun to engage in various revenue-generating activities. However, there has been little research on how IGAs contributes teaching and learning environment since the start of income-generating activities. Hence, the goal of this study was to determine the contribute of income-generating activities on teaching and learning environment in a public secondary school in Moshi municipality, Tanzania.

### Objectives of the study

This study was governed by the following objectives:

- i. To identify income generating activities available in public secondary schools in Moshi Municipality.
- ii. To determine the contribution of income generating activities on teaching and learning environment in public secondary schools in Moshi Municipality.

## Significance of the study

Many education stakeholders, including policymakers, instructors, students and the academic community, can benefit from the study's conclusions. Policymakers would be able to develop effective educational policies and programs in public secondary schools that encourage IGAs. Teachers can also improve their negative perceptions of IGAs in schools and support school leaders in their efforts to develop them. Similarly, depending on school location, students would be knowledgeable and participate in a variety of IGAs. As a result, the research can assist students to utilize effectively their environment and generating cash to improve their learning environment.

## Literature review

Review of literature was done by focusing on the objectives of the study. The aim was to get deeper understanding on the study topic from various scholarly works worldwide.

### Income generating activities practised in schools

Ahmad et al. (2015) looked into how academic staff at Malaysian public institutions generate money. In collecting and analyzing data, the researcher used qualitative methodologies. The participants' data was collected using the interview schedule. According to the survey, research and consultation, as well as commercial activities, are sources of income for Malaysian public institutions.

Furthermore, Gebreyes (n.d.) discovered student fees, campus services, project money and donor funds as sources of income in East African colleges while looking for revenue generating tactics in Sub-Saharan African universities. These researches focused on university education, but their ideas can be employed in public secondary schools as well.

Heads of schools can devise a variety of revenue-generating projects such as commercialization and seek out a variety of donors to help improve the teaching and learning environment in their schools. Nse (2020) conducted a related study in Nigeria on alternate money creation approaches for Nigerian academic libraries. Printing, photocopying, overdue book fees, costs for lost library cards, reservation fees and internet fees can all be used as additional sources of income in schools, according to the report.

In a similar vein, Aremu (2016) mentioned library fees, individual donations, alumni, gifts and endowment cost sharing as potential sources of income for universities. As a result, schools can engage in a variety of revenue-generating activities.

Heads of school should be creative in their search for the most appropriate IGA for their school's needs in order to increase funding and improve the learning environment. Likewise, Balhao (2016) investigated funding and management strategies for Namibian schools. Sponsors, donors, alumni, crowd financing, second hand stores, online landing pages and investments, according to the survey are the most common sources of IGAs in Namibian schools.

In South Africa, Hajdu, Ansell, Robson, Blerk and Chipeta (2011) highlighted vocational business training concentrating on building regionally acceptable types of small-scale businesses as a source of income-generating activities in secondary schools. As a result, vocational training in schools can assist such schools in engaging in microbusiness and investing to raise finances rather than relying on government and donor funds. Heads of schools can use funds gained from investment and micro-business to purchase teaching and learning resources, inspire personnel and facilitate other activities in school. Ngwenya and Sibanda (2017) conducted research in Zimbabwe on how secondary school education managers earn funds within a school-based management framework. Internal fundraising operations, cash cow initiatives for remote schools and donor solicitation were all identified as IGAs in secondary schools according to the data.

In Kenya, Getange (2013) discovered that renting houses, crop and animal production, intensive gardening, school facility hiring and animal cost sharing might all be good sources of IGAs in secondary schools. As a result, secondary school principals can use a variety of projects based on school location to locate an appropriate source of funding to improve the teaching and learning environment. Boahebene (2015) conducted a research in Asantewaa Girls' senior secondary schools in Ghana on the management of funds in public secondary schools.

According to the survey, government budgetary support, donor pool monies and internally generated funds are all key sources of funds in Ghanaian secondary schools. As a result, government finances are sufficient to improve secondary school teaching and learning environments.

However, many African governments offer finances for education, but these funds are insufficient to support education, forcing school leaders to seek alternate funding sources such as income-generating activities and donor cash to supplement government efforts. In Tanzania, Mtorobo (2019) did a research in the Busega district of Mwanza on income-generating activities in public elementary schools and their contribution to school budgets. Sheep and poultry rearing, crop cultivation, horticulture and burning wedding were found to be IGAs in public primary schools.

Similarly, Lunani (2014) revealed that grain cultivation

and dairy farming are key income-generating activities in secondary schools in Mumias. As a result, secondary school principals might use a variety of income-generating activities such as agriculture and livestock husbandry as alternate sources of funding. These IGAs have the potential to produce revenue for the improvement of teaching and learning facilities.

### **Contribution of income generating activities on teaching and learning**

Boldureanu et al. (2020) conducted a study in Romania on entrepreneurship teaching at higher education institutions using successful entrepreneurial models. According to the findings, starting a business helps students learn about the sources of business ideas, the setting and the reasons for beginning a firm.

Furthermore, Poverty reduction strategies according to Mashinkila and Assefaw (2001) in Malawi support the operationalization of the government by providing functional literacy, basic business management, skills development training and improved microfinance to improve the youth's ability to engage in viable small-scale income-generating activities.

As a result, IGAs at public secondary schools are important for students because they provide instruction in a range of income-generating projects that they can put into effect after school. To improve entrepreneurship skills, school leaders should organize income-generating activities in secondary schools.

Despite this, Ogba et al. (2019) conducted research on alternative sources of secondary school funding for Nigeria's long-term development. In gathering and analyzing data from the field, the researcher used qualitative methodologies. The individuals' data was also collected using a standardized questionnaire. The findings revealed that IGAs assisted schools in becoming self-sufficient and increasing revenue in order to ensure their long-term viability.

Similarly, Nwakpa (2016) found that income-generating activities put school managers in a stronger position to utilize money from non-traditional sources.

Secondary schools with income-generating activities are able to motivate instructors, students and other personnel, resulting in a more sustainable institution with superior academic performance. A number of studies have been undertaken in Kenya to investigate the influence of IGAs in secondary schools.

Okoth (2013) discovered that earnings from alternative sources improve secondary school management through salary remuneration for teachers and support staff as well as the improvement of physical facilities, while searching for alternative sources of funding secondary school education in Kenya's rural counties. Nyamwega (2016) examined income-generating initiatives in Nairobi

County's public secondary schools. In a descriptive survey design, the researcher employed quantitative approaches for data collection and analysis. Also, the researcher used questionnaires and observation to obtain information from the subjects. According to the findings, IGAs assisted low-income students in paying their fees, creating cleaning detergents, motivating professors, staff and students and planning trips and retreats. Income-generating activities are critical in dealing with the on-going financial issues in secondary schools. Thus, school leaders must think outside the box when it comes to create IGAs in their schools. Notwithstanding, Kiarie et al. (2019) conducted another study on the effects of IGAs on physical infrastructural development among public high schools in Nakuru's Molo sub-county. The researcher used a combination of research approaches to collect data from the participants. In addition, interview schedule and questionnaires were employed to get data from participants. Moreover, a descriptive research approach was used in data analysis. The findings indicated that IGAs have a significant relationship with physical infrastructural development among public high schools in Molo. Thus, income-generating activities contribute significantly to the improvement of infrastructure such as classrooms, laboratories and libraries that they should be implemented in public secondary schools to modernize infrastructure. Amos et al. (2018) conducted research in Tanzania on the benefits of school-based income-generating activities to quality education in secondary schools operated by the Catholic Diocese of Moshi. In a cross-sectional survey design, the study used qualitative approaches to collect and analyse data from the field. Questionnaires and document analysis were also used to collect data from the participants. The researcher demonstrated that IGAs are a viable tool for generating additional cash and assisting secondary schools in resolving financial issues. Similarly, Mtorobo (2019) discovered that IGAs were important in providing additional cash to schools for the purchase of teaching and learning materials, as well as the supply of meals in schools. As a result, it is important for all public secondary schools to implement revenue-generating activities so that parents are freed of the burden of payments, particularly for school meals and improvements.

### **METHODOLOGY**

This study employed mixed research approach in a convergent parallel research design. The design was employed because it offers an opportunity to collect both qualitative and quantitative data at once and analyzed it independently. The targeted population of the study was 552 individuals. These involved secondary school teachers, students, heads of schools and Ward Education Officers (WEOs) in Moshi Municipality.

From the targeted population, 141 participants were selected from students and teachers through simple random sampling procedure. Also, purposive sampling technique was used to select 4 heads of schools and 2 WEOs and make a total 147 participants of the whole study. Moreover, questionnaires, interview guides, documentary reviews and observation checklists were used as research instruments for data collection. Both content and face validity of the instrument were checked and the split-half technique was used to ensure the reliability of the research instrument. The qualitative data obtained were analyzed through thematic analysis and presented in a narrative and quotation form while the quantitative data were analyzed through descriptive statistics with the help of the computer software known as Statistical Package for Social Science (SPSS) version 20.

## RESULTS AND DISCUSSION

The findings and discussion of the study was presented basing on research objectives. This included income generating practices in secondary schools and the contribution of income-generating activities on teaching and learning.

### Income generating practices in schools

In the first objective, the researcher intended to identify the income generating activities in secondary schools. The researcher asked the respondents whether their schools have income generating projects and the findings are presented in Table 1.

**Table 1:** Teachers' and Students Responses if School have Income Generating Activates (n=141).

	Teachers		Students	
	Frequency	Percentage	Frequency	Percentage
Yes	59	96.7	79	98.8
No	2	3.3	1	1.3
Total	61	100.0	80	100

Source: Field data (2021).

Table 1 indicates 97 percent of teachers said that there is income generating activities in their schools and 3 percent of teachers in Moshi municipality said that there is no income generating activities in school. Also, 99 percent of student said that there is income generating activities in their school and 1 percent said there is no income generating activities in their school. This implied that many schools in Moshi Municipality have income generating as a source of generating extra income and few schools did not have ones. Notwithstanding, when participants were asked to name income-generating activities found in school they mentioned horticulture,

shops, poultry farming, crops farming, canteens and stationery as shown in (Table 2).

**Table 2:** Teachers' and Students Responses on Type of IGAs' in Public Secondary Schools (n=141).

IGAs	Teachers		Students	
	Frequency	Percent	Frequency	Percent
School shops	24	39.3	40	50
Crops farming	16	26.2	20	25
Stationaries	7	11.5	9	11
Horticulture	5	8.2	4	5
School canteen	5	8.2	4	5
Poultry farming	4	6.6	3	4
Total	61	100	80	100

Source: Field Data (2021)

The findings implied that many schools in Moshi Municipality had income generating activities that provided extra income; however, participants reported its contribution was minimal in public secondary schools in Moshi municipality.

Table 2 indicated the type of income generating activities carried out in public secondary schools in Moshi municipality, 39 percent of teachers said school shops, 26 percent of teachers said crops farming and 12 percent of teachers said stationeries. Both horticulture and school canteens attained 8 percent respectively.

Moreover, 7 percent of teachers showed that poultry farming was among the income generating activities available in schools.

From the findings, the results showed that majority of teachers mentioned school shops as type of IGAs in public secondary schools.

This indicated that majority of public secondary schools in Moshi depended on school shops as their IGAs while other attributes were practiced rarely in some schools. The findings implied that public secondary preferred shops not because of getting income but for students' discipline.

Table 2 also indicated students' responses on the types of IGAs found in Moshi Municipality at public secondary schools. The result showed school shops by 50 percent, 25 percent reported crop farming while 11 percent of students mentioned stationeries as the type of IGAs in public secondary schools.

Also, 5 percent of the respondents represented horticulture as type of IGAs, 5 percent said canteens and 4 percent of the respondents said that public secondary schools in Moshi practised poultry farming.

From the findings, it is revealed that majority of students in public secondary schools in Moshi Municipality mentioned school shops as type of IGAs practised in schools.

Based on the respondents' findings, there are different themes extracted in the achievements to identify the income-generating activities found in schools as discussed below.

## Crops farming

From the findings, 26 percent of teachers mentioned crop farming as one of the incomes generating projects cultivated in schools (Table 2) and 25 percent of students responded that crops farming is one of the incomes generating project available in schools (Table 2). Among the crops mentioned to be cultivated included maize, beans, tobacco, coffee and banana in the selected schools. This implies that many schools in Moshi Municipality have different crops which increased income to their schools. The information provided by the heads of school during the interview supported the sub theme where the head of School "A" explained that

*There were different crops cultivated including maize and beans which are used as a source of food in the school for teachers and students. The surplus obtained are used by the school as a source of income and the income obtained is used for the improving of teaching and learning environment (HoS A, Interview, 2021).*

Likewise, during the interview, the information provided with the head of school "D" corresponded with other heads of school in the theme of crop farming. One head of school was quoted saying:

*Crop farming in school was used as a source of income and the income obtained is used to help school administrators in providing food to the students in school. Also, the income generated was used to help school administrators in improvement of teaching and learning environment (HoS D, Interview, 2021).*

Moreover, through observation the researcher observed different crop farming in schools where in school D the researcher observed different crops in the farm. These crops are maize and beans. The observed crops were used as an income generating activities. Furthermore, the researcher reviewed the crop farming project plan document and realized that there was effectiveness on the project and its progress. This sub theme is supported by the findings obtained in the study conducted by Getange (2013) in Kenya where the findings showed that in school, crop farming is one of the projects found in schools. Likewise, the findings obtained from Mtorobo (2019) are in line with this sub theme. The findings showed that in schools, there is a crop cultivation project which increase income in school. Furthermore, the findings from Lunani (2014) supported this sub theme in the sense that in schools, there is crop farming project which provided income in the school. Therefore, in schools, there are different income generating activities which provided income to the school whereby it can facilitate the purchasing of teaching and learning

materials. Furthermore, this theme corresponds with innovation theory of entrepreneurship which emphasizes on the establishment of income generating activities in schools. The establishments of crop farming act as the income generating activities in schools. Thus, the income obtained enabled the development of teaching and learning environment.

## Poultry farming

Poultry farming was practiced in different public secondary schools. From the findings, 7 percent of teachers reported the presence of poultry farming in schools as an income generating activity (Table 2). Likewise, 4 percent of students mentioned poultry farming as an income generating project in schools (Table 2). This implies that in Moshi Municipality, secondary schools have poultry farming as one of the IGAs in schools. In support of the sub theme, the ward education officer B was quoted saying:

*Poultry farming has been an important and significant project in school for the income generating since from this activity, schools gain income based on the sales of different products obtained from poultry farming like eggs, chicken meat and fertilizer. From the income generated from poultry farming, most schools afford to improve teaching and learning environment (WEO, Interview,2021).*

This shows that in schools, poultry farming is important income generating projects which lead to the improvement of teaching and learning environment. In the same vein, a head of school C explained that from the poultry farming, schools had managed to generate income used in running different activities in schools like in improving teaching and learning environment (HoS C, Interview, 2021). Likewise, in school C, the researcher observed poultry farming project and the product generated from the project. Moreover, the researcher reviewed the project plan document and progress document and realized that the poultry farming was a profitable project which increases school income. This sub theme corresponds with the findings obtained in the study done by Mtorobo (2019). The study findings revealed that in schools, there was chicken keeping as an income generating project in schools. Likewise, the findings obtained from the study conducted by Getange (2013) unveiled that in the studied schools, there were animal production projects which increased income in schools. The theory of innovation emphasizes more on the establishment of income generating activities. The establishment of poultry farming in schools generates income used in the development of teaching and learning environment.

Generally, secondary schools keep kitchen and animals which increase the income of the schools used in the development of teaching and learning environment.

### **School canteens**

The findings in Table 2 shows that 8 percent of teachers mentioned school canteen as an income generating project in school. Similarly, in (Table 2), it is pointed that 5 percent of respondents responded that their schools managed canteens as an income generating project in school. This implies that public secondary schools in Moshi Municipality managed to run canteens used to provide services to the teachers and students and generated income to the schools. It greatly assists schools in adding incomes and reducing students' movements outside school premises. This sub theme was supported by the information obtained during the interview with head of school A who explained,

*“The presence of school canteen ensures health security among the students and teachers in school. The income is generated from selling food which include breakfast, lunch and dinner (HoS A, Interview, 2021)”.*

Likewise, the researcher observed a good and clean canteen in school A and the researcher interact with teachers to get food in the canteen. Furthermore, the researcher reviewed the document which shows the progress of the school canteen to see the income generated and its function in school, the researcher realized the income generated is used to improve teaching and learning environment.

The findings are supported by Hajdu et al. (2011) who commented that schools initiate different small-scale project like school canteens which provide service to the people and act as a source of income in schools. Likewise, the theory of Innovation emphasizes much on the school project used in school as a source of income. The initiation of school canteen showed the establishment of income generating project in school. Therefore, in schools, canteens were observed as an income generating activity that provided a service of breakfast to the students and teachers which increases school income.

### **School shops**

From the findings, 39 percent of teachers mentioned that the income generating activities found in schools are shops (Table 2). Likewise, in (Table 2), 50 percent of the students reported that in their school, there are shops which provide services to students and teachers in school meanwhile generating school income. From the findings, school shops were dominant compared to other income generating activities in public secondary schools.

This implies that it is obviously the popular project to generate income and the most known to every individual. In support of the view, head of school A said:

*School shops were given high priorities as an income generating project rather than other income generating activities because it needs low capital to start this business. The projects provide services to the students, teachers and hence increases the income in schools and the income generated is used for the improvement of teaching and learning environment (HoS A, Interview, 2021).*

This implies that most schools afford to initiate shop businesses as an income generating activities due to the fact that it needs low investment. In the similar stance, the researcher observed school shop in school A, C and D. The observed shops provided services to the students and teachers and it largely contributed to school income. Moreover, the researcher reviewed the documents which showed the progress of the school shop projects where it was evidenced that school shops contributed more to school income.

The findings are supported by the findings from Hajdu, Ansell, Robson, Blerk and Chipeta (2011) who comments that schools initiate different income generating activities which are small scale businesses in schools including shops which offer the service to the school and help in the improvement of income generating project in school. Likewise, Balhao (2016)'s findings support the findings from the respondents. The findings from Balhao indicated that in schools, there are different income generating projects like thrift shops used in provision of service in schools and increases income in schools. Furthermore, the innovation theory emphasizes on the establishment of income generating project which increases income in school.

The initiation of school shops is one of the income generating activities in school which increases the income in school and ensure development of teaching and learning environment. Therefore, in schools, the process of buying and selling is among the project which consistently increases income to the school and provides service to the people at the same time.

### **Stationaries**

The findings showed that 12 percent of teachers as well as 11 percent of students reported that in their schools, there are stationeries used to generate income for school (Table 2). The findings indicated that most public secondary schools did not engage in stationeries as income generating activities. This implies that stationeries activities need a lot of money to buy equipment's and make some services as well as skilled personnel to manage these activities.

The findings concur with the observation made by the researcher who observed the presence of school stationeries in school B and C. The stationeries observed offer the services like photocopying and printing. The income obtained from the stationeries is used to buy different teaching and learning materials. Likewise, a head of school C was quoted saying:

*The presence of stationeries in schools generate income to schools through selling different material which are used in the process of teaching and learning like exercise books, pens, pencils and rulers. The income obtained in the stationeries is used to buy materials like chalks used in the process of teaching and learning (HoS C, Interview, 2021).*

This means that, in schools' stationeries are very important in providing service to schools. Also, the researcher reviewed documents which showed the income generated from the school project was used to improve teaching and learning environment in school. Notwithstanding, the findings also concur with Nse (2020) in Nigeria who commented that in most of schools, there were different sources of income including stationeries which provided different service in schools. The service provided in school included printing, photocopying, overdue book charges and charges for loss of library cards. Furthermore, the findings corresponded with the innovation of entrepreneurship theory. The theory emphasizes much on the innovation of income generating activities in schools. In this stance, the innovations of school stationeries act as a source of income in schools for the development of teaching and learning environment.

### Horticulture

The finding in Table 2 shows that 8 percent of teachers in public secondary school in Moshi mentioned horticulture as one of the incomes generating projects in their schools. Similarly, 5 percent of students reported that in schools, there is horticulture as an income generating projects. This implies that horticulture was beneficial to schools as it enabled to get food and generate school income. However, the findings showed there are minimal practices for horticultural activities in public secondary schools; the project is much beneficial compared to other projects that can be implemented in schools. This sub theme is supported by the information obtained during the interview with a head of school D who explained that the presence of horticulture projects ensured availability of vegetables in school. The vegetables are used for food by teachers and students as well as a source of income (HoS D, Interview, 2021). Likewise, the researcher observed the presence of horticulture in school D which

generates income to the school through selling vegetable crops. Moreover, the researcher reviewed the documents which showed the project plan and its progress; the document revealed that the projects generated income which are used in improvement of teaching and learning environment. The findings concurred with Mtorobo (2019) who found that schools practice horticulture as an income generating project and the income obtained used in the improvement of teaching and learning environment. Likewise, the innovation theory binds the finding as it emphasizes on the creativity and innovation of income generating project in schools. The initiation of horticulture in school acts as a source of income in school used in the improvement of teaching and learning environment.

### Income generating activities on teaching and learning

In the second objective, the researcher needed to determine the contribution of income generating projects on teaching and learning environment, the researcher asked the participants to state whether income generating projects in schools improved teaching and learning environment. In achieving this objective, Table 3 represents the findings.

**Table 3:** Teachers' and Students Responses on whether Income Generating Activities Improved Teaching and Learning Environment (n=141).

	Teachers		Students	
	Frequency	Percentage	Frequency	Percentage
Yes	59	96.7	79	98.8
No	2	3.3	1	1.3
<b>Total</b>	<b>61</b>	<b>100.0</b>	<b>80</b>	<b>100.0</b>

Source: Field Data (2021)

The finding from Table 3 indicates that 97 percent of teachers replied on "Yes" while 3 percent responded on "No". Likewise, when students were asked the similar question, 99 percent pointed on "Yes" while only 1 percent said "No". The findings showed that both teachers and students agreed that IGAs impacted positively in schools. In the same vein, participants of public secondary schools in Moshi municipalities were asked to give out the contribution of IGAs on teaching and learning environment in public schools.

The findings from teachers and students indicated that income projects helped in purchasing teaching and learning materials, useful in financial rewarding, facilitates maintenance and infrastructure development, improvement of working condition, enhancing self-reliance and school income and increases students' motivation.

Figure 1 represents the importance of IGAs in secondary school as represented by teachers in public secondary schools in Moshi municipalities. Teachers'

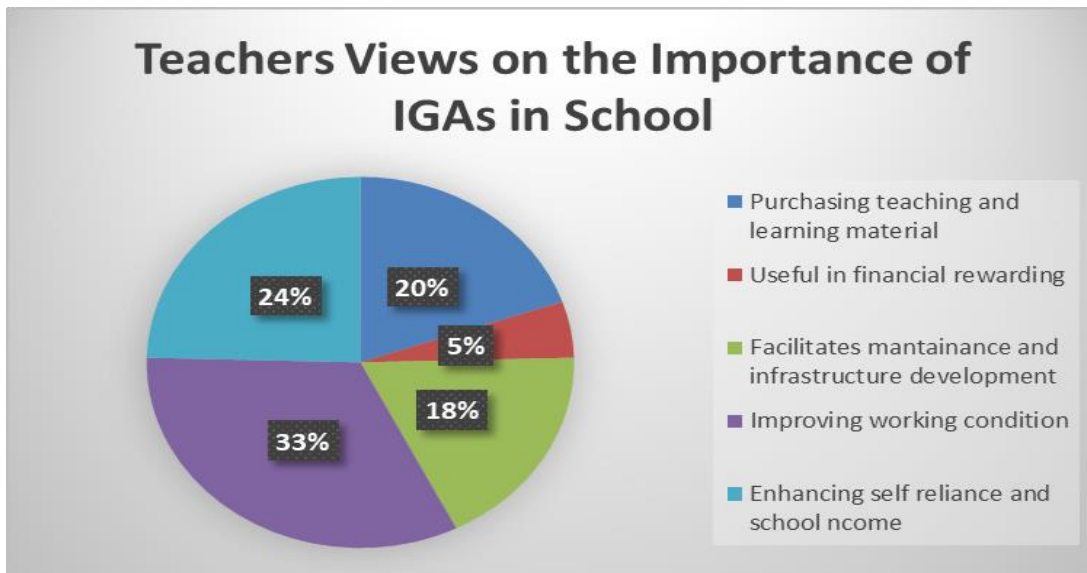


Figure 1: Teachers responses on the Importance of IGAs in Schools (n=61). Source; Field Data, 2021

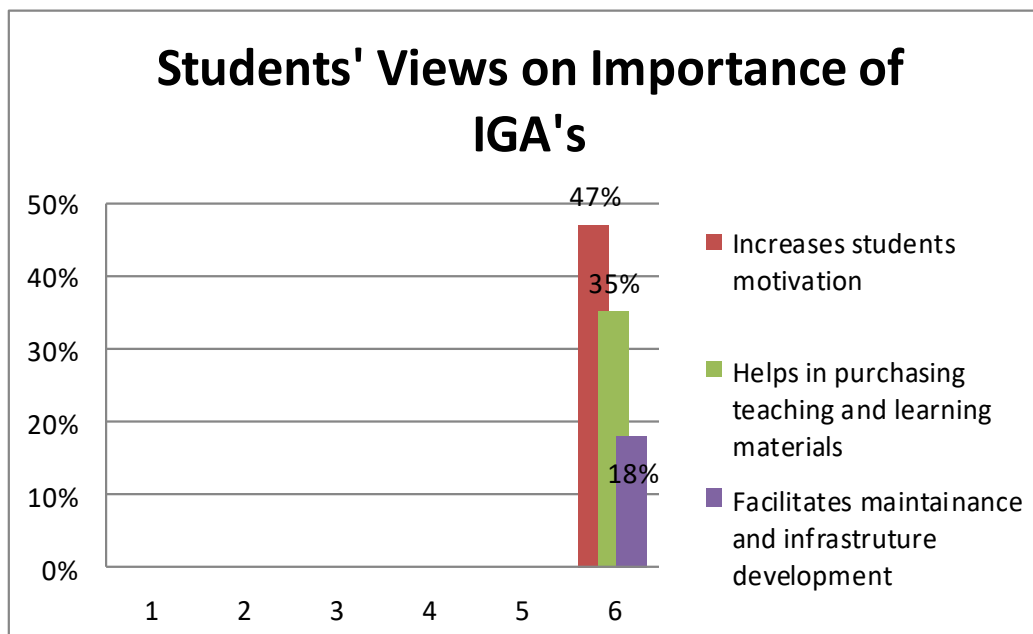


Figure 2: Students views on importance of IGAs in school (n=80). Source: Field Data (2021).

views on the importance of income generating activities in public secondary schools and 33 percent showed that it improves working condition, 24 percent of teachers said it enhances self- reliance and school income, 20 percent said it helps in purchasing teaching and learning materials, 18 percent of teachers said that it facilitates maintenance and infrastructure development and 5

percent of teachers said that it is useful in financial rewards in public secondary schools. Figure 2 indicates the findings on the students' views on the contribution of IGAs in public secondary schools in Moshi Municipality. The findings showed that 47 percent said that it increased students' motivation, 35 percent of the respondents said it helps in purchasing teaching and

learning materials and 18 percent of respondents said it facilitates maintenance and infrastructure development. Generally, the findings showed that income generating activities are important in ensuring students' income motivation, increase teaching and learning materials and used in infrastructure improvement which finally improved students' academic performance. The findings were in line with Ogba et al. (2019) who said that IGAs helped schools to be self-reliant and increase school revenue for sustainability. Also, participants were asked to explain whether income generating activities influence teaching and learning environment. The findings are represented in (Table 4.)

**Table 4:** Students' and Teachers' Responses on how income generating activities influence teaching and learning environment (Students n=80; Teachers n=61).

Responses	Students		Teachers	
	Frequency	Percentage	Frequency	Percentage
Increase school income and food security	23	28.8	17	27.9
Purchasing teaching and learning material	35	43.7	26	42.6
Infrastructure maintenance	16	20.0	12	19.7
Improve teacher working environment	6	7.5	6	9.8
Total	80	100.0	61	100.0

Source: Field Data, 2021

Table 4 shows that 44 percent of students explained income generated from different projects in schools were used in purchasing teaching and learning materials. 29 percent of students reported that the income generating projects in school increased school income and food security. Also, 20 percent of students mentioned that the income generated from different projects are essential in infrastructure maintenance. Moreover, the 8 percent of students stated that the incomes generated from different projects are used in the improvement of teachers' working environments.

This implies that most of the schools use the income generated from different projects available in schools in different matters which relate to the improvement of teaching and learning environment. However, in some schools through observation, the researcher recognized that they do not have access to adequate income generating projects. The situation made some schools to encounter some challenges pertaining to teaching and learning resources. Moreover, the findings showed that 43 percent of teachers mentioned that the income-generated was used in purchasing teaching and learning

materials in school. Also, 28 percent of teachers agreed that the income-generated from different projects available in school increased school income and ensured food security. Likewise, 20 percent of teachers reported that the income obtained in school from the project available used in the infrastructure maintenance. Moreover, the 10 percent of teachers stated that the income generated from projects available in schools are used in improving teachers working environment. Therefore, the results implied that each school has its own priorities in the use of income generated from the projects available in school. The priorities relied on teaching and learning environment in school to raise students' academic performance. From the findings obtained during the study, there are different themes extracted which shows that the income generated from the available projects contribute to the teaching and learning environment. Among the variables extracted are increased school income and food security in school, infrastructure maintenance, improvement of teachers' working condition and purchasing of teaching and learning materials as they are explained below.

### **Increase school income and food security in schools**

Income generating activities help public schools to acquire income and increase food security in schools especially those who participate in farming activities. The findings indicated that 29 percent of students which equals to 23 students reported that managing income generating activities in schools helps schools to increase school income and food security (Table 4). Similarly, 28 percent of teachers reported that the income generated from the project available in school raises school income and ensures food security in school. Generally, this implies that the income generated in schools' increases school budget and contributes to students' food which used as breakfast and lunch. Due to availability of food in schools, students tend to stay in school and reduce truancy and drop outs rates from school. Due to these, teachers and students enjoy being at school. In this theme, the information provided by head of school D during the interview explained;

*"In our school, income generating activities like school shop, canteen and crop farming helped us to get some amount of money generated from these activities. Also, we get some food for teachers and porridge for students and these activities fix some budget problems" (Hos D, interview, 2021).*

Similarly, A ward education officer was also quoted saying:

*Most schools have different income generating projects*

*like farming and livestock keeping as through those projects, the school generates income and food which enable the school to offer food service in school to the teachers and students. Through those projects, the school is able to improve teaching and learning environment (WEO A, Interview, 2021).*

This means that income generating project is important in the development of teaching and learning materials in schools. The school administrators used the income obtained from available project to facilitate teaching and learning environment. In the same vein, the innovation theory of entrepreneurship emphasizes the initiation of the income generating project to be used as a source of income in schools. The initiation of different income generating projects increases school income and ensures the availability of food in respective schools.

Equally, Nwakpa (2016) findings corresponding with this sub theme where the findings showed that in schools, the income generating projects keep the school administrator in a position of using money obtained in the project for the development of teaching and learning environment. Thus, schools' income generating projects are used in the development of teaching and learning environment and keep school at the highest level of income collection.

### **Purchasing teaching and learning materials**

The findings in table 4 also indicate that 44 percent of students agreed that income generating activities help schools to afford buying of some teaching and learning materials. Also, 43 percent of teachers reported that income generating activities helped the school administrators to purchase teaching and learning materials (Table 4). Mostly, this implies that in schools, there are different incomes generating activities which provide income in the school and the income is used to purchase teaching and learning materials such as purchasing school infrastructure. These infrastructures are students' books, Manila sheets for teaching, teachers' books and the maintenance of school furniture by using the project profits.

The availability of enough teaching and learning materials helped teachers to implement curriculum and hence, improvement of learning activities. This sub theme is supported by the observation made by the researcher. The researcher observed different teaching and learning materials purchased in school through the use of income generated projects available. The materials observed included bundle of paper, boxes of chinks and boxes of pens. Correspondingly, the researcher reviewed documents showing the uses of the income generated from the projects available in school. Also, the document showed the purchased income used to purchase some

books and other teaching materials. Likewise, in the interview, the head of school B explained;

*The school implemented different income generating projects which are used in school as sources of income. The income generated in school enabled the school administrators to buy different materials used in the teaching and learning process such as students' text books and teachers' guide books. The situation of purchasing teaching and learning materials ensure effective development of teaching and learning environment (HoS B, Interview, 2021).*

Furthermore, the findings were consistent with the theory of innovation of entrepreneurship that emphasizes initiation of different income generating activities and increase income in schools. However, the findings contradict with Kones (2012)'s study which showed that schools did not have enough teaching and learning materials as he encouraged schools to use local available resources despite the presence of income generating activities in schools. Also, Achumba (2012) asserted that in Buncoma South District, schools used between 10001 to 150000 Kenyan shillings generated from income generating activities to buy teaching and learning materials in school departments by buying laboratories equipment and improvement of curriculum. This was contrary to some public schools in Moshi Municipality which depended more on government and donor funds to improve teaching and learning environment.

### **Facilitating maintenance and infrastructure development**

The findings from Table 4 reveal that 20 percent of students reported that the income generating projects in schools enabled maintenance of school infrastructures. Similarly, 20 percent of teachers mentioned the maintenance of infrastructure as one of the influences of school income generating projects in teaching and learning environment. This implies that income generating activities support schools in the maintenance and infrastructural development. The results also show that through school income generating activities, schools maintain infrastructure such as classrooms, staff offices, stores, desks, chairs, libraries, school toilets and administration blocks. The findings were also different in some schools in the study area. The researcher found some classes and other school infrastructure was not in a good condition, however, the schools had income generating projects. This means that the schools were waiting for the government funds to make maintenance and innovations. The sub themes supported by the information obtained during the interview with the ward education officer from Ward B who explained:

*School administrators are responsible in ensuring the effective development of teaching and learning materials in school. The incomes generated are used by administrators to keep good environment for teaching and learning process. This was observed when the school administrators contributed to the income generated in building toilets in school (WEO B, Interview, 2021).*

Likewise, the information obtained during the interview with the head of school C had this to explain:

*The income generated in school is used by the school administrators to ensure effective delivery of the teaching and learning process. It is clear that good teaching and learning environments are ensured with the use of income generated from the available projects (HoSC, Interview, 2021).*

Moreover, the findings resemble the idea of innovation of entrepreneurship. The theory advocates on creativity in schools that leads to the initiation of income generating activities. The incomes generated from the activities initiated in schools are used in the improvement of teaching and learning environment. This result concurs with the study by (Simatwa et al., 2011) who advocated that income generating activities are used in repairing maintenance and improvement of school infrastructures such as dormitories and classrooms. Similarly, it concurred with (Omukoba et al., 2011) who said that income generating activities helps different schools in maintenance and development of school infrastructure.

### **Improvement of teachers' working condition**

Also, the findings in Table 4 indicate that 8 percent of students were satisfied that income generating activities improve teachers' working condition. Likewise, 10 percent of teachers reported that the income generated projects available in schools help the school administrators to improve teachers' working condition in schools. This implies that the income obtained from the projects available in schools were important for improving teachers' working condition.

Teachers are not satisfied with salary payment and other worker benefits, but schools made efforts to ensure schools obtain income for improvements of working condition to make it favourable for teachers. The findings were contrary since majority of teachers were lamenting about their working condition. Thus, school heads are emphasized to use incomes obtained from the various projects to improve teachers' working conditions in school. The sub theme is supported by the information obtained during the interview whereby a head of school A explained:

*In schools, the incomes generated in schools are used by the school administrators to improve the working environment. The working condition of teachers are unsatisfactory due to lack of income. The incomes generated in schools through the income generating activities help school administrators to improve working condition of teachers through hiring and paying part time teachers (HoS A, Interview, 2021).*

Furthermore, the findings revealed that in school A, teachers are teaching evening classes for the remedial activities. Those teachers who were involved in remedial classes are paid extra amount apart from their salary. The school administrators use the income generated from school generating activities to pay teachers who engage in remedial classes. Also, they provide food for the teachers and students undertaking the program. Likewise, the findings were consistent with the theory of innovation which emphasizes much on the initiation of projects which increase income in school. The availability of income generating projects in school, leads to the increase of school income.

The income is used in improving working condition in schools. The findings were also in line to (Mulokozi, 2015) that teachers faced poor working condition and as a result, they engage in moonlight behaviours due to insufficient salary, lack of incentives and cost of living in the city. This contradicts with the findings from the study which indicated that schools which managed well their income generating activities have a chance to improve teachers' working condition.

In the same vein, Achumbi (2012) commented that income generating activities improved teachers' working condition. The results exhibit that most teachers and students agreed that income-generating activities have a significant contribution to improve teaching and learning environments. The researcher also discovered there was no effective policy for management of IGA to contribute school growth as well as teachers and students' welfare.

### **Conclusion**

Based on the findings, the paper concludes that income-generating activities plays a crucial role for development and improvement of the teaching and learning environment as well as motivation for students and teachers. Despite the role played by income generating projects, the findings indicated that there was no effective policy to govern income generating activities in schools to benefit them. The situation has led school heads to use income generating activities per their willingness to offer services in school. Moreover, it led to have some of infrastructure improved in public schools in Moshi Municipality.

## Recommendations

Focusing on the study findings, the researcher recommended the following:

Policymakers should integrate the income-generating activities into the education policy to ensure its effective management in schools. The policy can make income generating activities to be used wisely to improve the teaching and learning environment. There should be effective training for both school heads, teachers and students to work in collaboration to manage income-generating projects in schools. This can ultimately lead to the improvement of the teaching and learning environment through income generating activities.

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