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## **Conceivable Challenges Heads of Schools Face in Managing School-Based Income-Generating Activities Among Public Secondary Schools in Kilimanjaro Region – Tanzania**

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**ABSTRACT:** *This study explored and examined the conceivable challenges heads of schools face in managing School-Based Income-Generating Activities (SB-IGAs) in public secondary schools in Kilimanjaro region, Tanzania. Guided by Resource Dependency Theory, the study adopted the embedded model of convergent design under a mixed research approach for concurrent data collection and analysis. Probability and non-probability sampling techniques were used to obtain 36 Heads of Schools (HOSs), 360 Teachers, 432 Students, and 6 District Education Officers. The quantitative data were descriptively analyzed through frequencies and percentages, and presented in tables, whereas qualitative data were transcribed and analyzed in themes emerging, and explained in words supported by verbatim quotations. The study found that inadequate knowledge and shortage of funds as initial capital were stumbling blocks that prevented the advancement and stability of SB-IGAs. The study also revealed that there was the inadequacy of land set aside and insufficient water supply that was explicitly meant for SB-IGAs in public secondary schools. The study concluded that inadequacy of land, insufficient water supply, lack of transparency, lack of motivation and inadequate funds as initiation capital are the core challenges that prevent the advancement of SB-IGAs and thus hinder financial sustainability in public secondary schools in Kilimanjaro region. Therefore, the study recommends that the Ministry of Education, Science and Technology should develop and adopt clear strategies for resolving challenges that HOSs face in managing SB-IGAs in public secondary schools in Tanzania.*

**KEYWORDS:** School-based income-generating activities, management of challenges, school financial sustainability

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## **INTRODUCTION**

Education is a conscious and planned effort to create a learning atmosphere and learning process so that students actively develop their potential to have acquired self-control, personality, intelligence and skills needed by the society and nation at large (Gaol & Sitepu, 2020; Islam et al., 2018). Education plays a great role in economic and technological development which transforms society from low to higher levels of achievement of 21<sup>st</sup>-

century skills specifically inquiring mind, creativity and initiatives vital in life and in the entrepreneurial era (Nouri et al., 2020 and Wrahatnolo, 2018). In improving the quality of secondary school education, there is a need for Heads of Schools (HOSs) to mobilize adequate financial resources, enhance quality leadership and a suitable learning environment (Madani, 2019; Shaturaev, 2021) as aspiring School Financial Sustainability (SFS).

Different countries in the world have embarked on financial resources as a pillar to improve quality education by introducing Fees-Free Education (FFE) to provide the chance for all children to have equal access to basic education regardless of their social-economic backgrounds (Nakula & Mathews, 2019; Msuya, 2022). Despite the advantages of a fees-free education strategy, management of the education sector encounters challenges associated with inadequate infrastructures, high enrolment of students, delayed capitation funds from the government and parental misconception about fees-free secondary education that reduce their participation in various school projects (Mndeme, 2020; Metta, 2019).

Globally, the provision of FFE in developed countries such as the United States of America as noted by Maani and Galea (2020) and Suebvises (2018) is usually done by the public sector with funding from three levels of government including the federal government, state and local governments. It was also noted in Canada that, FFE is under a government-run program of public education which is provided and overseen by the federal government provincial and local governments (Watson et al., 2019; Smith, 2022). This implies that the provision of education to the individuals and entire citizens is solely in the hands of the government which emphasis is placed on Education For All (EFA) which aims to enrich learners with four pillars of education for the twenty-first century – learning to know, to do, to be and to live together. In developing countries, the public education system is financed by central governments through tax-payer revenue, loans from developed countries and donations from monetary institutions which are not sufficient to facilitate all education programs effectively (Giron et al., 2022; Parvin et al., 2020; Karim & Bah, 2022). The education financing role of the central governments has a serious effect on the effective implementation of FFE and created a necessity for public schools to find alternatives to bridge the financial gaps by getting involved in School-Based Income-Generating Activities (SB-IGAs).

Heads of Schools are anticipated to explore every possible cost-effective opportunity in their public schools that can be taped to generate income through effective implementation of SB-IGAs for the provision of quality education and school financial sustainability (Kurawa, 2021; Ndege, 2019). As per Wassie (2020) and Aronson et al. (2020) resource opportunities can be in the forms of land, water sources, location of the school, climate, technology and cultural artifacts. In public secondary schools, the HOSs takes a great role in creating an efficient and successful school environment for the implementation SB-IGAs. The HOSs usually perform three interchangeable functions at the school level. As managers, they focus on managing and controlling human, physical, and financial resources (Xu & Wang, 2018; Stone et al., 2020). As leaders, they drive the vision of the institution and focus on organizational development and school improvement (Shaked & Schechter, 2020) while as administrators, they deal with

day-to-day operational matters and continuously shift between leadership and management functions (Naidoo, 2019). The same qualities of good HOSs are transferable and probably usable in the management of SB-IGAs for public school financial sustainability.

Strong institutional leadership enhancement school achievement both in academic and financial management, access to school resources is very crucial for the sustainability and achievement of the set school objectives, therefore should be effective supervision of resources within the school there is a need for a strong and well-skilled school administrator. Aboramandan et al. (2019) in Palestine observed that the success of the educational organization and attached income-generating activities rely basically on the quality of human resource management of the personnel as the key element and should be managed in an effective manner. In West Africa, the study by Ajayi and Ogunode (2022) and Victor (2017), exposed that secondary school principals had managerial competencies in financial matters that govern the schools but could not display the challenges faced in the management of SB-IGAs. Thus, the challenges HOSs face in the management of their institutions and SB-IGAs could probably be organizational-related and linked to the roles of the HOSs for planning, organizing, directing, staffing and controlling (Musingafi, 2014 and Romlah et al., 2021).

Apart from SB-IGAs' main role of generating supplement income for public school financial sustainability, SB-IGAs are also meant for inculcating entrepreneurship skills in the learners in their school circle (Fadele, 2019). The additional advantage of SB-IGAs prepared the young generation for self-employment after the education cycle and bridged the societal outcries on youth unemployment. Notwithstanding the good impression and outcome of SB-IGAs, there is turmoil on challenges that hinder HOSs in managing SB-IGAs in public secondary schools. Regardless of the challenges that HOSs face in managing SB-IGAs, the HOSs were not completely discouraged to plan and establish low-scales-IGAs in public secondary schools (Njau et al., 2022) which necessity a need for a study to be conducted to disclose the challenges. Therefore, the current study aimed to examine and explore the empirical challenges HOSs face in managing SB-IGAs for school financial sustainability in public secondary schools in Kilimanjaro region.

### **Statement of the Problem**

The inadequate execution of SB-IGAs in public secondary schools (Ayina & Kasujja, 2020; Ndege, 2019) emerged from a number of factors that are not well established by the body of literature. The governments in developing countries are struggling to meet the sustainable development goals (SDGs) number four, which emphasizes the importance of education, which entrepreneurship education can be obtained through the implementation of IGAs in public secondary schools (Avelar et al., 2019). Despite the 1995 and 2014 Education and Training Policies in Tanzania in reflection of the SDGs, the adoption of SB-IGAs as alternatives to supplement government funding for school financial sustainability has not been well achieved. Public secondary schools' financial constraints raised concerns the society regarding the role of SB-IGAs in school financial sustainability which prompted this study to reveal the underlying challenges HOSs face in IGAs management. Therefore, this study

focused on the challenges heads of schools face in managing SB-IGAs in the public secondary schools in Kilimanjaro region to bridge the gap.

### **Research Question**

What challenges do heads of schools face in the management of school-based income-generating activities for financial sustainability in public secondary schools in Kilimanjaro region?

### **Theoretical Framework**

The study was anchored in Resources Dependency Theory (RDT). The proponent of the theory is Emerson in 1962 and later modified by Pfeffer and Salanciks in 1978. The theory provides valuable guidelines for managers who want to understand considerations and consequences relevant to different types of inter-organizational patterning. The RDT aims to understand how internal and external resources affect the effectiveness and efficiency of an organization. Consequently, SB-IGAs possessing necessary internal and external resources may lead to school financial sustainability, whereas SB-IGAs' dependency on external resources only is likely vulnerable to control. RDT deliberates that, even though all public secondary schools received government funds, the funds are not sufficient and thus, they must be subject to internal resources available within the school environment including headships' entrepreneurship skills and competencies and innovative teachers and students, and community positive attitudes to support their operations and aspirations. The theory relates to the study as it emphasizes HOSs face challenges that originated from internal resources to adopting external sources as alternatives and vice versa is true. Therefore, the current study opted for RDT to demonstrate how the challenging internal and external factors affect HOSs in managing SB-IGAs for financial sustainability in public secondary schools in Kilimanjaro region.

### **LITERATURE REVIEW**

The literature review is based on the challenges HOSs encounters during the initiation and management of IGAs in education institutions. The review of different kinds of literature on the challenges HOSs face in management IGAs aimed to see what other scholars have discussed on the matter under discussion at the global level and at regional levels to realize the theoretical gaps.

Tagegn (2017) assessed the income generation practices and challenges among NGOs operating in Addis Ababa in Ethiopia: the case of Kolfe Keranyo and Lideta Sub-cities. The purpose of this study was to provide a general analysis of the challenges of income-generating activities management faces in executing IGAs funded by NGOs. The study findings revealed the problem facing income generation activities, including the infant's stages of the project and the constant market for consuming the IGAs products. Similarly, the study findings by Nyamwega (2016) in Kenya identified that HOSs face difficulties in the market assessment of SB-IGAs products. These imply that the school-based IGAs demand the HOSs have enough

market needs assessment before establishing a certain type of income-generating activities so that they produce what the consumer; so that to have a quick flow of the IGAs products.

This implies that when an institution invested in the IGAs must have enough funds for the initial stages to make it stable and sustainable, failure to abide by that may lead to stagnation or collapse of the IGAs. The study by Tagegn (2017) also reveals that most IGAs were established based on NGO funding without necessarily having a prior survey for the market of their product and services. However, not all IGAs are directly supported by NGOs in their operations, and which their challenges could be generalized to public-owned IGAs. This steered the current study to investigate the challenges HOSs face in implementing school-based IGAs by triangulating sources of information and obtaining in-depth information on the genesis of such challenges in public secondary schools.

The study by Chinyoka and Mutambara (2020) in Zimbabwe examined the challenges of revenue generation in public education institutions. The study employed a case study design, interviews, and purposive sampling to collect data from two financial directors and ten senior staff members. The study findings revealed education institutions faced challenges such as a political environment with limited leadership stability, limited government funds to support income-generating projects, limited fiscal space and equipment to support income-generating projects and higher inflation rates. The findings concur with the findings by Mugambi (2017), Nyangaresi et al. (2016) and Victor (2017) in Kenya who reported that IGAs is highly faced with challenges of insufficient physical facilities for their operations and lack of financial management skills among personnel. These findings imply that IGAs in education institutions in Zimbabwe and Kenya are highly challenged by political uncertainty, high fees, levies, insufficient fiscal facilities and limited entrepreneurship skills among institution staff members. The findings are opposed to the situation in Tanzania, where there is no political interference, fees and levies on the IGAs operating in the public education institutions. Based on the aforementioned facts, the current study used a mixed-method approach designed to find out the challenges HOSs face in the management of IGAs in public secondary schools in Kilimanjaro region that are not associated with political and government interferences.

Abdulrahman and Abdelmalik (2015) conducted a study on assessing income generation activities in West and Central Darfur States. The study aimed to assess income generation activities in Darfur, particularly in Geneina and Zalingei localities of West and Central Darfur. Using a descriptive-analytical method, the study revealed that agriculture is the main alternative source of income in the Darfur States, but the projects faced challenges of inadequate funds. This study's findings is similar to Issa and Mhagama (2022) and Baseki (2021) in Tanzania, which point out that among challenges HOSs face in managing school SB-IGAs include misallocation of resources, inadequate resources, lack of supervision skills, and poor cooperation among the staff members. The study by Abdulrahman and Abdelmalik (2015) was picked based on its findings being on agricultural-related IGAs as compared to Issa and Mhagama (2022) and Baseki (2021) which were directly linked with educational institutions and, most specifically, secondary schools. However, Kilimanjaro region has potential land that



could be used for agricultural-related school-based IGAs and thus challenges IGAs face could be similar. This insight stimulated the current study to venture into examining challenges that HOSs face in the management of school-based IGAs, most especially focusing on agricultural-related projects in public secondary schools in Kilimanjaro region.

The study by Sadia (2017) in Kenya revealed that, most of the heads of schools lack proper supervision procedures for their income-generating activities while being the ones involved in the major decision-making on the IGAs, the influence of personal qualifications, supervision, and support from the staff members. In addition, lack of initial capital has been a hindrance for the HOSs in the implementation of the IGAs. These findings agree to what was proposed by findings from the studies by Amos et al. (2021) and Lyanga and Chen (2020) in Tanzania that indicated most of the heads of schools face challenge of shortage of funds for IGAs implementation. This implies that the school-based IGAs demand the HOSs have enough market needs assessment before establishing a certain type of income-generating activities so that they produce what the consumer; so that to have quick flow of the IGAs products.

In Tanzania's context, Mwashinga (2019) conducted a study on the contribution of school-income-generating projects in financing public secondary schools' activities in Rungwe district Mbeya region. The study aimed at exploring the number of School-Income Generating Projects (SIGPs) that contribute to school budgets and examine the challenges facing SIGPs and their possible remedies in public secondary schools in the Rungwe district. The study employed a qualitative approach through multiple case study design and involved the DEO, District Statistics and Logistics Officer, 6 HOSs, 36 SMT members and 6 School Projects Prefects from six selected public secondary schools. The study was selected since it involved similar categories of respondents as per the current study but differed in methodology and delimitations. The study findings discovered lack of capital, lack of entrepreneurship knowledge, lack of transparency, misuse of the fund generated, theft and destruction of SIGPs infrastructures as challenges SIGPs face in the district. The findings of the study are not different from those by Lasway (2019) and Mbozu (2018) in Tanzania who revealed that, among the challenges head of schools face in managing School income-generating activities includes lack of education on the type of IGAs that were established in a particular school environment and lack of skilled personnel. Through a mixed-method approach, the current study sought to anticipate similar encounters but was designed to examine and explore further challenges HOSs face in the management of school-based IGAs in the public secondary schools in Kilimanjaro region as supported by SIGPs results.

## RESEARCH METHODOLOGY

The study adopted an embedded model of the convergent research design under the mixed-method approach. The design involved concurrent collection of quantitative and qualitative data sets in a single phase (Creswell & Plano-Clark, 2018 and Creswell and Creswell, 2014). Kilimanjaro Region has 225 public secondary schools in its entire 7 Districts. The study

comprised 36 secondary schools from 7 Districts of Kilimanjaro Region obtained through stratification that ensured representativeness of all characteristics of interest. A total sample of 834 respondents containing 360 teachers, 36 heads of schools who were obtained through stratified random sampling technique while 432 students' leaders and 6 District Education Officers were automatically included in the study sample. Information for this study was collected using questionnaires for the heads of schools, teachers, and students. In addition, interview guide was used to gather information from District Education Officers, while observation guide and the documentary analysis guide were also deployed to ensure triangulation of data. Research experts in educational administration determined the content validity of the instruments whereas Cronbach Alpha technique tested the reliability of the questionnaires for HOSs, teachers and students with coefficients of 0.809, 0.810 and 0.835 correspondingly. The trustworthiness of the qualitative instruments was ensured by triangulation and Peer Debriefing techniques. Descriptive statistics in form of frequencies and percentages were used to analyze quantitative data and presented in tables whereas, qualitative data were analyzed through transcription of information from interviews, presented in direct quotations, and interpretation was done according to the context of the study.

## DISCUSSION OF FINDINGS

The study sought to find challenges HOSs face in managing IGAs for financial sustainability in public secondary schools in Kilimanjaro region. The information to answer this question was collected from DEOs, HOSs, teachers and students. Through their questionnaires, HOSs, teachers, and students were provided with statements concerning the challenges HOSs face in fostering IGAs in which they were requested to indicate their agreements or disagreement with the statements. The researcher also used an interview guide to obtain in-depth information from DEOs along with reviewing documents related to the challenges incurred by HOSs during fostering of IGAs from heads of schools' offices. Table 1 summarizes the views of the respondents.

**Table 1: HOSs (n=36), Teachers (n=336) and Students (n=432) Responses on Challenges HOSs face in fostering IGAs for Financial Sustainability**

Statements	Respondents	SD (%)	D (%)	UD (%)	A (%)	SA (%)	Mean
1. There is inadequate knowledge of IGAs at my school	HOSs	16.7	19.4	27.8	19.4	16.7	3.00
	Teachers	22.0	14.3	19.0	12.5	32.1	3.18
	Students	15.1	13.3	35.6	15.3	20.7	3.13
2. There is inadequate funds for improving IGAs	HOSs	5.6	11.1	16.7	22.2	44.4	3.89
	Teachers	8.4	16.1	15.8	19.7	40.0	3.67
	Students	13.7	13.9	22.9	19.2	30.3	3.39
3. There is a little involvement of teachers in IGAs	HOSs	33.3	19.4	22.2	19.4	5.5	2.44
	Teachers	23.2	16.4	22.0	17.3	21.1	2.97
	Students	22.2	14.8	35.2	13.4	14.4	3.83
4. There is a contradiction of government directives on implementation of IGAs	HOSs	19.4	11.1	36.1	11.1	22.2	3.06
	Teachers	25.9	15.8	20.2	15.5	22.6	2.93
	Students	29.9	13.7	20.6	19.3	16.5	2.79
5. There is inadequate land for IGAs projects in my school	HOSs	30.6	5.6	11.1	16.7	36.1	3.22
	Teachers	24.7	15.2	16.7	11.6	31.8	3.11
	Students	41.2	18.8	15.7	8.3	16.0	2.39
6. There is the inadequate water supply for IGAs in my school	HOSs	27.8	11.1	8.3	13.9	38.9	3.25
	Teachers	27.7	17.6	14.6	17.9	22.3	2.90
	Students	33.3	16.9	23.8	9.5	16.4	2.59
7. School-based projects are faced with insufficient market of IGAs product	HOSs	36.1	25.0	19.4	13.9	5.6	2.28
	Teachers	30.4	19.9	17.0	11.6	21.1	2.73
	Students	31.0	16.9	18.3	15.7	18.1	2.73
8. There is lack of transparency on the use of IGAs funds	HOSs	66.7	16.7	8.3	2.8	5.6	1.64
	Teachers	26.2	18.2	20.6	14.3	20.3	2.84
	Students	23.6	16.4	21.3	15.3	23.4	2.98
9. There is lack of motivation to participate in the school IGAs activities.	HOSs	38.9	19.4	16.7	19.4	5.6	2.33
	Teachers	19.6	14.9	19.3	20.8	25.3	3.17
	Students	21.8	14.8	26.4	17.1	19.9	2.99
10. Inadequate time for projection of IGAs	HOSs	30.6	13.9	22.2	13.4	19.4	2.78
	Teachers	19.6	19.9	19.6	12.8	28.0	3.10
	Students	16.0	14.1	23.6	17.4	28.9	3.29

**Source: (Field data, 2022)****Key: SD = Strong Disagree, D = Disagree, UD = Undecided, A = Agree, SA = Strong Agree**

Data in Table 1 show that 36.1% of HOSs and 44.6% of teachers agree and strongly agree that there is inadequate knowledge of IGAs at their school level, with the mean of 3.00 and 3.18, respectively. These denote that HOSs had mixed opinions and balanced on inadequate knowledge of income-generating activities in the public secondary schools in Kilimanjaro region. This implies that half of the public secondary school communities were less considerate about IGAs operations in their environment, while half were fully attentive, with a neutral mean of 3.00 on HOSs responses. These findings are in agreement with findings from the study by Living (2022) in Tanzania which revealed that inadequate knowledge in school project management is a challenge facing the implementation of IGAs in public secondary schools.



These findings also coincide with the findings from the study by Himulayi (2020) in Namibia, which specifies that inadequate knowledge, lack of initiative, self-driving efforts and capacity-building are barriers to the implementation of school-based IGAs. Findings from two studies exemplify those African countries face a challenge of inadequate knowledge on the implementation of IGAs in public secondary schools, as indicated in Namibia and Tanzania, particularly in Kilimanjaro region.

Moreover, 44.6% of the teachers agree and strongly agree with the statement related to inadequate knowledge of IGAs in public secondary schools, with the mean above the neutral (3.18). This implies that most teachers are conscious that low implementation of IGAs is directly related to inadequate knowledge about IGAs and their significance in financial sustainability in public secondary schools. These findings concur with the study by Mbozu (2018) in Tanzania, who disclosed that the suffocation of IGAs resulted from inadequate qualified, skilled personnel in the management of the IGAs, especially in planning, development, monitoring, and evaluation of the IGAs. This is supported by the information disclosed by District Education Officers during a face-to-face interview, who stated that: *The major challenge towards implementation of viable income-generating activities in public secondary schools is that HOSs, teachers, and students have inadequate knowledge of establishing and handling various projects which could generate income in the schools (Personal Interview with DEO "C" on 03/05/2022).*

The information from the DEO and the findings from the study by Mbozu (2018) show that the HOSs and teachers in public secondary schools have inadequate knowledge of the execution of IGAs for the benefit of the entire school community. This indicates that inadequate knowledge among HOSs and teachers as being a factor that hinders the planning, development, monitoring, and evaluation of the IGAs in public secondary schools.

On the other hand, data in Table 1 display that 36.0% of the students agree and strongly agree with the statement that there is inadequate knowledge of IGAs among the HOSs, teachers and students, with a mean of 3.13. However, 35.6% of students rated undecided to the aforementioned statement. This implies that one-third of the students were not aware of the low implementation of IGAs in their schools related to inadequate knowledge of the school-based income-generating activities. Based on a mean of 3.13, which is above the neutral, the information from the students implies that there is inadequate knowledge of IGAs implementation among HOSs, teachers and students in public secondary schools. This finding is similar to the study by Amos et al. (2021) in Tanzania, who unveiled that HOSs and teachers have little knowledge of effective utilization of school-based finance for quality education provision. This implies that HOSs and teachers in public secondary schools have insufficient knowledge of the implementation and usability of the fund internally generated by IGAs for school financial sustainability.

Additionally, data in Table 1 indicate that majority of the HOSs (66.6%) and teachers (59.7%) agree and strongly agree that there are inadequate funds for improving IGAs in public

secondary schools. Almost half of the students (49.5%) agree and strongly disagree, while nearly a quarter of the students (22.9%) were found to be unascertained about the inadequacy of funds for improving IGAs in public secondary schools. This shows that HOSs and teachers had profound concerns about the involvement of funds in implementing school-based IGAs. The findings imply that HOSs and teachers consider inadequate funds for improving IGAs as a stumbling block that prevents the advancement and stability of school-based IGAs projects. These findings are in line with the opinion of the DEO, who narrated that:

The government does not set aside a particular budget to cater for the implementation of income-generating activities and various income-generating projects which are carried out at school. There is inadequate capital for initiating and maintaining income-generating projects. Schools are just left by themselves to secure resources and other funds if they want to invest in projects and activities that generate funds. Parents are also involved in income-generating activities, and they may work with the school boards and school management teams to acquire capital to start their income-generating projects (*Personal Interview with DEO "A" on 05/05/2022*).

Another DEO, during a face-to-face interview on the same aspect, shared that:

The initial capital is among the hindrances to implementing income-generating activities at the school level. Schools have no clear direction and guidelines for securing capital for the projects. It is upon the school management to mobilize and coordinate other sources like donors, parents, and fundraising, depending on the needs to start projects of their choices (*Personal Interview with DEO "C" on 03/05/2022*).

The information from the DEOs signifies that initiation capital for IGAs is a more challenging factor that hinders the introduction and implementation of income-generating projects at the school level. The findings infer that implementation of IGAs entirely rests on the availability of initiation funds which are reasonably inaccessible to most public secondary schools. Similar findings were revealed by the study of Rini et al. (2020) in Indonesia and Ugwu and Nnebendum (2018) in Nigeria, who found out that due to lack of funds, many income-generating activities such as agriculturally-based have been fully exploited in various educational institutions. The findings exemplify that inadequate funding is a comprehensive phenomenon that hinders full initiation and implementation of IGAs projects in schools, as depicted in Indonesia, Nigeria and Tanzania, particularly in Kilimanjaro region. Therefore, the scarcity of funds for initiating and improving school-based IGAs is among the hindering factors for enabling financial sustainability in public secondary schools that cry for the collective attention of all education stakeholders, including the government, parents and school management. Henceforth, the findings are directly supported and linked to the proposition of Resources Dependency Theory (RDT) that too much dependency on external resources creates uncertainty when delayed. Hence HOSs are obliged to implement school-based IGAs to stand stable financially and avoid suffocation of funds.

Furthermore, the results in Table 1 indicate the majority of HOSs (62.8%) and teachers (42.4%) agree and strongly agree with the statement that there is inadequate land for IGAs projects in their schools at means of 3.22 and 3.11, respectively. In addition, 52.8% of HOSs with a mean of 3.25 and 40.2% of teachers with a low mean of 2.90 showed to agree and strongly agree in their responses that there is an inadequate water supply for IGAs in their schools. The information from HOSs means that from a school management perspective, there is inadequate land and water supply for IGAs in public secondary schools. The findings suppose that HOSs are solely administrators directly involved in the initiation and operation processes of IGAs and thus have a broad scope of cognizing and accurate information about the inadequacy of land and water supply in public secondary schools. In its place, information from teachers advocates that land is inadequate, but the water supply for IGAs is adequate in public secondary schools. The mixed opinions of the teachers may infer that land is accessible for IGAs as contrary to water supply due to its costs. This shows that, even if the government provides grants that are insufficient to sustain the school needs, public secondary schools ought to adhere to incorporate internal sources such as IGAs to supplement the grants as suggested by Resource Dependence Theory (RDT). These findings relate to what was proposed by DEO during a face-face interview who claimed that:

There are various categories of secondary schools in the district, most of which falls under the category of ward secondary school, which were introduced in collaboration with local communities. Most of these public secondary schools have limited school premises and hence have limited land for implementing profitable projects like agriculturally based activities (*Personal Interview with DEO "A" on 05/05/2022*).

The views from the DEO clearly show that most of the public secondary schools are community-based, which were constructed aiming to provide mainly formal education and less on informal education, such as the acquisition of entrepreneurship abilities through school-based IGAs. This implies that, ideally, school-based IGAs were in the projection when schools were constructed and there were no prior plans for land and supply of water for IGAs in advance of the public secondary schools' constructions. The findings may further imply that there were no IGAs insights prior construction of the schools. Thus, they only emerged as a result of the engagements of the school management, who could probably take over after the schools had been constructed. These findings are similar to those of Mbozu (2018) in Tanzania, who realized that drought was one of the challenges facing income-generating projects due to the water tap inconstant and high-water bills to grow crops and vegetables.

Also, the findings of the study by Mas et al. (2020) disclosed the challenges of limited financial support, limited marketing and limited land as affecting school-based projects. Compatibly, the inadequacy of water was similarly addressed by the findings of the studies by Lasway (2019) and Ayina and Kasujja (2020) that it was due to poor climatic conditions, weather changes and high cost of water supply infrastructure maintenance. The findings entail that the utilization of school lands and availability of water supply for school-based IGAs is the same in East African countries. Hence, there is limited land and a shortage of water supply systems

that are set aside for operationalizing school-based income-generating activities in public secondary schools in Kilimanjaro region.

Moreover, data in Table 1 signpost that 83.46% of the HOSs disagree and strongly agree with the statement that there is a lack of transparency on the use of IGAS funds in public secondary schools, with the lowest mean of 1.64. Data from HOSs were not much different from those from teachers and students, where 44.3% of teachers and 40.0% of students disagree and strongly disagree on the same at the means of 2.84 and 2.98, respectively. This suggests that HOSs, teachers and students acknowledge transparency in the use of school-based IGAs funds in public secondary schools as opposed to the study by Mwashinga (2019), who spotted out lack of transparency in the use of funds raised through IGAs. The findings may also infer that the school managements involve all stakeholders at schools on matters regarding the provision and use of IGAs funds.

Similar findings were reported by the study by Macha and Mhagama (2022) in Tanzania, who revealed that the head of school informed the teachers about finances received in school, hence transparency was not a problem. This is also supported by Carpio et al. (2022) in the Philippines, who stated that the heads of schools are very efficient and transparent in utilizing the school-generated funds. The findings from various scholars indicate transparency in the use of school-based generated funds obtained through IGAs and that HOSs in most public secondary schools practice good leadership characteristics by being transparent about the use of the IGAs funds. The findings, on the other hand, tallied with the information gathered through documentary analysis that minutes pertaining IGAs were endorsed by names and signatures of different teachers and board members on behalf of parents who were involved in negotiation on the use of funds generated from the projects. The information gotten indicated that there are pieces of evidence of teachers' and parents' involvement in the decisions on the use of various funds generated by IGAs in public secondary schools.

In addition, data in Table 1 display that the slight majority (58.3%) of the HOSs indicated disagree and strongly disagreed with the statement that there is a lack of motivation to participate in the school IGAs with the mean low mean of 2.33. On the contrary, teachers and students had mixed opinions in their responses, where 46.1% of teachers and 37.0% of students agreed and strongly agreed while 34.5% of teachers and 36.6% of the students disagree and strongly disagreed on the lack of motivation for IGAs in public secondary schools at varying means of 3.17 and 2.99 respectively. The figures indicate that there is clarity in the management viewpoint on the motivation of stakeholders to participate in school-based IGAs, while teachers and students were found fairly hesitant in acknowledging the lack of motivation to participate in IGAs. These findings imply that HOSs, teachers and students visualize and perceive motivation to participate in IGAs from different standpoints, HOSs being on the administrative. In contrast, teachers and students are in the subordinate position regarding the implementation of IGAs in public secondary schools. These findings reflect what was shared by DEO during a face-to-face interview, which stated clearly that:

Motivation to participate in income-generating projects depends on the school approach and nature of the project operating and the school environment. If teachers find the project to be helping or serving their needs, it is evident that they will get involved to boost it. For students, it is clear that if they benefit in one way or another, they get part in it, provided it offers the services which are in their vicinity and it is accessible (*Personal Interview with DEO "C" on 03/05/2022*).

The information provided by the DEO point to the scope of teachers' involvement as subordinate members in school communities. The information may also indicate HOSs, in collaboration with the school board, are mandated to create a school environment that entices both teachers and students to get involved in IGAs and participate in most other profit-generating projects in public secondary schools. This implies that HOSs play the central administrative role of motivating teachers and students on matters regarding the implementation of school-based IGAs.

The findings are in agreement with what was found by Mas and Suling (2020) in Indonesia and Ayina and Kasujja (2020) in Uganda that entrepreneurship competence skills of the head of schools motivate the teachers and students' involvement in the school-based income-generating activities while money found from IGAs used to improve pupils and workers welfare through motivation. These findings from Indonesia and Uganda indicate that both skillful HOSs and the provision of IGAs funds for the welfare of the teachers and students are motivational factors for their involvement in school-based IGAs, as in Tanzania, particularly in Kilimanjaro region. Therefore, it is the HOSs entrepreneurship capabilities and the use of IGAs profit that are combined to motivate teachers and students for their involvement in the implementation of IGAs in public secondary schools.

## SUMMARY OF THE FINDINGS

The study found that there is a challenge of inadequate knowledge on the execution of IGAs for the benefit of the entire school community in public secondary schools in Kilimanjaro region. Some of the public secondary school communities were found to be less considerate about IGAs operations in their environment, while others were mindful of the operations and their significance in financial sustainability. The study also comprehended that inadequate fund, as initial capital for IGAs was a stumbling block that prevents the advancement and stability of school-based projects. Thus, inadequate knowledge and unavailability of commencement capital were key factors that hinder the planning, development, monitoring, and evaluation of the IGAs in public secondary schools.

Moreover, the findings indicated that there was an inadequacy of land set aside for SB-IGAs and an insufficient water supply that was explicitly meant for SB-IGAs in public secondary schools. There were no prior plans for land in advance of the implementation of SB-IGAs and the water supply was costly to cater to SB-IGAs purposes such as agricultural-related activities.



The study also spotted out lack of transparency in the use of funds raised through IGAs and a lack of motivation among the school community members to participate in SB-IGAs. Consequently, it is the HOSs entrepreneurship capabilities and transparency on the use of IGAs profit that motivate the school community members and stimulate their active participation in implementing IGAs in public secondary schools.

## CONCLUSION

The study concluded that inadequacy of land, insufficient water supply, lack of transparency, lack of motivation and inadequate funds as initiation capital are the core challenges that prevent the advancement and stability of IGAs in public secondary schools. The study also concluded that headship entrepreneurship capabilities and interests are the basis of all other challenges that HOSs face in the implementation of IGAs and financial sustainability in public secondary schools in Kilimanjaro region.

## Recommendations

The Ministry of Education Science and Technology should provide initiation capital to enhance IGAs practices as part of its core responsibility of supporting public secondary schools financially. Subsequently, the Ministry of Education, Science, and Technology, through the Tanzania Institute of Education (TIE), should introduce Entrepreneurship Education into the formal secondary school curriculum to be taught theoretically in classes and practically by implementing school-based IGAs.

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